

# GRADE 7 ART

First edition

8 units

32 lessons

A video for every lesson

FIRST EDITION

## COURSE GUIDE

Grade 7 Art is a full year of serious, joyful making for students of twelve and thirteen. The student learns to **see** before drawing: to measure with a pencil, to notice where an edge is sharp and where it melts away, and to find the large shapes of light and shadow under all the small details. From there the year moves through the clothed figure and the portrait, acrylic painting and color mixing from a limited palette, the study of light, the science of paint itself, landscape and perspective, and the planning of a picture that tells a story.

Every lesson follows the same pattern: **look, learn, make**. The student watches a short video lesson, reads the core ideas, and spends time with a painting by a master such as Leonardo, Raphael, Rembrandt, Vermeer, Velázquez, Chardin, Constable or Millet. Then comes a studio project that uses the very idea the master used, and a short sketchbook exercise to keep the hand in practice. The final unit gathers the year together in the Renaissance and Baroque masters, whom the student now knows from the inside, because he or she has tried their methods.

The course is written in the classical Christian tradition. We look for what is true, good and beautiful; we treat the student as a maker made in the image of the Maker; and we hold to the old motto *Fabricando fit faber*: by making, one becomes a maker. Many of the paintings we study are sacred art, and some lessons include a verse of Scripture that sheds light on the work of the hands.

Most videos come from teaching artists and art schools (Circle Line Art School, The Virtual Instructor, That Art Teacher, Art Prof and others) and from museums and art-history channels such as Smarthistory and the Art Institute of Chicago. Every video was checked for content, but some channels mention their own courses, books or supply links at the end; you can stop the video when the lesson part is over. Figure-drawing videos in this course use clothed models or wooden mannequins only. Please preview a video before your student watches if you have any doubt. Every video, including

every artwork that appears on screen, was checked frame by frame for wholesome content: nothing immodest, nothing violent and nothing divisive.

**Start with Lesson 1.1 →**

## WHO IT IS FOR

Students in Grade 7 (about ages 12–13). No earlier art course is required, though students who have done Grade 6 Art will recognize the vocabulary. The student should be able to read the lessons independently and work for 50–60 minutes at a time; a parent does not need any art background, only a willingness to look at the paintings together and ask the questions.

## HOW TO USE THIS COURSE

1. **Weekly rhythm.** There are 8 units of 4 lessons, one lesson a week for 32 weeks. Each lesson takes two sessions of 50–60 minutes. Session 1: warm-up, video, core ideas and picture study. Session 2: the studio project and sketchbook practice. In the last week of each unit, add a third session for the unit review and portfolio piece.
2. **Picture study.** Show the painting large (on a screen or a good print). Have the student look in silence for two full minutes, then put the picture away and tell back everything he or she saw, in order. Bring the picture back and work through the “Look for” items and the questions. Picture study trains attention; do not rush it, and do not supply answers too quickly.
3. **The video.** Each lesson tells you when to watch. Encourage the student to pause the video and copy the artist’s steps in the sketchbook. A backup video is listed for many lessons in case the main one is ever unavailable or a second explanation would help.
4. **The sketchbook.** Keep one sketchbook for the whole year, and date every page. Sketchbook pages are practice, not performance: mistakes are expected. A few minutes of drawing on days without art class will do more for the student than any single long lesson.
5. **Studio projects.** Read the whole project, gather materials, and set up good light before beginning. Steps are written in order; follow them, then use the “Check”

list to judge the work honestly. If a project runs long, finish it in a third session rather than hurrying.

6. **Unit review and portfolio.** Each unit ends with a written review (out of 100 points) and a portfolio piece that pulls the unit's skills together. The portfolio rubric tells the student exactly what will be looked for. Keep portfolio pieces flat in a large folder; by the end of the year it will show a year of real growth.
7. **Safety.** Acrylic paint, charcoal and ink are safe when used sensibly: work on a covered table, wash hands after charcoal, never point or lick brushes, keep paint water away from food and drink, and use any spray fixative outdoors with an adult. No solvents such as turpentine are used in this course.

## SCOPE AND SEQUENCE

### UNIT 1 • WEEKS 1–4

#### Seeing Like an Artist

Drawing what is really there: still life, drapery, hard and soft edges, and measuring with a pencil (sighting).

- 1.1 Still Life: Seeing Shapes, Not Symbols
- 1.2 Drapery: The Folds of Cloth
- 1.3 Edges: Hard, Soft and Lost
- 1.4 Measuring: Sighting, Angles and Proportion

### UNIT 3 • WEEKS 9–12

#### Color and Painting

Acrylic painting basics, warm and cool color temperature, natural colors from a limited palette, and color harmonies.

- 3.1 Acrylic Painting Basics
- 3.2 Color Temperature: Warm and Cool
- 3.3 Natural Colors from a Limited Palette
- 3.4 Color Harmonies

### UNIT 2 • WEEKS 5–8

#### Figure and Portrait

The clothed figure and the portrait: gesture, the proportions of the body in “heads,” the face in light and shadow, and hands and feet.

- 2.1 Gesture: Capturing the Action
- 2.2 Proportions of the Figure
- 2.3 The Portrait in Light and Shadow
- 2.4 Hands and Feet

### UNIT 4 • WEEKS 13–16

#### Light

Light as the old masters understood it: value studies, reflected light, lost and found edges, and grisaille painting in grays.

- 4.1 Value Studies: Seeing in Three Values
- 4.2 Reflected Light and the Anatomy of a Shadow
- 4.3 Edges and the Turning Form: Sfumato
- 4.4 Grisaille: Painting in Grays

## UNIT 5 • WEEKS 17–20

### Material Science: Paint

The material science of paint: pigments and binders in oil, acrylic, watercolor and tempera; canvas, panel and gesso; brushes and their care; lightfastness and a safe studio.

5.1 Pigment and Binder: Oil, Acrylic, Watercolor and Tempera

5.2 Supports and Grounds: Panel, Canvas, Paper and Gesso

5.3 Brushes: Shapes, Hairs and Care

5.4 Colors That Last: Lightfastness and a Safe Studio

## UNIT 7 • WEEKS 25–28

### Composition and Narrative

Planning a picture: thumbnail sketches, focal point, notan value design, and telling a story in a single image.

7.1 Thumbnail Sketches: Planning a Picture

7.2 The Focal Point

7.3 Notan: Designing in Light and Dark

7.4 Telling a Story in a Picture

## UNIT 6 • WEEKS 21–24

### Perspective and Landscape

Landscape: linear perspective in nature, atmospheric perspective, painting trees and skies, and working outdoors (plein air).

6.1 Linear Perspective in the Landscape

6.2 Atmospheric Perspective

6.3 Trees and Skies

6.4 Painting Outdoors: Plein Air

## UNIT 8 • WEEKS 29–32

### Renaissance and Baroque Masters

The Renaissance and Baroque masters: Leonardo, Raphael, Rembrandt, and Velázquez with Vermeer, studied through master copies.

8.1 Leonardo: The Last Supper and the Notebooks

8.2 Raphael: Harmony and Grace

8.3 Rembrandt: Light and the Human Soul

8.4 Velázquez and Vermeer: Painters of Space and Light

## WEEKLY PACING CALENDAR

| WEEK | PLAN                                                                                                                                                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"><li>• Session 1: Lesson 1.1 Still Life: Seeing Shapes, Not Symbols: warm-up, video, teaching and picture study</li><li>• Session 2: Lesson 1.1 studio project and sketchbook practice</li></ul> <p><i>Two sessions a week is the usual rhythm. Younger children can split a long session in two; older students can do both sessions in one sitting.</i></p> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                |

| WEEK | PLAN                                                                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <ul style="list-style-type: none"> <li>• Session 1: Lesson 1.2 Drapery: The Folds of Cloth: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 1.2 studio project and sketchbook practice</li> </ul>                                                                        |
| 3    | <ul style="list-style-type: none"> <li>• Session 1: Lesson 1.3 Edges: Hard, Soft and Lost: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 1.3 studio project and sketchbook practice</li> </ul>                                                                         |
| 4    | <ul style="list-style-type: none"> <li>• Session 1: Lesson 1.4 Measuring: Sighting, Angles and Proportion: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 1.4 studio project and sketchbook practice</li> <li>• Session 3: Unit 1 review and portfolio piece</li> </ul> |
| 5    | <ul style="list-style-type: none"> <li>• Session 1: Lesson 2.1 Gesture: Capturing the Action: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 2.1 studio project and sketchbook practice</li> </ul>                                                                      |
| 6    | <ul style="list-style-type: none"> <li>• Session 1: Lesson 2.2 Proportions of the Figure: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 2.2 studio project and sketchbook practice</li> </ul>                                                                          |
| 7    | <ul style="list-style-type: none"> <li>• Session 1: Lesson 2.3 The Portrait in Light and Shadow: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 2.3 studio project and sketchbook practice</li> </ul>                                                                   |
| 8    | <ul style="list-style-type: none"> <li>• Session 1: Lesson 2.4 Hands and Feet: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 2.4 studio project and sketchbook practice</li> <li>• Session 3: Unit 2 review and portfolio piece</li> </ul>                             |
| 9    | <ul style="list-style-type: none"> <li>• Session 1: Lesson 3.1 Acrylic Painting Basics: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 3.1 studio project and sketchbook practice</li> </ul>                                                                            |
| 10   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 3.2 Color Temperature: Warm and Cool: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 3.2 studio project and sketchbook practice</li> </ul>                                                                   |
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| WEEK | PLAN                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 3.3 Natural Colors from a Limited Palette: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 3.3 studio project and sketchbook practice</li> </ul>                                                |
| 12   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 3.4 Color Harmonies: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 3.4 studio project and sketchbook practice</li> <li>• Session 3: Unit 3 review and portfolio piece</li> </ul>              |
| 13   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 4.1 Value Studies: Seeing in Three Values: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 4.1 studio project and sketchbook practice</li> </ul>                                                |
| 14   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 4.2 Reflected Light and the Anatomy of a Shadow: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 4.2 studio project and sketchbook practice</li> </ul>                                          |
| 15   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 4.3 Edges and the Turning Form: Sfumato: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 4.3 studio project and sketchbook practice</li> </ul>                                                  |
| 16   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 4.4 Grisaille: Painting in Grays: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 4.4 studio project and sketchbook practice</li> <li>• Session 3: Unit 4 review and portfolio piece</li> </ul> |
| 17   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 5.1 Pigment and Binder: Oil, Acrylic, Watercolor and Tempera: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 5.1 studio project and sketchbook practice</li> </ul>                             |
| 18   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 5.2 Supports and Grounds: Panel, Canvas, Paper and Gesso: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 5.2 studio project and sketchbook practice</li> </ul>                                 |
| 19   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 5.3 Brushes: Shapes, Hairs and Care: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 5.3 studio project and sketchbook practice</li> </ul>                                                      |
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| WEEK | PLAN                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 5.4 Colors That Last: Lightfastness and a Safe Studio: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 5.4 studio project and sketchbook practice</li> <li>• Session 3: Unit 5 review and portfolio piece</li> </ul> |
| 21   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 6.1 Linear Perspective in the Landscape: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 6.1 studio project and sketchbook practice</li> </ul>                                                                       |
| 22   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 6.2 Atmospheric Perspective: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 6.2 studio project and sketchbook practice</li> </ul>                                                                                   |
| 23   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 6.3 Trees and Skies: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 6.3 studio project and sketchbook practice</li> </ul>                                                                                           |
| 24   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 6.4 Painting Outdoors: Plein Air: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 6.4 studio project and sketchbook practice</li> <li>• Session 3: Unit 6 review and portfolio piece</li> </ul>                      |
| 25   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 7.1 Thumbnail Sketches: Planning a Picture: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 7.1 studio project and sketchbook practice</li> </ul>                                                                    |
| 26   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 7.2 The Focal Point: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 7.2 studio project and sketchbook practice</li> </ul>                                                                                           |
| 27   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 7.3 Notan: Designing in Light and Dark: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 7.3 studio project and sketchbook practice</li> </ul>                                                                        |
| 28   | <ul style="list-style-type: none"> <li>• Session 1: Lesson 7.4 Telling a Story in a Picture: warm-up, video, teaching and picture study</li> <li>• Session 2: Lesson 7.4 studio project and sketchbook practice</li> <li>• Session 3: Unit 7 review and portfolio piece</li> </ul>                      |
|      |                                                                                                                                                                                                                                                                                                         |

| WEEK | PLAN                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 29   | <ul style="list-style-type: none"> <li>Session 1: Lesson 8.1 Leonardo: The Last Supper and the Notebooks: warm-up, video, teaching and picture study</li> <li>Session 2: Lesson 8.1 studio project and sketchbook practice</li> </ul>                                                                                                                                                                                                     |
| 30   | <ul style="list-style-type: none"> <li>Session 1: Lesson 8.2 Raphael: Harmony and Grace: warm-up, video, teaching and picture study</li> <li>Session 2: Lesson 8.2 studio project and sketchbook practice</li> </ul>                                                                                                                                                                                                                      |
| 31   | <ul style="list-style-type: none"> <li>Session 1: Lesson 8.3 Rembrandt: Light and the Human Soul: warm-up, video, teaching and picture study</li> <li>Session 2: Lesson 8.3 studio project and sketchbook practice</li> </ul>                                                                                                                                                                                                             |
| 32   | <ul style="list-style-type: none"> <li>Session 1: Lesson 8.4 Velázquez and Vermeer: Painters of Space and Light: warm-up, video, teaching and picture study</li> <li>Session 2: Lesson 8.4 studio project and sketchbook practice</li> <li>Session 3: Unit 8 review and portfolio piece</li> </ul> <p><i>Last week. Hold a family art show: hang the best piece from each unit and let the student tell guests about one of them.</i></p> |

## MATERIALS

### **Sketchbook (9×12 in, mixed-media paper, at least 60 sheets)**

For warm-ups and sketchbook practice all year. Mixed-media paper takes pencil, charcoal and light washes.

### **Drawing paper pad (9×12 or 11×14 in, 80 lb / 130 gsm or heavier)**

For finished drawings and portfolio pieces.

### **Graphite pencils: 2H, HB, 2B, 4B, 6B**

Hard (H) pencils for light lay-in lines; soft (B) pencils for dark values.

### **Kneaded eraser and a white vinyl eraser**

The kneaded eraser lifts graphite and charcoal gently and can be shaped to a point to “draw” highlights.

### **Blending stumps (tortillons) and a soft tissue**

For soft edges and smooth gradations.

### **Vine charcoal (soft) and a compressed charcoal stick or pencil**

For value studies and broad drawings. Work over newspaper and wash hands afterward.

**White charcoal or white pastel pencil and gray or tan toned paper**

For drawing highlights on toned paper (drapery, master copies).

**Acrylic paints (student grade is fine): titanium white, ivory or mars black, yellow ochre, a warm red (cadmium red light hue or naphthol red), a cool red (quinacridone magenta or alizarin crimson hue), a warm yellow (cadmium yellow medium hue), a cool yellow (lemon or hansa yellow light), ultramarine blue, phthalo or cerulean blue, burnt umber, burnt sienna**

Large tubes of white; small tubes of the rest. This palette lets you mix nearly anything.

**Synthetic brushes for acrylic: flats #2, #6 and #10, a filbert #6, rounds #2 and #6, and a 1-inch flat for gesso**

Synthetic (nylon) brushes handle acrylic well and survive careful washing.

**Palette knife (plastic or metal) and a palette (a paper palette pad, a white plate, or a sheet of glass with taped edges)**

For mixing paint cleanly.

**Canvas panels or canvas paper (8×10 and 9×12 in), and a few sheets of heavy cardboard or hardboard**

Painting supports. You will prime the cardboard yourself in Unit 5.

**Acrylic gesso (white, one small jar)**

Primer for supports; also used to understand what gesso does.

**Watercolor pan set and a few sheets of 140 lb (300 gsm) watercolor paper**

For the paint-comparison experiments in Unit 5 and some outdoor sketches.

**Two water jars, a spray bottle, rags or paper towels, painter's tape, an old shirt or apron**

Basic studio supplies. The spray bottle keeps acrylics wet on the palette.

**A desk lamp with a plain bulb, a white cloth or old sheet, a small mirror, a ruler and a viewfinder (a card with a rectangular window)**

For lighting still lifes, drawing drapery, self-portraits, and composing pictures.

**Black and white construction paper, scissors and a glue stick**

For notan designs in Unit 7.

**Optional: a wooden drawing mannequin and a small easel**

Helpful for figure proportions and for painting outdoors, but not required.

## GRADING

Grade 7 work is graded on effort, care and growth in skill, not on talent. Use the project “Check” lists, the unit reviews and the portfolio rubrics, and talk with the student about each grade.

| PART                | %  |
|---------------------|----|
| Studio projects     | 40 |
| Sketchbook practice | 15 |
| Unit reviews        | 20 |
| Portfolio pieces    | 25 |

**Scale:** A 90–100, B 80–89, C 70–79, D 60–69, below 60 should be redone.

- Studio projects: grade each one on the project’s Check list (all items met and careful work, A; most items met, B; a few items met or rushed work, C). A project may be redone for a better grade.
- Sketchbook: give full credit for dated pages that show honest effort on every assigned exercise. Do not grade sketchbook pages for beauty.
- Unit reviews are open to the student’s own sketchbook but not to the lessons. Written answers should use the unit’s vocabulary correctly.
- Portfolio pieces are scored with the rubric in each unit. Score each criterion out of 4 (4 excellent, 3 good, 2 developing, 1 beginning) and convert to a percentage.
- Keep the portfolio pieces. At the end of the year, compare the first and last pieces with the student; growth is the best grade of all.

## A NOTE TO PARENTS

You do not need to be an artist to teach this course. Your work is to set aside the time, gather the materials, look at the paintings with your student, and ask the questions. The lessons explain the techniques; the videos show them; the master paintings show what they can become. Your honest interest is the most important ingredient.

Twelve- and thirteen-year-olds often become self-critical about their drawing just when they are able to improve the most. Praise specific things (“that edge where the cloth turns into shadow is really soft and convincing”) more than general talent, and remind your student that every master on these pages made thousands of practice drawings. As the old motto says, *Fabricando fit faber*: by making, one becomes a maker.

## UNIT 1

# SEEING LIKE AN ARTIST

Most drawing problems are really seeing problems. When we draw a cup, the mind hands us a symbol of a cup (a rectangle with a loop on the side) instead of the shape the eye actually sees: an ellipse on top, a curve at the bottom, a handle that is half hidden. This unit trains the eye to see what is really there.

You will draw a still life, a draped cloth, and objects with both sharp and melting edges, and you will learn to measure proportions and angles with nothing but a pencil held at arm's length. Along the way you will study four masters who were famous for patient looking: Zurbarán, Leonardo, Chardin and Dürer.

### PREREQUISITES

- Able to hold a pencil lightly and make long, smooth lines
- Knows the basic forms: sphere, cube, cylinder, cone
- Has a sketchbook, graphite pencils (2H–6B), a kneaded eraser and a lamp

### MASTERY CHECKLIST

- ☐ I can set up and light a simple still life and draw it from observation.
- ☐ I can draw the large shapes first and add details last.
- ☐ I can draw pipe folds, drop folds and the shadows inside folds in cloth.
- ☐ I can tell hard, soft and lost edges apart and draw each on purpose.
- ☐ I can use sighting to compare sizes and copy angles accurately.

### LESSONS IN THIS UNIT

#### 1.1 Still Life: Seeing Shapes, Not Symbols

2 sessions of 50–60 minutes

#### 1.2 Drapery: The Folds of Cloth

2 sessions of 50–60 minutes

#### 1.3 Edges: Hard, Soft and Lost

2 sessions of 50–60 minutes

#### 1.4 Measuring: Sighting, Angles and Proportion

2 sessions of 50–60 minutes

# UNIT 1 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a small drawing.

Total: 100 points.

1. 6 pts

What is blocking in, and why should it come before details?

2. 8 pts

Give two rules for drawing ellipses on a cup.

3. 6 pts

Why should a still life be lit by a single lamp?

4. 8 pts

Name three kinds of folds in drapery and where each one happens.

5. 6 pts

Where are the darkest values in a drawing of folded cloth?

6. 8 pts

Define hard edge, soft edge and lost edge.

7. 6 pts

Where do masters usually put their hardest edges, and why?

8. 8 pts

Describe how to measure a proportion by sighting.

9. 6 pts

What is a plumb line used for?

10. 8 pts

Name the artist of each work: *Great Piece of Turf*; *Soap Bubbles*; *Still Life with Lemons, Oranges and a Rose*; the *Uffizi Annunciation*.

11. **15 pts**

In four or five sentences, describe how Chardin uses edges in *Soap Bubbles*. Mention at least two kinds of edge.

12. **15 pts**

Draw a cylinder (a can or cup) lit from the left, with a cast shadow. Label one hard edge, one soft edge and both ellipses.

## ANSWER KEY

1. Lightly drawing the big, simple shapes and their placement first. It makes sure size, proportion and placement are right before time is spent on details.
2. Ellipses are rounded at both ends, never pointed; ellipses farther below eye level look rounder, so the bottom of a cup is rounder than the rim.
3. One light source gives each object a clear light side, shadow side and cast shadow, which show form. Several lights make confusing, flat shadows.
4. Pipe folds (long tubes where cloth hangs from a point), drop or diaper folds (swinging curves where cloth hangs between two points), zigzag folds (where cloth is pushed together, as at an elbow).
5. In the narrow valleys where two folds meet and in the core shadows, where light cannot reach.
6. Hard: a sharp transition with strong contrast or a sudden turn. Soft: a gradual, blurred transition where a form turns slowly or values are close. Lost: an edge that disappears because object and background are the same value.
7. Near the center of interest, because the eye is drawn first to hard edges and strong contrast.
8. Hold the pencil at arm's length with the elbow locked, one eye closed, pencil flat to the view; mark an object's size with the thumb as a unit; compare other sizes in units and transfer the ratios to the paper.
9. To check which points line up vertically, catching errors in placement.
10. Dürer; Chardin; Zurbarán; Leonardo da Vinci.
11. Model: The bubble is mostly made of soft and lost edges, so it seems to dissolve into the background, with just a few crisp highlights that make it believable. The face and hands of the young man have soft edges that make them feel rounded. The hardest edges are on the stone ledge and near the bubble and the face, where Chardin wants us to look. The background figure and leaves have soft edges, so they stay back.
12. Drawing should show a cylinder with correctly rounded ellipses (lower one rounder), shadow on the right side with a soft turning edge labeled, a hard edge (such as the outline against the background or the near edge of the cast shadow) labeled, and a cast shadow to the right.

## PORTFOLIO PIECE: AN OBSERVED STILL LIFE WITH DRAPERY

Arrange three or four objects (including one cylinder) on a draped cloth with at least two clear folds, lit by a single lamp. Use sighting to block in the proportions, draw the ellipses and folds carefully, and shade the whole drawing in graphite on 11×14 in paper. Plan your edges: make the hardest edges and strongest contrast at your center of interest, and let some edges soften or become lost elsewhere.

| LOOK FOR                        | WHAT IT MEANS                                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Proportion and placement</b> | Objects are in correct proportion to each other (checked by sighting) and the group is well placed on the page. |
| <b>Ellipses and drapery</b>     | Ellipses are rounded and consistent with eye level; folds come from clear supports and are shaded as forms.     |
| <b>Light and shadow</b>         | One consistent light source; each object and fold has a light side, shadow side and cast shadow.                |
| <b>Edges</b>                    | Hard, soft and lost edges are all present and used to lead the eye to the center of interest.                   |
| <b>Craftsmanship</b>            | Clean paper, no heavy outlines, careful finish, signed and dated.                                               |

## 1.1 STILL LIFE: SEEING SHAPES, NOT SYMBOLS

### OBJECTIVES

- Set up a still life with a single light source and a clear arrangement.
- Draw from observation by blocking in large shapes before details.
- Draw ellipses correctly on cylindrical objects such as cups and jars.

**Warm-up.** Put a mug in front of you. Without looking at the paper, slowly trace its outer edge with your pencil as your eyes travel around it (a blind contour), taking a full two minutes. Then draw it again in one minute while looking only at the shape of the empty space around it.

### WATCH

#### How to Draw a Still Life: Bottles and Jugs

Circle Line Art School · 16:30

<https://www.youtube.com/watch?v=qQy3Bm5SCkQ>

#### WHEN TO WATCH

After the core ideas, before the picture study. Watch the first five minutes closely: notice that he draws light construction lines and ellipses before any shading.

**Note:** The first ten minutes are in real time, so it is a good video to draw along with.

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### BACKUP VIDEO

#### How to Draw a Still Life: A Cup and Saucer

Circle Line Art School · 10:56

<https://www.youtube.com/watch?v=CSBoEHInvj0>

Use for extra practice with ellipses.

### KEY TERMS

#### **still life**

A drawing or painting of objects that do not move, such as fruit, cups, bottles, books or flowers, arranged by the artist.

#### **observational drawing**

Drawing what you actually see in front of you, rather than what you remember or imagine.

### **blocking in**

Drawing the big, simple shapes of a subject lightly first, so that size and placement are right before details are added.

### **ellipse**

A circle seen at an angle. The top of a cup or the base of a jar is an ellipse; the lower it is below your eye, the rounder it looks.

### **eye level**

An imaginary horizontal line at the height of your eyes. Objects below it show their tops; objects above it show their undersides.

## **CORE IDEAS**

A still life is the oldest training ground for artists, because the objects hold still and you can study them as long as you like. The goal is not to draw “a cup” but to draw *this* cup, from *this* angle, in *this* light. That shift, from symbol to observation, is the most important step an artist ever takes.

Begin every drawing by **blocking in**. With a light pencil (2H or HB) and loose, straight lines, mark the top, bottom and sides of the whole group of objects. Then find each object’s simple shape: a jar is a tall rectangle with an ellipse on top; an apple is a slightly squashed circle. Only after all the big shapes are in the right place should you draw details or shading. If you start with one perfect detail, the rest of the drawing will be built on guesswork.

Round objects such as cups, bowls and bottles are built on **ellipses**. Two rules make them believable. First, an ellipse is smooth and rounded at both ends, never pointed like a football. Second, the farther an ellipse is below your eye level, the rounder (fatter) it looks; an ellipse right at eye level is almost a flat line. So the bottom of a cup is always a little rounder than its rim.

Light makes form visible. Use a single lamp from one side, slightly above, and turn off other lights. A single light source gives every object a clear light side, a shadow side and a cast shadow on the table, which are what make a drawing look three-dimensional. Many lights from many directions make flat, confusing shadows.

Finally, arrange with care. Overlap some objects so they feel related, vary their heights, and leave some space around the group. Artists have always chosen humble

things for still life (bread, fruit, jugs), because careful looking makes even ordinary things beautiful.

## PICTURE STUDY



*Still Life with Lemons, Oranges and a Rose*, Francisco de Zurbarán, 1633 · Oil on canvas · Norton Simon Museum, Pasadena, California

Image: [Wikimedia Commons](#), public domain

Zurbarán was a Spanish painter of monks and saints who painted only a handful of still lifes. This one is so calm and carefully arranged that many viewers have thought of it as a kind of quiet prayer. Look at how each object is observed, not invented.

### Look closely

- Find the light. Which side of each object is brightest, and where does the light seem to come from?
- Look at the three groups. How has Zurbarán spaced them? Do any objects overlap?
- Look at the cup of water on the right-hand plate. Find the ellipse of its rim and the ellipse of the plate. Which is rounder?
- Notice the dark background. What does it do to the edges of the lemons and oranges?

### Talk about it

1. Why do you think Zurbarán kept the background so plain and dark?
2. The objects are set out almost in a straight line, like a row on an altar. How does that make the picture feel?

3. Which object do you think was the hardest to paint, and why?

## STUDIO PROJECT

### A Three-Object Still Life

You will set up and draw a still life of three objects with a single light, using blocking in and correct ellipses, as Zurbarán and every trained artist did.

#### You will need

- Drawing paper (9×12 in or larger)
- 2H, HB, 2B and 4B pencils
- Kneaded eraser
- Three objects: one cylinder (mug, jar or can), one round object (apple, orange, egg) and one object of your choice
- A plain cloth or sheet of paper as a background
- A desk lamp

#### Steps

1. Set the objects on a table against the plain background. Overlap at least two of them and vary their heights. Shine the lamp from one side, slightly above, and turn off other lights.
2. Sit where you can see the whole group without moving your head. Mark your chair's position so you can come back to the same view in the second session.
3. With the 2H pencil, lightly mark the top, bottom, left and right edges of the whole group on your paper. Leave a margin of at least an inch on all sides.
4. Block in each object with simple, straight-sided shapes. Compare: is the mug taller than the apple? By how much? Adjust now, while the lines are light.
5. Draw the ellipses at the top and bottom of the cylinder. Draw the whole ellipse lightly, even the back half you cannot see, so the curve is symmetrical. Make the bottom ellipse slightly rounder than the top.
6. Refine the outlines with an HB pencil, pressing more firmly where an edge faces the shadow side and more lightly where it faces the light.
7. Squint to find the shadow shapes. Lightly outline the shadow side of each object and its cast shadow on the table, then fill these shapes with an even

tone using the 2B.

8. Darken the deepest shadows (where objects touch the table and where they overlap) with the 4B. Leave the paper white for the brightest highlights.
9. Erase any construction lines that distract, sign the drawing, and write the date.

#### **Tips**

- Hold your pencil farther back from the point when blocking in; it keeps your lines light and loose.
- Step back from the drawing every ten minutes and compare it with the setup from a distance.

#### **Check your work**

- ☐ My three objects are in proportion to each other.
- ☐ My ellipses are rounded at both ends, and the lower one is rounder.
- ☐ Every object has a light side, a shadow side and a cast shadow that agree with the lamp.

#### **SKETCHBOOK PRACTICE**

1. Fill a page with ellipses: draw ten cups or jars seen from different heights (above, at eye level, and below eye level).
2. Draw one piece of fruit three times in five minutes each, turning it a little each time.
3. Draw a cluster of objects on your kitchen counter using only blocked-in shapes, no details.

**From history.** Still life became a respected subject in the 1600s, especially in Spain and the Netherlands. Painters such as Zurbarán, Juan Sánchez Cotán and the Dutch masters showed that bread, fruit and dishes, observed with love, could be as moving as grand scenes.

#### **COMMON MISTAKES**

- Drawing ellipses with pointed ends like a lemon. Ellipses are always rounded at the ends.
- Starting with details on one object before the whole group is placed, so the drawing runs off the page.

- Drawing a dark outline all the way around every object. Real edges are lighter on the lit side.

**Make it a game • Ellipse Duel.** Set a cup at three heights: on the floor, on the table, and at your eye level. For each, draw the cup's opening as an ellipse in twenty seconds. Your parent checks that it gets narrower as it nears your eye level. Say why. Then block in the whole cup with big shapes first. Score a point per good ellipse.

**Scripture.** “He hath made every thing beautiful in his time” (Ecclesiastes 3:11, KJV)

A still life asks us to look long at ordinary things. When we do, we discover that God has made even a lemon or a cup of water worth our careful attention.

## 1.2 DRAPERY: THE FOLDS OF CLOTH

### OBJECTIVES

- Identify the common fold types: pipe folds, drop (diaper) folds, and zigzag folds.
- Draw drapery from life by finding the light, halftone and shadow planes of each fold.
- Explain why studying drapery was a standard exercise for Renaissance apprentices.

**Warm-up.** Drop a dish towel on the table and draw only the lines where the cloth changes direction, in three minutes. Then pick up the towel by one corner, let it hang, and draw it again in three minutes.

### WATCH

#### How To Draw Fabric Folds: Drawing based on Leonardo da Vinci

Circle Line Art School · 5:25

<https://www.youtube.com/watch?v=mBHak4W7bFI>

#### WHEN TO WATCH

After the core ideas. He copies one of Leonardo's drapery studies; pause when he starts shading and notice how he finds the light, halftone and shadow planes of each fold.

### BACKUP VIDEO

#### How to draw a Drapery Drawing | How to draw folds in Cloth in Pencil | Drawing Fabric Folds

draw easy channel · 4:41

[https://www.youtube.com/watch?v=t\\_1oe9uAtH4](https://www.youtube.com/watch?v=t_1oe9uAtH4)

A silent step-by-step drawing of folds in cloth; good to draw along with.

### KEY TERMS

#### **drapery**

Cloth arranged in folds, in a still life or as clothing on a figure.

#### **pipe fold**

A long, tube-shaped fold that forms when cloth hangs from one point or line, like a curtain.

**drop fold**

Folds that fall in a curved, swinging shape when cloth hangs between two points (also called a diaper fold or swag).

**zigzag fold**

A fold that bends back and forth, often where cloth is pushed together, as in a sleeve at the elbow.

**halftone**

The middle values between the light and the shadow on a form, where the surface is turning away from the light.

**CORE IDEAS**

Cloth looks complicated, but every fold is simply a form, like a cylinder or a cone, made of fabric. A pipe fold is a half-cylinder; the swinging curve of a drop fold is part of a cone. If you can shade a cylinder, you can shade a fold.

Every fold has the same order of values across it: a **light** plane facing the lamp, a **halftone** where the surface turns, a **core shadow** (the darkest band on the form), and often some **reflected light** in the shadow from nearby cloth. The deepest darks are in the narrow valleys where two folds meet, because light can hardly reach in.

Folds are caused by something: the cloth hangs from a point, rests on an object, or is pushed together. Find the **points of support** first (a corner on a nail, the top of a bottle under the cloth). Folds radiate out from those points. If you lose your place in a tangle of folds, go back to the supports.

Draw drapery from big to small. First the overall silhouette, then the few largest folds, then the medium folds, and only at the end the small wrinkles. Leave out many small wrinkles: artists simplify drapery so that the big rhythms show clearly.

In Renaissance workshops, apprentices drew drapery for months. Leonardo and his fellow pupils in Verrocchio's workshop dipped linen in clay slip, arranged it over a small model, and drew it with a brush on colored paper. The point was to learn how light moves over a form, a skill that makes clothed figures look solid and alive.

## PICTURE STUDY



*Annunciation*, Leonardo da Vinci, about 1472–1476 · Oil and tempera on panel · Uffizi Gallery, Florence

Image: [Wikimedia Commons](#), public domain

Leonardo painted this when he was about twenty, still an apprentice in Verrocchio's workshop. It shows the angel Gabriel bringing Mary the news that she will be the mother of Jesus (Luke 1:26–38). The drapery is where the young Leonardo showed what he had learned from his long practice.

### Look closely

- Look at the angel's sleeve and cloak. Can you find pipe folds and zigzag folds?
- Find Mary's blue cloak spread across her lap. Where are the darkest valleys between the folds?
- Where is the light coming from? Do the lights on the folds of both figures agree?
- Compare the soft, heavy cloth of Mary's cloak with the thinner cloth of the angel's sleeve.

### Talk about it

1. How does the drapery help you feel the shape of the knees and arms underneath?
2. Why do you think a master would make apprentices draw drapery again and again?

3. What do Mary's raised hand and the angel's gesture tell you about this moment?

## STUDIO PROJECT

### A Drapery Study on Toned Paper

You will hang a cloth so it makes clear folds and draw it on gray or tan paper with dark pencil or charcoal for the shadows and white for the lights, the way Renaissance apprentices did.

#### You will need

- Gray or tan toned paper (9×12 in)
- HB and 4B pencils or a charcoal pencil
- White charcoal pencil or white pastel pencil
- Kneaded eraser
- A plain, light-colored cloth (a pillowcase, napkin or old sheet)
- A pushpin or tape, and a desk lamp

#### Steps

1. Pin the cloth to a wall or the back of a chair at one or two points so it hangs in folds. Try to get at least one pipe fold and one drop fold. Light it from one side.
2. Lightly draw the outer silhouette of the cloth with the HB pencil. Mark the pins (points of support) with small dots.
3. Draw the edges of the four or five largest folds as long, simple lines radiating from the supports.
4. Squint and find the shadow shapes. Fill them in with an even, medium tone using the side of the pencil or charcoal. Do not use the white yet.
5. Darken the core shadows and the deep valleys where folds meet. Keep the edges of core shadows soft, because the cloth turns gradually.
6. With the white pencil, draw only the lightest planes, the tops of folds facing the lamp. Press lightly in the halftones and harder on the brightest spots.
7. Let the tone of the paper stand for the halftone. You should now have three values: dark, paper, and white.
8. Add a few smaller folds if they help, then stop. Sign and date your drawing.

### Tips

- Never let the white and the dark touch and mix; the paper's middle tone should always lie between them.
- If the cloth gets bumped, take a photo of the setup at the start so you can rearrange it.

### Check your work

- ☐ My folds come from clear points of support.
- ☐ I used three values: dark shadows, the paper's middle tone and white lights.
- ☐ The lights on every fold agree with the direction of my lamp.

### SKETCHBOOK PRACTICE

1. Draw the sleeve of a jacket or sweater hanging on a chair, focusing on zigzag folds.
2. Draw a curtain in your home using only long pipe folds and their shadows.
3. Copy a small section of the angel's sleeve from Leonardo's Annunciation.

**From history.** The workshop of Andrea del Verrocchio in Florence trained Leonardo, Perugino and others. Several drapery studies on linen, painted in gray and white with a brush, survive from this workshop and are now in the Louvre and the Uffizi.

### COMMON MISTAKES

- Drawing every tiny wrinkle, so the large folds are lost. Simplify.
- Outlining folds with hard lines instead of shading them as forms.
- Using white in the shadows. White belongs only on planes that face the light.

**Make it a game • Fold Maker.** Drape a towel over a chair. Your parent calls pipe fold, drop fold or zigzag fold, and you arrange the cloth to match in thirty seconds. Then point to the light, halftone and shadow planes on one fold. Switch roles. Your parent may call a trick name for you to catch. Ten calls.

## 1.3 EDGES: HARD, SOFT AND LOST

### OBJECTIVES

- Define hard, soft and lost edges and find each in a real setup.
- Explain why edges change: contrast, form turning, focus and distance.
- Draw a still life that uses hard and soft edges on purpose to lead the eye.

**Warm-up.** Look at a ball or an apple under a lamp. Draw a quick circle, then draw only its shadow side. Where the ball turns away from the light, blend the shadow softly into the light with your finger or a stump. Where the ball meets the background, keep the edge crisp. Compare the two kinds of edge.

### WATCH

#### Learn to Draw #11 - Observing Edges for Realistic Renderings

SchaeferArt · 9:59

<https://www.youtube.com/watch?v=yy81BjqGRu0>

### WHEN TO WATCH

After the core ideas. Pause each time he names an edge and find the same kind of edge in your own setup.

**Note:** The description lists supply links; ignore them.

### KEY TERMS

#### **edge**

The place where one shape or value meets another. In drawing, an edge is not the same as a line.

#### **soft edge**

A gradual, blurred transition, where a rounded form turns slowly away from the light or where values are close.

#### **hard edge**

A sharp, clear transition between two shapes, usually where contrast is strong or an object turns away abruptly.

#### **lost edge**

An edge that disappears completely because the object and the background are the same value.

## **found edge**

An edge that is clearly visible. Artists use lost and found edges together to make a drawing breathe.

### **CORE IDEAS**

Look around the room: very few things have dark outlines around them. What we see are **edges**, places where one value or color meets another. Some edges are sharp, some are gentle, and some vanish altogether. Learning to see and control edges is one of the main differences between a beginner's drawing and a master's.

Edges are hard or soft for real reasons. **Hard edges** appear where there is strong contrast (a white cup against a dark wall), where a form turns sharply (the corner of a box), or in cast shadows close to the object. **Soft edges** appear where a rounded form turns gradually away from the light (the shadow edge on an orange), where values are close together, and in cast shadows far from the object. A **lost edge** happens when the object and the background are the same value, so the eye cannot tell where one ends.

Edges also guide attention. The eye goes first to the hardest edges and strongest contrasts in a picture. Masters keep their hardest edges near the center of interest and soften edges elsewhere. This imitates the way our eyes work: what we look at directly is sharp, and the edges of our vision are blurred.

To make a soft edge in pencil, shade in a gradual blend, or smudge gently with a blending stump or tissue, then lift any extra with a kneaded eraser. To make a hard edge, shade right up to the line with a sharp pencil, or erase a crisp shape with the edge of a vinyl eraser. Do not outline; let values meet.

Bubbles, glass and polished metal are perfect for edge practice, because they show crisp highlights and soft reflections side by side. That is why Chardin's soap bubble is such a good lesson: one round, nearly invisible form, made entirely of edges.

## PICTURE STUDY



*Soap Bubbles*, Jean-Siméon Chardin, about 1733–1734 · Oil on canvas · Metropolitan Museum of Art, New York

Image: [Wikimedia Commons](#), public domain

Chardin was a French painter of quiet kitchens and children at play. Here a young man blows a soap bubble while a small child watches. The bubble is painted with only a few touches of light, yet we believe in it completely.

### Look closely

- Find the bubble. Where is its edge hard and where is it almost lost against the background?
- Look at the young man's face and hands. Are the edges there sharp or soft?
- Find the hardest edge in the whole painting. Is it near the place you look first?
- Look at the edge of the stone window ledge. How does Chardin make it feel solid?

### Talk about it

1. Why might Chardin keep the edges of the background figures and the leaves soft?
2. A soap bubble lasts only a moment. What do you think Chardin wanted us to think about?

3. How would the painting change if every edge were painted sharp?

## STUDIO PROJECT

### Edges Still Life: Glass, Fruit and Cloth

You will draw a small still life that contains a glass object, a round fruit and a cloth, so that you must draw hard, soft and lost edges in one picture.

#### You will need

- Drawing paper (9×12 in)
- HB, 2B, 4B and 6B pencils
- Blending stump or tissue
- Kneaded eraser and vinyl eraser
- A clear glass or jar, a round fruit, a cloth (a dark or medium-colored one), and a lamp

#### Steps

1. Set the glass and fruit on the cloth, with a background that is dark on one side. Light from one side so the glass shows bright highlights.
2. Block in the shapes lightly with HB. Draw the glass's ellipses carefully.
3. Before shading, make a small key in the margin: a hard edge, a soft edge and a lost edge, each about an inch long.
4. Shade the background and cloth with 2B, leaving the shapes of the objects. Wherever an object is the same value as the background, let the edge disappear (lost edge).
5. Shade the fruit's shadow side with a gradual blend so that its turning edge is soft. Keep its outer edge against the background firmer.
6. In the glass, draw the reflections and the dark shapes you see through it. Erase sharp, small highlights with the corner of the vinyl eraser for hard edges.
7. Decide on your center of interest (probably the glass). Make the strongest contrast and hardest edges there; soften the edges at the far ends of the cloth.
8. Darken the deepest accents with 6B, sign and date.

#### Tips

- Squint often: squinting removes details and shows you which edges are truly hard.
- A stump can make a drawing look muddy if overused. Blend only where you need a soft edge.

#### Check your work

- ☐ My drawing has at least one clear hard edge, one soft edge and one lost edge.
- ☐ The hardest edges and strongest contrast are near my center of interest.
- ☐ I did not draw dark outlines around the objects.

#### SKETCHBOOK PRACTICE

1. Draw a spoon or a shiny pot lid, paying attention to its sharp highlights and soft reflections.
2. Draw a cloud shape and a rock side by side, one with all soft edges and one with hard edges.
3. Find three lost edges in your house (for example, a dark chair against a dark wall) and sketch each one quickly.

**From history.** Chardin painted several versions of *Soap Bubbles*. In the 1700s, a bubble was a familiar symbol in paintings of how brief life is, an idea found in Scripture too (James 4:14). Chardin was admired for making such ordinary moments feel calm and timeless.

#### COMMON MISTAKES

- Outlining everything with an even, dark line, which flattens the drawing.
- Making every edge soft, so the drawing looks blurred and has no focus.
- Smudging with fingers, which leaves oil on the paper and makes later shading blotchy. Use a stump or tissue.

**Make it a game • Edge Call.** Walk around a room with your parent pointing to places where one thing meets another. Within three seconds, call it a hard, soft or lost edge and give the reason: contrast, a turning form, focus or distance. A correct call with a reason earns two points. A correct call alone earns one.

## 1.4 MEASURING: SIGHTING, ANGLES AND PROPORTION

### OBJECTIVES

- Use the sighting method (pencil at arm's length) to compare sizes.
- Copy angles accurately from life using a pencil as a guide.
- Draw a group of objects or a plant with accurate proportions.

**Warm-up.** Hold your pencil at arm's length with your elbow locked and one eye closed. Measure the height of a door frame with the pencil, sliding your thumb to mark it. Now see how many of those door heights fit across the wall. Write down your answer, then draw the door and wall as a simple rectangle diagram.

### WATCH

#### How To Draw With Sighting

Drawsh Studio · 8:09

<https://www.youtube.com/watch?v=2sK4O5Zdhcs>

### WHEN TO WATCH

After the core ideas and before you try sighting yourself. Pause to practice each step with your own pencil.

### BACKUP VIDEO

#### Drawing with Simple Sighting Technique

Chris Triner · 8:44

[https://www.youtube.com/watch?v=Otv\\_l\\_qkML4](https://www.youtube.com/watch?v=Otv_l_qkML4)

A second lesson by a high school art teacher, useful if the first is unclear.

### KEY TERMS

#### **sighting**

Measuring by eye with a pencil held at arm's length, to compare the sizes and angles of what you see.

#### **unit of measure**

One length you choose (for example, the height of a cup) that you compare everything else to.

**proportion**

The size of one part compared with another part or with the whole.

**plumb line**

A true vertical line, used to see which points line up above or below each other.

**picture plane**

An imaginary flat window between you and your subject; sighting treats what you see as if it were flattened onto this window.

**CORE IDEAS**

Our minds are poor judges of size. We tend to draw important things too big, near things too small, and every angle closer to straight up or straight across than it really is. **Sighting** replaces guessing with measuring, using a tool everyone has: a pencil.

How to sight a proportion: Hold the pencil at full arm's length, elbow locked, with the pencil upright and flat to your view (as if laid against a window). Close one eye. Line the tip up with the top of an object and slide your thumb down to its bottom. That length is your **unit of measure**. Now, without changing your arm, see how many units fit into other things: "The bottle is two and a half cups tall; the whole group is four cups wide." Transfer those ratios to your paper.

Your arm must stay locked and the same distance from your eye every time, and you must stay in the same spot. If you lean in or bend your elbow, all your measurements change. Mark your chair's position with tape.

How to sight an angle: Hold the pencil out flat to the picture plane and turn it until it lines up with an edge, such as the slope of a roof or a leaning stem. Keep that angle, bring the pencil down to your paper, and draw it. You can also compare the angle against a true vertical or horizontal: "It leans about as far as the minute hand at five past."

Use **plumb lines** to check alignments. Hold the pencil perfectly vertical and ask: what is directly below the tip of the bottle? Where does a vertical from the left edge of the bowl hit the table? These checks catch mistakes quickly. Dürer, who wrote whole books on measurement and proportion, believed that careful measuring was not the enemy of beauty but the servant of it.

## PICTURE STUDY



*Great Piece of Turf*, Albrecht Dürer, 1503 · Watercolor and gouache on paper · Albertina, Vienna

Image: [Wikimedia Commons](#), public domain

Dürer, a German artist and devout Christian, dug up a clump of meadow and painted it at life size, blade by blade. No one had ever made a serious work of art from a patch of weeds. It is a monument to patient measuring and looking.

### Look closely

- Pick one tall grass stem. Follow its angle from bottom to top. Does it lean, curve, or stand straight?
- Compare the heights of the plants. Which is tallest? How many times taller is it than the shortest leaf?
- Find the dandelion flowers. Are they drawn as perfect circles or as ellipses seen at an angle?
- Look at the bottom edge of the earth. Where is it darkest?

### Talk about it

1. Why might Dürer choose such a humble subject for so much careful work?
2. How could sighting have helped Dürer get so many angles right?
3. What does this painting teach about the value of small things in God's creation?

## STUDIO PROJECT

### A Measured Drawing of a Plant or Tabletop Group

You will draw a houseplant, a bunch of weeds or flowers in a jar, or a group of tall and short objects, using sighting to get every proportion and major angle right.

#### You will need

- Drawing paper (11×14 in if you have it)
- HB and 2B pencils
- Kneaded eraser
- A plant in a pot or wild plants in a jar (or a tall bottle, a short box and a mug)
- Tape to mark your chair position

#### Steps

1. Set up your subject at about the height of a table, six to eight feet away. Mark your chair's position.
2. Choose your unit of measure: something easy to see, like the height of the pot. Sight it with your arm locked.
3. Measure the whole subject in units: how many units tall and how many wide? Write these numbers in the margin.
4. Lightly draw a box on your paper with the same height-to-width ratio. This box is the outside limit of your drawing.
5. Draw the pot or main object inside the box at the right size, then sight and place the tallest stems or objects. Check each against your unit.
6. Sight the angle of each major stem or edge with the pencil, and copy it onto the paper.
7. Use plumb lines to check: which leaf tip is directly above the pot's rim? Correct any errors now.
8. Refine the shapes of the leaves or objects, then shade lightly with 2B to show the light and shadow sides.

9. In the margin, write three of your measurements (for example, “stem = 2½ pots”). Sign and date.

#### **Tips**

- Measure, draw, then check. Re-measure the big proportions at least twice during the drawing.
- Do not try to measure tiny details. Sighting is for the big relationships; your eye can handle the small ones once they are in place.

#### **Check your work**

- ☐ My drawing has the same height-to-width proportion as the real subject.
- ☐ The angles of the main stems or edges match what I sighted.
- ☐ I wrote my measurements in the margin and they match the drawing.

#### **SKETCHBOOK PRACTICE**

1. Sight and draw a doorway with a chair in front of it, recording how many chair-heights tall the door is.
2. Sight the angles of a staircase railing or a leaning broom and draw only those angles.
3. Draw a family member sitting in a chair (clothed, fully dressed), measuring how many head-heights tall the seated figure is.

**From history.** Dürer traveled to Italy twice to learn the Italian study of perspective and proportion. Back home in Nuremberg he wrote *Four Books on Human Proportion*, published in 1528, the year he died, and designed drawing devices to help artists measure what they saw.

#### **COMMON MISTAKES**

- Bending the elbow or leaning forward while measuring, which changes every measurement.
- Tilting the pencil toward or away from you; keep it flat, as if pressed against a window.
- Measuring once at the beginning and never checking again.

**Make it a game • Plumb Line Detective.** Tie a button to a string and hold it up at arm's length as a plumb line. Pick three points on a tabletop group and predict which ones line up vertically. Check with the string. Then copy the angle of one object's edge with your pencil. Surprises earn bragging rights. First to five matches wins.

**Scripture.** “A false balance is abomination to the LORD: but a just weight is his delight.” (Proverbs 11:1, KJV)

Honest measuring matters to God in the marketplace, and the habit of measuring truly carries into our art. Sighting is a way of telling the truth about what we see.

## UNIT 1

# SEEING LIKE AN ARTIST

Most drawing problems are really seeing problems. When we draw a cup, the mind hands us a symbol of a cup (a rectangle with a loop on the side) instead of the shape the eye actually sees: an ellipse on top, a curve at the bottom, a handle that is half hidden. This unit trains the eye to see what is really there.

You will draw a still life, a draped cloth, and objects with both sharp and melting edges, and you will learn to measure proportions and angles with nothing but a pencil held at arm's length. Along the way you will study four masters who were famous for patient looking: Zurbarán, Leonardo, Chardin and Dürer.

### PREREQUISITES

- Able to hold a pencil lightly and make long, smooth lines
- Knows the basic forms: sphere, cube, cylinder, cone
- Has a sketchbook, graphite pencils (2H–6B), a kneaded eraser and a lamp

### MASTERY CHECKLIST

- ☐ I can set up and light a simple still life and draw it from observation.
- ☐ I can draw the large shapes first and add details last.
- ☐ I can draw pipe folds, drop folds and the shadows inside folds in cloth.
- ☐ I can tell hard, soft and lost edges apart and draw each on purpose.
- ☐ I can use sighting to compare sizes and copy angles accurately.

### LESSONS IN THIS UNIT

#### 1.1 Still Life: Seeing Shapes, Not Symbols

2 sessions of 50–60 minutes

#### 1.2 Drapery: The Folds of Cloth

2 sessions of 50–60 minutes

#### 1.3 Edges: Hard, Soft and Lost

2 sessions of 50–60 minutes

#### 1.4 Measuring: Sighting, Angles and Proportion

2 sessions of 50–60 minutes

# UNIT 1 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a small drawing.

Total: 100 points.

1. 6 pts

What is blocking in, and why should it come before details?

2. 8 pts

Give two rules for drawing ellipses on a cup.

3. 6 pts

Why should a still life be lit by a single lamp?

4. 8 pts

Name three kinds of folds in drapery and where each one happens.

5. 6 pts

Where are the darkest values in a drawing of folded cloth?

6. 8 pts

Define hard edge, soft edge and lost edge.

7. 6 pts

Where do masters usually put their hardest edges, and why?

8. 8 pts

Describe how to measure a proportion by sighting.

9. 6 pts

What is a plumb line used for?

10. 8 pts

Name the artist of each work: *Great Piece of Turf*; *Soap Bubbles*; *Still Life with Lemons, Oranges and a Rose*; the *Uffizi Annunciation*.

11. **15 pts**

In four or five sentences, describe how Chardin uses edges in *Soap Bubbles*. Mention at least two kinds of edge.

12. **15 pts**

Draw a cylinder (a can or cup) lit from the left, with a cast shadow. Label one hard edge, one soft edge and both ellipses.

## ANSWER KEY

1. Lightly drawing the big, simple shapes and their placement first. It makes sure size, proportion and placement are right before time is spent on details.
2. Ellipses are rounded at both ends, never pointed; ellipses farther below eye level look rounder, so the bottom of a cup is rounder than the rim.
3. One light source gives each object a clear light side, shadow side and cast shadow, which show form. Several lights make confusing, flat shadows.
4. Pipe folds (long tubes where cloth hangs from a point), drop or diaper folds (swinging curves where cloth hangs between two points), zigzag folds (where cloth is pushed together, as at an elbow).
5. In the narrow valleys where two folds meet and in the core shadows, where light cannot reach.
6. Hard: a sharp transition with strong contrast or a sudden turn. Soft: a gradual, blurred transition where a form turns slowly or values are close. Lost: an edge that disappears because object and background are the same value.
7. Near the center of interest, because the eye is drawn first to hard edges and strong contrast.
8. Hold the pencil at arm's length with the elbow locked, one eye closed, pencil flat to the view; mark an object's size with the thumb as a unit; compare other sizes in units and transfer the ratios to the paper.
9. To check which points line up vertically, catching errors in placement.
10. Dürer; Chardin; Zurbarán; Leonardo da Vinci.
11. Model: The bubble is mostly made of soft and lost edges, so it seems to dissolve into the background, with just a few crisp highlights that make it believable. The face and hands of the young man have soft edges that make them feel rounded. The hardest edges are on the stone ledge and near the bubble and the face, where Chardin wants us to look. The background figure and leaves have soft edges, so they stay back.
12. Drawing should show a cylinder with correctly rounded ellipses (lower one rounder), shadow on the right side with a soft turning edge labeled, a hard edge (such as the outline against the background or the near edge of the cast shadow) labeled, and a cast shadow to the right.

## PORTFOLIO PIECE: AN OBSERVED STILL LIFE WITH DRAPERY

Arrange three or four objects (including one cylinder) on a draped cloth with at least two clear folds, lit by a single lamp. Use sighting to block in the proportions, draw the ellipses and folds carefully, and shade the whole drawing in graphite on 11×14 in paper. Plan your edges: make the hardest edges and strongest contrast at your center of interest, and let some edges soften or become lost elsewhere.

| LOOK FOR                        | WHAT IT MEANS                                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Proportion and placement</b> | Objects are in correct proportion to each other (checked by sighting) and the group is well placed on the page. |
| <b>Ellipses and drapery</b>     | Ellipses are rounded and consistent with eye level; folds come from clear supports and are shaded as forms.     |
| <b>Light and shadow</b>         | One consistent light source; each object and fold has a light side, shadow side and cast shadow.                |
| <b>Edges</b>                    | Hard, soft and lost edges are all present and used to lead the eye to the center of interest.                   |
| <b>Craftsmanship</b>            | Clean paper, no heavy outlines, careful finish, signed and dated.                                               |

## UNIT 2

# FIGURE AND PORTRAIT

The human figure has been the great subject of Western art, because people are the crown of God's visible creation and the main actors in every story. In this unit you will learn to draw the clothed figure in motion with quick gesture drawings, to measure its proportions in "heads," to draw a portrait in light and shadow, and to tackle the two things beginners fear most: hands and feet.

All our models are clothed: family members, friends, a wooden mannequin, or yourself in a mirror. Clothing is actually a help, because the folds you learned to draw in Unit 1 show the movement and form of the body underneath. The masters for this unit are Millet, Jules Breton, Holbein and Dürer.

### PREREQUISITES

- Can block in shapes lightly and use sighting to compare proportions (Unit 1)
- Can draw folds of cloth as forms (Unit 1)
- Has a willing family member to pose for a few minutes at a time

### MASTERY CHECKLIST

- ☐ I can draw a 30-second to 2-minute gesture that shows the action of a clothed pose.
- ☐ I can draw a standing figure about 7½ to 8 heads tall with the main landmarks in place.
- ☐ I can place the features of a face using the guidelines and shade it in four or five values.
- ☐ I can draw a hand by first blocking in its large shapes and then adding fingers in groups.
- ☐ I can draw a foot or shoe as a simple wedge before adding details.

### LESSONS IN THIS UNIT

#### 2.1 Gesture: Capturing the Action

2 sessions of 50–60 minutes

#### 2.2 Proportions of the Figure

2 sessions of 50–60 minutes

#### 2.3 The Portrait in Light and Shadow

2 sessions of 50–60 minutes

## UNIT 2 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a drawing. Total: 100 points.

1. (6 pts)

What does a gesture drawing try to capture?

2. (6 pts)

What is the line of action, and what shapes does it usually take?

3. (8 pts)

When a person stands with weight on the right leg, what happens to the hips and shoulders?

4. (6 pts)

About how many heads tall is a real adult? How many do artists often use?

5. (8 pts)

On an 8-head figure, where are the hips, the wrists and the fingertips?

6. (6 pts)

Where are the eyes placed on the head, from top to chin?

7. (8 pts)

Which planes of the face are usually darkest when the light is above? Name three places.

8. (6 pts)

Why does likeness depend more on proportion than on detail?

9. (8 pts)

In what order should you draw a hand?

10. **8 pts**

Name the artist of: *The Gleaners*; *The Song of the Lark*; *Portrait of Sir Thomas More*; *Praying Hands*.

11. **15 pts**

In four or five sentences, explain how Millet uses gesture in *The Gleaners* to show the meaning of the work.

12. **20 pts**

Draw a standing clothed figure 8 heads tall. Mark and label the chin, chest, navel, hips, knees and feet on the head divisions.

## ANSWER KEY

1. The action, movement, weight and energy of a pose, rather than details or likeness.
2. One flowing line through the whole body showing the main direction of the pose; usually a C-curve, S-curve or straight diagonal.
3. The right hip rises and the hips tilt; the shoulders tilt the opposite way (the right shoulder drops).
4. About 7½ heads; artists often use 8.
5. The hips are at 4 heads (halfway); the wrists line up with the hips; the fingertips reach about mid-thigh (about 5 heads).
6. Halfway between the top of the head and the chin.
7. The under planes facing down: the eye sockets, under the nose, under the lower lip, under the chin.
8. Because we recognize people by the shape of the head and the spacing of the features; a perfect detail in the wrong place loses the likeness.
9. Palm box and thumb mass first, then the fingers as groups, then individual fingers and segments, then details like nails and wrinkles.
10. Millet; Jules Breton; Hans Holbein the Younger; Albrecht Dürer.
11. Model: Each woman bends in a strong curve, so we feel the strain on her back. Their poses are slow and repeated, which shows that the work goes on all day. The clothing folds follow their bending bodies. Millet makes them large and solid in the front of the picture, giving poor workers dignity, while the rich harvest is small and far away.
12. Drawing should be divided into 8 equal heads with labels at about 1 (chin), 2 (chest), 3 (navel/elbows), 4 (hips/wrists), just below 6 (knees), 8 (feet); clothing drawn over landmarks; arms reaching mid-thigh.

## PORTFOLIO PIECE: A FAMILY MEMBER AT WORK OR REST

Draw a clothed family member doing something ordinary and characteristic (reading, knitting, playing an instrument, working at a desk, peeling vegetables), at least 11×14 in. Start with a gesture, measure the proportions in heads, give careful attention to the face and the hands, and shade the drawing in four or five values with one light source.

| LOOK FOR               | WHAT IT MEANS                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Gesture</b>         | The pose feels natural and alive; a clear line of action and weight shift are visible.                           |
| <b>Proportion</b>      | The figure is correctly proportioned in heads; head, hands and feet are the right size.                          |
| <b>Face and hands</b>  | Features are placed correctly; hands are built from big shapes and look like they are really holding or resting. |
| <b>Value and light</b> | One light source; shadow shapes are connected; four or five values are used.                                     |
| <b>Craftsmanship</b>   | Careful, clean finish; clothing folds drawn as forms; signed and dated.                                          |

## 2.1 GESTURE: CAPTURING THE ACTION

### OBJECTIVES

- Explain what a gesture drawing is and why artists use it.
- Find the line of action in a pose and draw it first.
- Draw a series of timed gesture drawings of clothed figures.

**Warm-up.** Stand up and copy, with your own body, the pose of one of the women in Millet's *The Gleaners*. Feel where your weight is and which way your back curves. Then sit and draw that curve as a single line in ten seconds. Repeat for the other two women.

### WATCH

#### Figure Drawing - Gesture

Drawing & Painting - The Virtual Instructor · 6:56

<https://www.youtube.com/watch?v=xbE0vYgng00>

#### WHEN TO WATCH

After the core ideas. Draw along with each of his examples, using the same short time he uses.

**Note:** The models in this video are fully clothed. The last half minute is a promotion for the channel's website.

### KEY TERMS

#### **gesture drawing**

A quick, loose drawing (usually 30 seconds to 2 minutes) that captures the movement, weight and energy of a pose rather than its details.

#### **weight shift**

The way the body tilts when weight rests more on one leg: the hips tilt one way and the shoulders tilt the other (also called *contrapposto*).

#### **line of action**

One long, flowing line, usually a C-curve, S-curve or straight line, that runs through the whole body and shows the main direction of a pose.

#### **static and dynamic**

A static pose is still and balanced; a dynamic pose shows movement or effort.

## CORE IDEAS

A gesture drawing is not a sloppy drawing; it is a drawing of something different. Instead of recording what a person looks like, it records what the person is **doing**: bending, reaching, leaning, resting. Artists draw gestures because a careful drawing that misses the action looks stiff, like a statue, while a quick drawing that catches the action looks alive.

Start every gesture with the **line of action**: one sweeping line from the head through the spine to the weight-bearing foot. Most poses fit a simple C-curve, an S-curve or a straight diagonal. Draw it in one stroke, with your arm moving from the shoulder, not just your fingers.

Next, add the masses quickly: an oval for the head, a tilted line for the shoulders, a tilted line for the hips, and single strokes for the arms and legs. Notice the **weight shift**: when someone stands on one leg, that hip rises and the shoulders tilt the opposite way. Finding these tilts is what makes a figure look as though it is really standing.

Clothing helps. Sleeves and skirts form folds that point toward the joints and show which way the body is twisting. A coat hanging from bent shoulders tells you more about tiredness than any face could. Draw the big directions of the clothing as part of the gesture.

Gesture drawing is practice in looking fast. Use timed poses: ten 30-second poses, then five 1-minute poses, then two 2-minute poses. Use cheap paper and many sheets. Your first gestures will look like scribbles; by the twentieth you will start to see the life in them.

## PICTURE STUDY



*The Gleaners*, Jean-François Millet, 1857 · Oil on canvas · Musée d'Orsay, Paris

Image: [Wikimedia Commons](#), public domain

Gleaners were the poorest villagers, who were allowed to gather the grain left behind after the harvest, as Ruth did in the field of Boaz (Ruth 2). Millet gave these hardworking women the size and dignity usually reserved for kings and saints. Each of their poses is a lesson in gesture.

### Look closely

- Find the line of action of each woman. Which one is a deep C-curve?
- Look at the woman on the right. Where is her weight? Which hand is reaching?
- Find the folds in their skirts and sleeves. Which way do they point?
- Compare the three foreground figures with the tiny figures near the haystacks. What does the contrast in size tell you?

### Talk about it

1. How do the poses alone tell you that this work is tiring and repeated all day?
2. Why do you think Millet placed the three women so large in the front of the picture?
3. Read Ruth 2:2–3. How does knowing that story change the way you see this painting?

## STUDIO PROJECT

### A Page of Gestures and a Working Figure

You will fill two pages with timed gesture drawings of clothed family members doing ordinary work, then make one longer (10-minute) drawing of a working pose built on a gesture.

#### You will need

- Newsprint or cheap copy paper (at least 20 sheets)
- A soft pencil (4B) or vine charcoal
- A timer
- A drawing board or clipboard
- A clothed model (a family member) willing to hold poses, or a mannequin

#### Steps

1. Ask your model to take ordinary working poses: sweeping, lifting a basket, reaching to a shelf, kneeling to tie a shoe, bending over a garden bed. Each pose should be natural and easy to hold.
2. Set the timer for 30 seconds. Draw only the line of action and the head oval. Do ten of these, a new pose each time.
3. Set the timer for 1 minute. Draw the line of action, the shoulder and hip tilts, and single lines for the arms and legs. Do five poses.
4. Set the timer for 2 minutes. Add the big masses of the body and the main directions of the clothing. Do three poses.
5. Choose your favorite working pose. Ask your model to hold it for 10 minutes (with a short break if needed).
6. Start with a 30-second gesture on a fresh sheet. Then, over that gesture, block in the proportions and the large shapes of the clothing.
7. Add the main folds and a little shadow on the side away from the light. Stop before it becomes stiff.
8. Look over all your gestures and circle the three that feel most alive. Write one sentence about why.

### Tips

- Draw from your shoulder, with long strokes. Small, hesitant strokes kill gesture.
- If you finish before the time is up, do not add details; draw the pose again beside the first one.

### Check your work

- ☐ Every gesture starts with a clear line of action.
- ☐ In my standing poses, the shoulder and hip lines tilt in opposite directions where weight is on one leg.
- ☐ My 10-minute drawing still feels like it is moving.

### SKETCHBOOK PRACTICE

1. Draw ten 1-minute gestures of people at church, at a park, or in your family going about their day.
2. Draw gestures of an animal (a dog, a cat or birds) for ten minutes. Animals move, so you must work fast.
3. Copy the three gleaners as gesture drawings, 1 minute each.

**From history.** Millet grew up on a farm in Normandy and spent his later life in the village of Barbizon near Paris, painting peasants at work and prayer. Many critics in his day disliked his paintings of poor laborers, but Van Gogh admired Millet so much that he copied his figures dozens of times.

### COMMON MISTAKES

- Starting with the face or outline instead of the line of action.
- Drawing the shoulders and hips perfectly level in every pose.
- Pressing hard and erasing. Gesture drawings should be light, fast and never erased.

**Make it a game • Five Poses, Thirty Seconds.** Your parent strikes five poses, thirty seconds each. For every pose, first draw only the line of action, then the weight shift, then a quick figure. Your parent calls whether each pose is static or dynamic. A line of action drawn first earns two points. Swap roles and pose for yourself.

## 2.2 PROPORTIONS OF THE FIGURE

### OBJECTIVES

- Use the head as a unit to measure the proportions of a standing adult figure.
- Locate key landmarks: chin, chest, waist, hips, knees, feet, and elbow and wrist positions.
- Draw a proportioned, clothed standing figure from a model or mannequin.

**Warm-up.** Using sighting from Lesson 1.4, measure how many head-heights tall a family member is while standing (clothed, at a distance of about ten feet). Then measure how many head-heights tall a seated person is. Write both numbers down.

### WATCH

#### How to Draw Basic Human Proportions | The Easiest Way to Draw the Human Body

That Art Teacher • 6:14

<https://www.youtube.com/watch?v=SoMPFmDk1Ww>

### WHEN TO WATCH

After the core ideas. Draw along with her on a sheet marked into eight equal sections.

**Note:** She draws a simple mannequin-style figure; no model is shown.

### KEY TERMS

#### **canon of proportion**

A set of rules for the ideal proportions of the human body, usually measured in head-heights.

#### **landmark**

A place on the body that lines up at a predictable point, such as the chin, chest, navel, hips and knees.

#### **head unit**

The height of the head from chin to crown, used as a measuring unit for the whole figure.

#### **foreshortening**

The way a form looks shorter when it points toward or away from you.

## CORE IDEAS

Artists measure the figure using the **head** as a unit. A real adult is about 7½ **heads** tall; artists often draw 8 heads for a figure that looks a little more heroic and elegant. Children have larger heads in proportion: a toddler is about 4 heads tall, a ten-year-old about 6.

On an 8-head adult figure, these landmarks fall close to the divisions: 1, the chin; 2, the chest; 3, the navel and the elbows; 4, the hips and the wrists (the hands reach about halfway down the thigh); 5, mid-thigh, where the fingertips end; 6, just below the knees; 7, the shins; 8, the soles of the feet. The halfway point of the body is at the hips, not the waist.

Width matters too. A man's shoulders are about 2 heads wide; a woman's are a bit narrower and her hips relatively wider. The arms are longer than most beginners think: with the arm hanging down, the elbow lines up with the waist and the wrist with the hip.

Proportion rules are a starting point, not a cage. Real people vary, and the rules apply only to a figure standing straight and facing you. When a person bends, sits or turns, parts are **foreshortened**. That is why we combine the canon with sighting: the rules tell you what to expect, and your measuring tells you what is really there.

Clothed figures follow the same landmarks. A belt sits near the waist; a hem may fall at the knee; sleeves bunch at the elbow. Find the landmark first, then let the clothing fall over it.

## PICTURE STUDY



*The Song of the Lark*, Jules Breton, 1884 · Oil on canvas · Art Institute of Chicago

Image: [Wikimedia Commons](#), public domain

A young farm worker, on her way to the fields at dawn, stops to listen to a lark singing. Breton painted her almost life-size and standing tall, so she is perfect for studying figure proportion. In 1934 this was voted the most popular painting in America.

### Look closely

- Sight her height in heads using your pencil on the screen. About how many heads tall is she?
- Find where her hands are compared with her hips. Does it match the rule?
- Find her waist, her knees and her feet. Do they fall where the canon says they should?
- Look at her clothing. Where does it show the form of the body underneath?

### Talk about it

1. What makes her pose look like a pause, not just a standing figure?
2. Why do you think so many people loved this painting?
3. Why might Breton have painted her standing so straight and so large in the frame?

## STUDIO PROJECT

### An 8-Head Figure, Clothed

You will draw a standing clothed figure twice: first a diagram figure measured in heads, then a drawing from a real model or mannequin built on the same measurements.

#### You will need

- Drawing paper (two sheets, 9×12 in or taller)
- Ruler
- HB and 2B pencils
- Kneaded eraser
- A clothed model standing in a relaxed pose (or a wooden mannequin)

#### Steps

1. On the first sheet, draw a vertical line about 10 inches tall. Divide it into 8 equal parts with small tick marks and number them.
2. Draw the head in the top section. Mark the landmarks: chest at 2, navel and elbows at 3, hips and wrists at 4, fingertips at mid-thigh, knees just below 6, feet at 8.
3. Build a simple figure over these marks: shoulders about 2 heads wide, a rib-cage oval, a pelvis shape, and cylinders for the arms and legs. This is your diagram.
4. On the second sheet, ask your model to stand with weight on one leg, arms relaxed. Begin with a 1-minute gesture to catch the tilt of the hips and shoulders.
5. Sight the model's head height and count how many heads tall the whole figure is. Mark the top and bottom on your paper and divide the space into that many heads.
6. Place the landmarks on your drawing as you see them on the model, checking each against your head unit.
7. Draw the clothing over the landmarks: collar, sleeves, belt or waistband, hem, shoes. Add the main folds.

8. Shade lightly on the side away from the light. Write the number of heads you measured in the margin, sign and date.

#### **Tips**

- Draw the whole figure lightly before committing to anything; the feet are often the part that runs off the page.
- If your figure looks too short, the legs are almost always the problem. The legs are about half the height of the body.

#### **Check your work**

- ☐ My diagram figure has the landmarks at the correct head divisions.
- ☐ My figure from life is about 7 to 8 heads tall, and I measured it.
- ☐ The hands reach to mid-thigh and the elbows line up with the waist.

#### **SKETCHBOOK PRACTICE**

1. Draw a child and an adult side by side in heads (for example, a 5-head child and an 8-head adult).
2. Draw a seated clothed figure and measure how many heads tall it is.
3. Measure a figure in a painting you like (such as one of Millet's) in head units and make a quick diagram.

**From history.** The ancient Roman architect Vitruvius wrote about the proportions of the human body, and Renaissance artists such as Leonardo and Dürer measured hundreds of people to test those rules. They found that real people vary a great deal, but that a few simple ratios help every artist begin.

#### **COMMON MISTAKES**

- Making the head too big, which makes adults look like children.
- Making the legs too short. The hips are at the halfway point of the body.
- Making the arms too short; the fingertips reach well below the hips.

**Make it a game • How Many Heads Tall?** Cut a paper strip the height of your head. Estimate how many heads tall your parent is, then measure by stepping the strip up the wall. Closest guess wins. Then name where the chin, chest, waist, hips, knees and feet fall in head units, and check them against your drawn figure.

## 2.3 THE PORTRAIT IN LIGHT AND SHADOW

### OBJECTIVES

- Place the features of the face using standard guidelines.
- Simplify a face into light and shadow shapes and render it in four or five values.
- Draw a portrait of a family member from life or from your own photograph.

**Warm-up.** Draw an egg shape and divide it with a vertical center line and a horizontal line halfway down. Place the eyes on the halfway line. Then draw three more egg heads tilted up, down and turned to the side, curving the guidelines around the egg as it turns.

### WATCH

#### How to Draw a Face: Step by Step for Beginners

Circle Line Art School • 13:11

<https://www.youtube.com/watch?v=p39WnAvQqVw>

### WHEN TO WATCH

After the core ideas. Draw along with him, pausing after each of the ten steps.

### KEY TERMS

#### **portrait**

A work of art that represents a particular person, showing his or her likeness and often something of his or her character.

#### **facial proportions**

The usual positions of the features: eyes halfway down the head, the face divided into three equal parts from hairline to brow, brow to nose, and nose to chin.

#### **plane**

A flat or nearly flat surface of a form facing one direction. The face has front, side and under planes that catch light differently.

#### **value**

How light or dark a tone is, from white to black.

## likeness

How much a portrait resembles the person. Likeness depends more on accurate proportions and big shapes than on details.

### CORE IDEAS

Every face is different, but the basic arrangement is the same. Seen from the front, the eyes sit **halfway** between the top of the head and the chin; most beginners place them far too high. The face from hairline to chin divides into three equal parts: hairline to brow, brow to the bottom of the nose, nose to chin. The space between the eyes is about one eye-width. The bottom of the ears lines up roughly with the bottom of the nose, and the corners of the mouth line up roughly below the pupils.

Likeness comes from the big things first: the shape of the head, the spacing of the features, and the pattern of light and shadow. A perfect eye in the wrong place destroys likeness; a rough eye in the right place keeps it.

To shade a face, think of it as a set of **planes**, like a carved block. The forehead, cheeks and nose front face forward; the sides of the head turn away; the under-plane of the nose, the eye sockets and the space under the lower lip face down. With a light above and to one side, the front planes are light, the side planes darker, and the under planes darkest. This pattern is what makes the head look solid.

Work in a few values. Squint at your model until the face breaks into two shapes: light and shadow. Draw the shadow shape as one piece first, in a single middle-dark tone. Then add a darker accent in the deepest places (eye sockets, nostrils, under the chin) and a few lighter halftones in the light. Four or five values are enough for a strong portrait.

A portrait is an act of attention and respect. You must look at another person carefully and kindly for a long time. Holbein's great portraits show not only what people looked like but something of who they were.

## PICTURE STUDY



*Portrait of Sir Thomas More*, Hans Holbein the Younger, 1527 · Oil on oak panel · The Frick Collection, New York

Image: [Wikimedia Commons](#), public domain

Holbein was a German painter who became court painter in England. This is his portrait of Thomas More, a lawyer, writer and statesman known for his faith and integrity. Look at how Holbein builds a living face out of carefully observed light and shadow.

### Look closely

- Where is the light coming from? Find the lightest part of the face.
- Find the shadow side of the face. Is it one simple shape or many small ones?
- Look under the nose, under the lower lip and in the eye sockets. Which planes face down and are darker?
- Compare the textures: stubble, fur, velvet and gold chain. How does Holbein show each one?

### Talk about it

1. What kind of person do you think this man was, from his face and expression?
2. Why do you think Holbein painted the eyes looking off to the side rather than at us?

3. Where does Holbein use his strongest contrast? Why there?

## STUDIO PROJECT

### A Portrait in Five Values

You will draw a portrait of a family member, from life or from a photograph you take yourself with one strong light, using correct proportions and a simple pattern of light and shadow.

#### You will need

- Drawing paper (9×12 in)
- 2H, HB, 2B, 4B and 6B pencils
- Kneaded eraser and blending stump
- A family member willing to sit (or a photo you take of them lit by one lamp from the side and above)
- A ruler

#### Steps

1. Light your sitter with one lamp from the side and a little above. If using a photo, print it in black and white about the size of your drawing.
2. Make a five-step value scale in the margin, from white to the darkest your 6B can make.
3. Lightly draw the egg shape of the head and the neck. Sight the width compared with the height.
4. Draw the center line and the eye line halfway down. Mark the three divisions of the face: hairline, brow, base of nose, chin.
5. Place the eyes, nose, mouth and ears on the guidelines, checking against your model. Adjust for the person's real features.
6. Squint and draw the outline of the shadow shape on the face, neck and hair. Fill it with an even middle-dark tone (value 4 on your scale).
7. Add the darkest accents (value 5) in the eye sockets, nostrils, between the lips, under the chin and in the darkest hair.
8. Add halftones (value 2 and 3) in the light side, where the planes turn. Leave the brightest spots (forehead, nose, cheekbone) nearly white.

9. Shade the clothing simply and stop. Compare with your value scale; sign and date.

#### **Tips**

- Keep checking the eye line. If the eyes drift up, the forehead shrinks and the person looks younger.
- Do not outline the nose; show it with the shadow under it and on its side.

#### **Check your work**

- ☐ The eyes are halfway down the head and the three divisions of the face are close to equal.
- ☐ The shadow side reads as one connected shape.
- ☐ My drawing uses all five values from my scale.

#### **SKETCHBOOK PRACTICE**

1. Draw the planes of a head as a simple carved block: front, side and under planes, shaded under a side light.
2. Draw five eyes, five noses and five mouths from family members or from portraits by the masters.
3. Copy the face of Holbein's Thomas More in pencil, using only three values.

**From history.** Holbein first came to England in 1526 with a letter of introduction to Thomas More, who welcomed him and helped him find work. More was later imprisoned and executed for refusing to deny his conscience, and he is remembered for his saying that he died “the king’s good servant, but God’s first.”

#### **COMMON MISTAKES**

- Placing the eyes too high on the head.
- Drawing the nostrils and lips with dark outlines instead of shadows.
- Spotty shading: many small shadow patches instead of one connected shadow shape.

**Make it a game • Call the Value.** Light a model's face from one side with a lamp. Squint. Your parent points to areas of the face, and you shout a number from one, the lightest, to five, the darkest. Check against the real thing by squinting together. The closest number wins a point. Switch roles.

**Scripture.** “So God created man in his own image, in the image of God created he him” (Genesis 1:27, KJV)

Every face you draw belongs to someone made in God’s image. That is why portrait drawing calls for patience and respect.

## 2.4 HANDS AND FEET

### OBJECTIVES

- Block in a hand as simple shapes: the palm as a box, the fingers as cylinders in groups.
- Know the basic proportions of the hand and foot.
- Draw your own hand in three positions and a foot or shoe from life.

**Warm-up.** Hold up your non-drawing hand. Draw a box for the palm and a wedge for the thumb in 30 seconds. Change the position and repeat five times. Do not draw fingers yet, only the big shapes.

### WATCH

#### How to Draw a Realistic Hand

Drawing & Painting - The Virtual Instructor · 14:24

[https://www.youtube.com/watch?v=Q\\_PZ09Qlssw](https://www.youtube.com/watch?v=Q_PZ09Qlssw)

#### WHEN TO WATCH

Before the studio project. Watch the first part (the simple shapes) before drawing; then pause and work alongside the shading.

### BACKUP VIDEO

#### How to Draw Hands: Five Quick Sketches

Circle Line Art School · 8:41

[https://www.youtube.com/watch?v=IJHc\\_JL2Jlc](https://www.youtube.com/watch?v=IJHc_JL2Jlc)

Use for extra practice with different hand positions.

### KEY TERMS

#### **palm mass**

The block-like part of the hand between the wrist and the knuckles, which can be drawn as a slightly tapered box.

#### **knuckle arc**

The curved line along which the knuckles sit; the fingers fan out from it, and the middle finger is longest.

**thumb mass**

The fleshy pad at the base of the thumb, which connects the thumb to the wrist, not to the side of the palm.

**wedge**

The simple shape of the foot from the side: high at the ankle and sloping down to the toes.

**CORE IDEAS**

Hands are hard because they have many parts, but the solution is the same as for everything else: big shapes first. Draw the **palm** as a slightly tapered box, then the **thumb mass** as a wedge that starts at the wrist, then the fingers as groups of cylinders, and only at the end the nails and wrinkles.

Useful proportions: the hand is about as long as the face from chin to hairline. The fingers are about as long as the palm. The middle finger is longest; the knuckles sit on a curved line, not a straight one, and the fingers fan out from them. Each finger has three segments, and they get shorter toward the tip. The thumb is shorter than you think, reaching only to the first joint of the index finger.

Draw fingers in **groups**. When fingers curl, they often move together, so draw them as one mitten-like shape first, then divide it. Follow the gesture of the hand: a hand is almost never flat and stiff; it curves, and each finger curves a little toward the middle.

The foot from the side is a **wedge**: tall at the ankle, sloping down to the toes. From the front it is a fan, wider at the toes than at the heel. The inner ankle bone is higher than the outer one. A foot is about as long as the forearm. Shoes follow the same wedge, with the sole as a flat, slightly curved slab underneath.

Hands and feet are where a figure touches the world: it holds, gives, prays, walks and works. Many masters drew their own hands hundreds of times because they always had a model with them. You do too.

## PICTURE STUDY



*Praying Hands*, Albrecht Dürer, 1508 · Brush and ink with white heightening on blue-prepared paper ·  
Albertina, Vienna

Image: [Wikimedia Commons](#), public domain

Dürer made this drawing as a study for the hands of an apostle in an altarpiece. The altarpiece was later destroyed by fire, but the study survived and became one of the most famous drawings in the world. It is a lesson in how much a pair of hands can express.

### Look closely

- Find the palm masses of both hands. Can you see them as boxes pressed together?
- Follow the curve of the knuckles. Is it straight or arched?
- Look at how Dürer uses white lines. Where does he put them, and why?
- Find the veins and wrinkles. Are they drawn everywhere or only in some places?

### Talk about it

1. What does this drawing tell you about the person whose hands they are?
2. Why do you think a study drawing like this became more famous than the painting it was made for?
3. How does the blue paper help the black and white lines?

## STUDIO PROJECT

### A Page of Hands and a Foot Study

You will fill a sheet of toned paper with three studies of your own hand in different positions, and one study of a foot or shoe, using dark and white like Dürer.

#### You will need

- Gray, blue or tan toned paper (11×14 in or 9×12 in)
- HB and 4B pencils or a black colored pencil
- White charcoal or white colored pencil
- Kneaded eraser
- A mirror (optional, for unusual angles)
- A shoe or a family member's foot in a sock

#### Steps

1. Plan the page: three hands across the top two-thirds and a foot or shoe across the bottom. Lightly mark their positions so they do not crowd each other.
2. Hand 1, open and relaxed: block in the palm box, the thumb mass and the fan of finger directions. Check proportions: are the fingers about as long as the palm?
3. Divide the fingers into three segments each, getting shorter toward the tips. Shape the knuckle arc.
4. Hand 2, holding something (a cup, a pencil, or a book): draw the object first lightly, then the hand around it. Draw the curled fingers as a group before dividing them.
5. Hand 3, your choice: folded in prayer, pointing, or resting on the table. Use the same order: big shapes, groups, then details.
6. Shade all three with hatching on the shadow sides, and use white only on the brightest planes facing the light, as Dürer did.
7. Foot or shoe: block in the wedge from the side. Mark the ankle bones (inner higher than outer) or the shoe's sole, heel and toe box. Shade simply.
8. Sign and date. Write the position of each hand under it.

### Tips

- Draw your hand in a mirror to see it from unusual angles.
- If a finger looks wrong, check its length against the palm before redrawing details.

### Check your work

- ☐ Each hand began with a palm box and thumb mass.
- ☐ My fingers have three segments and the knuckles sit on a curve.
- ☐ My foot or shoe is built on a clear wedge shape.

### SKETCHBOOK PRACTICE

1. Draw your hand in ten different positions, 2 minutes each, using only big shapes.
2. Draw a family member's hands while they read, knit, or do a puzzle.
3. Draw three pairs of shoes from your closet from different angles.

**From history.** Dürer's *Praying Hands* was one of eighteen drawings he made for the Heller Altarpiece, painted for a merchant in Frankfurt. The central panel was destroyed in a fire in 1729, but many of his study drawings survive, showing how carefully he prepared.

### COMMON MISTAKES

- Drawing fingers as separate sausages attached to a flat palm.
- Attaching the thumb to the side of the palm instead of to the wrist.
- Making the hands too small. A hand covers most of the face.

**Make it a game • Twenty Questions Hand.** Your parent hides a hand in a pose behind a book. Ask yes-or-no questions about the palm box, finger cylinders, thumb mass or knuckle arc, up to twenty. Then draw it from your answers. Reveal and compare. For a foot, use a wedge. Score one point for each part you got right.

**Scripture.** “establish thou the work of our hands upon us; yea, the work of our hands establish thou it.” (Psalms 90:17, KJV)

Our hands are tools for work, prayer and making. Moses asked God to bless the work of our hands; we can ask the same for our art.

## UNIT 2

# FIGURE AND PORTRAIT

The human figure has been the great subject of Western art, because people are the crown of God's visible creation and the main actors in every story. In this unit you will learn to draw the clothed figure in motion with quick gesture drawings, to measure its proportions in "heads," to draw a portrait in light and shadow, and to tackle the two things beginners fear most: hands and feet.

All our models are clothed: family members, friends, a wooden mannequin, or yourself in a mirror. Clothing is actually a help, because the folds you learned to draw in Unit 1 show the movement and form of the body underneath. The masters for this unit are Millet, Jules Breton, Holbein and Dürer.

### PREREQUISITES

- Can block in shapes lightly and use sighting to compare proportions (Unit 1)
- Can draw folds of cloth as forms (Unit 1)
- Has a willing family member to pose for a few minutes at a time

### MASTERY CHECKLIST

- ☐ I can draw a 30-second to 2-minute gesture that shows the action of a clothed pose.
- ☐ I can draw a standing figure about 7½ to 8 heads tall with the main landmarks in place.
- ☐ I can place the features of a face using the guidelines and shade it in four or five values.
- ☐ I can draw a hand by first blocking in its large shapes and then adding fingers in groups.
- ☐ I can draw a foot or shoe as a simple wedge before adding details.

### LESSONS IN THIS UNIT

#### 2.1 Gesture: Capturing the Action

2 sessions of 50–60 minutes

#### 2.2 Proportions of the Figure

2 sessions of 50–60 minutes

#### 2.3 The Portrait in Light and Shadow

2 sessions of 50–60 minutes

## UNIT 2 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a drawing. Total: 100 points.

1. (6 pts)

What does a gesture drawing try to capture?

2. (6 pts)

What is the line of action, and what shapes does it usually take?

3. (8 pts)

When a person stands with weight on the right leg, what happens to the hips and shoulders?

4. (6 pts)

About how many heads tall is a real adult? How many do artists often use?

5. (8 pts)

On an 8-head figure, where are the hips, the wrists and the fingertips?

6. (6 pts)

Where are the eyes placed on the head, from top to chin?

7. (8 pts)

Which planes of the face are usually darkest when the light is above? Name three places.

8. (6 pts)

Why does likeness depend more on proportion than on detail?

9. (8 pts)

In what order should you draw a hand?

10. **8 pts**

Name the artist of: *The Gleaners*; *The Song of the Lark*; *Portrait of Sir Thomas More*; *Praying Hands*.

11. **15 pts**

In four or five sentences, explain how Millet uses gesture in *The Gleaners* to show the meaning of the work.

12. **20 pts**

Draw a standing clothed figure 8 heads tall. Mark and label the chin, chest, navel, hips, knees and feet on the head divisions.

## ANSWER KEY

1. The action, movement, weight and energy of a pose, rather than details or likeness.
2. One flowing line through the whole body showing the main direction of the pose; usually a C-curve, S-curve or straight diagonal.
3. The right hip rises and the hips tilt; the shoulders tilt the opposite way (the right shoulder drops).
4. About 7½ heads; artists often use 8.
5. The hips are at 4 heads (halfway); the wrists line up with the hips; the fingertips reach about mid-thigh (about 5 heads).
6. Halfway between the top of the head and the chin.
7. The under planes facing down: the eye sockets, under the nose, under the lower lip, under the chin.
8. Because we recognize people by the shape of the head and the spacing of the features; a perfect detail in the wrong place loses the likeness.
9. Palm box and thumb mass first, then the fingers as groups, then individual fingers and segments, then details like nails and wrinkles.
10. Millet; Jules Breton; Hans Holbein the Younger; Albrecht Dürer.
11. Model: Each woman bends in a strong curve, so we feel the strain on her back. Their poses are slow and repeated, which shows that the work goes on all day. The clothing folds follow their bending bodies. Millet makes them large and solid in the front of the picture, giving poor workers dignity, while the rich harvest is small and far away.
12. Drawing should be divided into 8 equal heads with labels at about 1 (chin), 2 (chest), 3 (navel/elbows), 4 (hips/wrists), just below 6 (knees), 8 (feet); clothing drawn over landmarks; arms reaching mid-thigh.

## PORTFOLIO PIECE: A FAMILY MEMBER AT WORK OR REST

Draw a clothed family member doing something ordinary and characteristic (reading, knitting, playing an instrument, working at a desk, peeling vegetables), at least 11×14 in. Start with a gesture, measure the proportions in heads, give careful attention to the face and the hands, and shade the drawing in four or five values with one light source.

| LOOK FOR               | WHAT IT MEANS                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Gesture</b>         | The pose feels natural and alive; a clear line of action and weight shift are visible.                           |
| <b>Proportion</b>      | The figure is correctly proportioned in heads; head, hands and feet are the right size.                          |
| <b>Face and hands</b>  | Features are placed correctly; hands are built from big shapes and look like they are really holding or resting. |
| <b>Value and light</b> | One light source; shadow shapes are connected; four or five values are used.                                     |
| <b>Craftsmanship</b>   | Careful, clean finish; clothing folds drawn as forms; signed and dated.                                          |

## UNIT 3

# COLOR AND PAINTING

This unit puts a brush in your hand. You will learn to handle acrylic paint: how to mix it, how to lay it on thin and thick, and how to build a painting in layers from dark to light. Then you will learn three ideas that painters use every day: color temperature (warm and cool), the beauty of a limited palette of earthy colors, and color harmonies that make a whole painting hold together.

Our masters are painters of color and light: Van Gogh, whose thick, bright paint you will imitate; Monet, who painted the same haystacks in every kind of light; Millet, who made a prayerful evening from a few humble earth colors; and Turner, who set the sky on fire with warm and cool.

### PREREQUISITES

- Knows the primary, secondary and tertiary colors on the color wheel
- Knows the words hue, value and intensity (or chroma)
- Has acrylic paints, synthetic brushes, a palette and canvas panels or canvas paper

### MASTERY CHECKLIST

- ☐ I can set up an acrylic palette, keep paint wet, mix cleanly, and clean my brushes properly.
- ☐ I can paint in layers: a toned ground, a block-in, then opaque lights.
- ☐ I can explain warm and cool color temperature and use warm light with cool shadows (or the reverse).
- ☐ I can mix a range of natural colors from a limited palette of yellow ochre, red, black and white.
- ☐ I can choose and use a color harmony: analogous, complementary, split-complementary or triadic.

### LESSONS IN THIS UNIT

#### 3.1 Acrylic Painting Basics

2 sessions of 50–60 minutes

#### 3.2 Color Temperature: Warm and Cool

2 sessions of 50–60 minutes

#### 3.3 Natural Colors from a Limited Palette

2 sessions of 50–60 minutes

## UNIT 3 REVIEW

Answer each question in your own words. You may look at your own sketchbook and color charts but not at the lessons. Questions 11 and 12 ask for a few sentences. Total: 100 points.

1. (6 pts)

What is acrylic paint made of, and why does it become water-resistant when dry?

2. (6 pts)

Why do painters often tone the canvas before beginning?

3. (6 pts)

Finish the painter's saying: dark to \_\_\_\_, thin to \_\_\_\_, big brushes to \_\_\_\_.

4. (8 pts)

What happens to the color of shadows when the light is warm? When the light is cool?

5. (6 pts)

Why is black a poor choice for darkening shadows?

6. (8 pts)

Name the four colors of the Zorn palette. Which color plays the part of blue?

7. (6 pts)

What are earth pigments? Give two examples.

8. (8 pts)

Define analogous, complementary and triadic color schemes.

9. (6 pts)

What does dominance mean in a color harmony?

10. **8 pts**

Name the artist of: *Sunflowers*; the *Stacks of Wheat*; *The Angelus*; *The Fighting Temeraire*.

11. **16 pts**

In four or five sentences, explain how Turner uses color in *The Fighting Temeraire* to tell the story.

12. **16 pts**

In three or four sentences, explain why Monet painted the same stacks of wheat many times, and what he learned about color.

## ANSWER KEY

1. Pigment in an acrylic polymer emulsion. As the water evaporates, the polymer particles fuse into a tough plastic film.
2. A middle tone removes the glaring white, makes values easier to judge, and gives harmony to the colors painted over it.
3. Light; thick; small.
4. Warm light gives cool-looking shadows; cool light gives warm-looking shadows.
5. It deadens and dirties colors; it lowers intensity and loses the temperature of the shadow.
6. Yellow ochre, a red, ivory black, titanium white. Black acts as the blue.
7. Pigments from colored clays and iron oxides dug from the ground, such as yellow ochre, burnt sienna, raw umber.
8. Analogous: neighbors on the color wheel. Complementary: opposites. Triadic: three colors evenly spaced around the wheel.
9. One color or temperature takes up most of the picture; the others are supporting or small accents.
10. Van Gogh; Monet; Millet; Turner.
11. Model: Turner divides the picture into a warm half and a cool half, a complementary harmony. The blazing orange sunset on the right suggests an ending, like the end of the old ship's life. The old warship is pale and silvery in the cool half, almost like a memory, while the small modern tug is dark and solid. The reflections repeat the colors, so the whole scene glows. The warm sunset dominates and draws the eye.
12. Model: Monet wanted to show how changing light changes the colors we see. The same stacks look gold, pink, violet or blue depending on the season and time of day. He learned that the light, not the object's local color, controls what we see, and that shadows are full of color, often cool when the light is warm.

## PORTFOLIO PIECE: A HARVEST TABLE IN A CHOSEN HARMONY

Paint a still life (8×10 in or larger) of three or four natural objects such as bread, fruit, vegetables or a clay jug, on a cloth, with a single light. Plan it with a small color sketch, choose either a limited palette or a named color harmony, tone your canvas, and build the painting in layers. Show warm and cool temperature in the light and shadow.

| LOOK FOR                 | WHAT IT MEANS                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------|
| <b>Paint handling</b>    | Toned ground, thin shadows and thicker lights; clean mixtures; confident brushwork.               |
| <b>Color temperature</b> | Light and shadow are clearly different in temperature, and shadows are not made with black alone. |
| <b>Harmony</b>           | The palette or harmony is named and followed; one color or temperature dominates.                 |
| <b>Form and value</b>    | Objects look solid, with correct values for light, halftone, shadow and cast shadow.              |
| <b>Craftsmanship</b>     | Neat edges of the panel, no bare white canvas, signed and dated.                                  |

## 3.1 ACRYLIC PAINTING BASICS

### OBJECTIVES

- Set up a palette, mix acrylic colors cleanly, and keep them workable.
- Use basic brush techniques: flat strokes, blending while wet, dry brush and impasto.
- Paint a simple still life in layers: toned ground, block-in, then opaque lights.

**Warm-up.** On a scrap of canvas paper, paint four small squares with the same color: one thin and watery, one smooth and opaque, one dry-brushed (almost no paint on the brush), and one thick (impasto) with visible brush marks. Label them.

### WATCH

#### Acrylic Painting for Beginners: Techniques & Supplies

Art Prof: Your Art School • 14:06

<https://www.youtube.com/watch?v=CFULyTf-RzM>

### WHEN TO WATCH

Before the studio project. Watch all of it once; you do not need the gels, mediums and varnishes she mentions, but it is good to know they exist.

**Note:** The description links to the channel's paid e-book; it is not needed.

### KEY TERMS

#### **acrylic paint**

Paint made of pigment held in an acrylic polymer emulsion. It thins with water when wet, dries fast, and becomes water-resistant when dry.

#### **toned ground**

A thin, even layer of a middle color (often a warm brown or gray) painted over the white canvas before starting, so that values are easier to judge.

#### **opaque and transparent**

Opaque paint covers what is underneath; transparent paint lets the layer below show through.

#### **impasto**

Paint applied thickly so that brush or knife marks stand up from the surface.

## dry brush

Dragging a brush with very little paint over the surface so the color catches only on the high points, creating texture.

## CORE IDEAS

Acrylic paint is pigment (colored powder) suspended in a milky acrylic polymer emulsion. While wet, it mixes and cleans up with water; as the water evaporates, the tiny plastic particles fuse into a tough, flexible film. That is why acrylic is wonderful for students (fast-drying, no solvents) and also why you must work quickly and never let it dry in your brushes. (Unit 5 explores the science more deeply.)

Set up your palette the same way every time: white in the biggest pile, then the colors around the edge in order from warm to cool, with a large open space in the middle for mixing. Put out small amounts and mist them with a spray bottle every so often; a damp paper towel under baking paper makes a simple “stay-wet” palette. Keep two water jars, one for rinsing and one clean.

Mix with a palette knife or the brush, always adding the **dark to the light in small amounts**, because a little dark changes a light color quickly, but it takes a lot of light to change a dark. Mix more than you think you need; matching a mixture later is hard.

Most paintings are built in layers. First, a **toned ground**: a thin wash of burnt sienna or gray over the whole canvas, so there is no glaring white. Second, a **block-in**: the large shapes of shadow and background in thin paint. Third, the **lights and details**, painted more thickly and opaquely on top. Painters often say: dark to light, thin to thick, big brushes to small.

Acrylic darkens a little as it dries, because the milky binder becomes clear. Mix your colors a shade lighter than you want. Wash your brushes in cool water with a bit of soap before the paint dries, and never leave them standing on their bristles.

## PICTURE STUDY



*Sunflowers*, Vincent van Gogh, 1888 · Oil on canvas · National Gallery, London (one of several versions)

Image: [Wikimedia Commons](#), public domain

Van Gogh painted these sunflowers in Arles in the south of France to decorate a friend's room. They are painted in thick strokes of yellow on yellow, and every brushmark is easy to see. He worked in oil, but his handling of thick paint is a perfect model for acrylic.

### Look closely

- Find three different kinds of brushstroke. Which are thick (impasto) and which are flat?
- Look at the seed heads in the middle of the flowers. How is the paint applied there?
- Find the darkest and the lightest yellow. How did Van Gogh make the flowers stand out from a yellow background?
- Notice the line where the table meets the wall. What color is it?

### Talk about it

1. Why might Van Gogh include drooping and dying flowers along with fresh ones?
2. What would be lost if this were painted with smooth, invisible brushstrokes?
3. How does the thickness of the paint itself become part of the picture?

## STUDIO PROJECT

### One Piece of Fruit in Acrylic

You will paint a single piece of fruit (an orange, a lemon, an apple or a pear) on a toned canvas panel, working in three layers from dark to light and thin to thick.

#### You will need

- Canvas panel or canvas paper (8×10 in)
- Acrylic paints: titanium white, black, yellow ochre, burnt sienna, a warm yellow, a warm red, ultramarine blue
- Flat brushes #6 and #10, a round #4
- Palette and palette knife
- Two water jars, rags, spray bottle
- One piece of fruit, a plain cloth and a lamp

#### Steps

1. Tone the canvas: mix burnt sienna with a lot of water and brush it thinly over the whole panel. Wipe it with a rag so it is even. Let it dry (5–10 minutes).
2. Set up the fruit on the cloth with the lamp from one side. With a thin brush and diluted burnt sienna, draw the fruit's shape, its shadow side and its cast shadow.
3. Block in the shadows: mix a dark (burnt sienna plus a little ultramarine) and paint the cast shadow and the shadow side of the fruit thinly.
4. Block in the background and the cloth with a flat middle value, painting right up to the fruit's edge.
5. Mix the local color of the fruit in light (for an orange: warm yellow plus warm red plus a touch of white). Paint the light side opaquely, leaving the shadow side alone.
6. Mix a halftone between your light color and your shadow color and blend it where the form turns, working while the paint is still wet.
7. With thicker paint (impasto), add the highlight: white with a touch of yellow, placed in one confident dab. Do not fuss with it.

8. Clean your brushes thoroughly with water and soap. Let the painting dry flat, then sign it with a small brush.

#### **Tips**

- If the paint dries too fast, mist the palette and work in smaller sections.
- Stand back often. Acrylic paintings look different from three feet away.

#### **Check your work**

- ☐ My canvas has no bare white showing, because I toned it first.
- ☐ My fruit has a clear light side, shadow side and cast shadow.
- ☐ I used thin paint in the shadows and thicker paint in the lights.

### **SKETCHBOOK PRACTICE**

1. Paint a value scale in acrylic from white to black in seven steps, mixing carefully each time.
2. Paint three small swatches of the same color: transparent (thin), opaque and impasto.
3. Copy a small section (about 3 inches square) of Van Gogh's *Sunflowers* with thick strokes.

**From history.** Artists' acrylic paints first appeared in the 1950s; before that, painters such as Van Gogh used oil paint, which dries far more slowly. Van Gogh painted seven large versions of his vase of sunflowers in 1888 and 1889; some of his yellow paint (chrome yellow) has slowly darkened over the years, a problem we will study in Unit 5.

### **COMMON MISTAKES**

- Using too much water, so the paint becomes weak and streaky.
- Letting paint dry in the brush, which ruins it.
- Starting with tiny details instead of big shapes and a toned ground.

**Make it a game • Brush Mime.** Without paint, mime a brush technique and let your parent guess: flat stroke, blending while wet, dry brush or impasto. Then tell how you would keep acrylic workable and what happens if you let it dry on the palette. Your parent mimes too. Whoever guesses more techniques wins.

## 3.2 COLOR TEMPERATURE: WARM AND COOL

### OBJECTIVES

- Explain color temperature and why it is relative.
- Observe and paint warm light with cool shadows, and the reverse.
- Shift the temperature of a color without changing its value much.

**Warm-up.** Lay out swatches or colored pencils of every red you own. Arrange them from coolest (leaning toward violet) to warmest (leaning toward orange). Do the same with blues and with yellows. Notice that a “cool” red is still warmer than any blue.

### WATCH

#### Mastering Color Temperature: Bringing Your Art to Life

Malcolm Dewey · 8:05

<https://www.youtube.com/watch?v=njp98yQFnvo>

#### WHEN TO WATCH

After the core ideas, before the picture study. Pause when he mixes a cool shadow color and write down how he did it.

**Note:** The end of the description links to the painter’s courses; they are not needed.

### BACKUP VIDEO

#### How I think about warm and cool colors

Paint Coach · 9:47

<https://www.youtube.com/watch?v=00UfJgcjRxU>

A second explanation with color-mixing examples.

### KEY TERMS

#### **color temperature**

How warm (toward red, orange and yellow) or cool (toward blue, green and violet) a color appears.

#### **relative temperature**

The idea that a color is warm or cool only compared with the colors next to it; a green can be warm next to a blue.

**local color**

The actual color of an object in plain, neutral light, such as the yellow of a lemon.

**ambient light**

The general light that fills a space, such as cool blue light from the sky outdoors.

**CORE IDEAS**

Colors seem to have temperature. Reds, oranges and yellows remind us of fire and sun, so we call them **warm**; blues, greens and violets remind us of water, ice and shade, so we call them **cool**. Warm colors tend to seem to come forward; cool colors tend to seem to recede.

Temperature is **relative**. Every hue has warmer and cooler versions: lemon yellow is cool next to cadmium yellow; ultramarine blue (leaning violet) is warmer than phthalo blue (leaning green). A painter is always asking, “Is this warmer or cooler than the color next to it?”

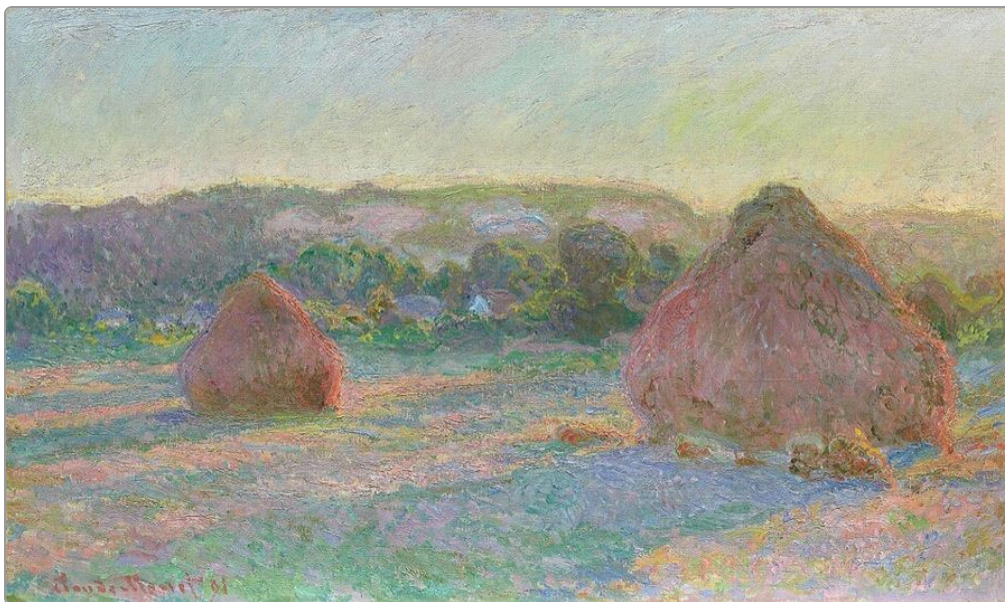
Here is the most useful rule in landscape and still life painting: **when the light is warm, the shadows look cool; when the light is cool, the shadows look warm.**

Outdoors on a sunny day, the sunlit side of a haystack is warm, while its shadow, lit only by the blue sky, is cool and bluish. Under a warm indoor lamp, the shadows look cooler. Under cool north-window light, the shadows take on a warm cast.

To change temperature without ruining value, add a touch of a neighboring hue of the **same value**. To cool a shadow on an orange, add a little blue-violet and a touch of the shadow color, not black; black makes colors dull and dirty. To warm a light, add a touch of yellow or orange rather than just white, which tends to cool and chalk colors.

Monet painted the same stacks of wheat over and over in different seasons and times of day because he realized that light, not the object, controls the colors we see. The same stack can be gold, rose, violet or blue. Learning to see color temperature means learning to see the light.

## PICTURE STUDY



*Stacks of Wheat (End of Summer)*, Claude Monet, 1890–1891 · Oil on canvas · Art Institute of Chicago  
(one of the Haystacks series)

Image: [Wikimedia Commons](#), public domain

In 1890 and 1891 Monet painted about twenty-five canvases of the wheat stacks in a field near his home in Giverny, in every season and light. This one shows the end of summer. Look at how the light side and the shadow side differ, not only in value but in temperature.

### Look closely

- Find the sunlit side of the larger stack. Is it warm or cool?
- Look into the shadow of the stack. What colors can you find there? Are they warm or cool?
- Look at the cast shadow on the ground. Is it gray, or is it colored?
- Compare the color of the distant hills and trees with the color of the near field.

### Talk about it

1. Why would a painter paint the same subject twenty-five times?
2. If Monet had painted the shadows with brown or black, how would the picture change?

3. Where in your own home or yard could you see warm light and cool shadows today?

## STUDIO PROJECT

### Two Eggs, Two Temperatures

You will paint two small studies of the same white egg (or white cup) on a white cloth: one under warm lamplight with cool shadows, and one in cool window light with warm shadows. It is a classic exercise for training the eye to see temperature.

#### You will need

- Two canvas panels or a sheet of canvas paper divided in half
- Acrylic paints: white, warm yellow, yellow ochre, warm red, cool red, ultramarine blue, burnt sienna
- Flat brushes #6 and #10, round #4
- A white egg (hard-boiled) or white cup, white cloth
- A desk lamp with a warm bulb, and a window with daylight (or a cool LED bulb)

#### Steps

1. Study 1: set the egg on the white cloth under the warm lamp in a darkened room. Look carefully: what color is the light side? (Probably cream or pale orange.) What color is the shadow? (Probably gray-violet or blue-gray.)
2. Tone the panel thinly with a warm gray. Draw the egg, its shadow side and its cast shadow with thin paint.
3. Mix the shadow color: white plus a little ultramarine and a touch of red, adjusted to the value you see. Paint the shadow side and cast shadow.
4. Mix the light color: white plus a touch of yellow ochre and red. Paint the light side, and blend the turning edge while wet. Paint the cloth in light and shadow with the same two temperatures.
5. Study 2: move the egg near a window with cool daylight (no sunlight), and turn off the lamp. Look again: the light side is cooler, and the shadow side has a warmer cast.
6. Repeat steps 2–4, but now the light is white with a touch of blue, and the shadow is a warmer gray (white, burnt sienna and a little blue).

7. Place the two studies side by side. Write under each: “warm light, cool shadow” or “cool light, warm shadow.”

#### **Tips**

- Squint and compare values: keep the shadows the right value even as you change their temperature.
- If you cannot see the temperature at first, hold up a pure white card next to the egg. Compared with pure white, the colors become easier to see.

#### **Check your work**

- ☐ My two studies have clearly different color temperatures in the light and shadow.
- ☐ I did not use black to make the shadows.
- ☐ The values in each study read correctly when I squint.

#### **SKETCHBOOK PRACTICE**

1. Make two color strips with colored pencils or paint: six warm colors and six cool colors, each arranged from light to dark.
2. Sketch a sunny scene outside in colored pencil, using warm colors for sunlight and cool colors for shadows.
3. Find a red that looks warm next to one color and cool next to another; paint or color both pairs.

**From history.** Monet exhibited fifteen of his stacks of wheat together in Paris in 1891, and nearly all of them sold within days. Showing a series side by side let viewers see how the same scene changed with the light, an idea Monet later repeated with poplar trees, Rouen Cathedral and his water lilies.

#### **COMMON MISTAKES**

- Darkening shadows with black, which makes them dead and gray.
- Changing the value by accident when changing temperature.
- Painting all shadows the same cool blue without looking at what is really there.

**Make it a game • Warmer or Cooler?.** Cut five paper swatches and line them up from coolest to warmest. Then replace one swatch and see whether it still fits, showing that temperature is relative. Your parent holds up two swatches and you say which is warmer and why. Explain warm light and cool shadows. Ten rounds.

## 3.3 NATURAL COLORS FROM A LIMITED PALETTE

### OBJECTIVES

- Explain why painters often choose a limited palette.
- Mix a chart of colors from yellow ochre, a red, black and white (the “Zorn palette”).
- Paint a still life of natural objects in harmonious earth colors.

**Warm-up.** Look around the room and name ten colors that are not bright: the brown of a table, the gray-green of a plant pot, the tan of a cardboard box, the dull red of a book. Write them down. Most colors in the world are muted, not pure.

### WATCH

#### Realistic Skin Tones with Just 4 colours!?!? The Zorn Palette - Colour Mixing Demonstration

Andrew Tischler · 14:20

<https://www.youtube.com/watch?v=QTqpWZtDH9M>

#### WHEN TO WATCH

Before the studio project. Make your own mixing chart along with him from yellow ochre, red, black and white, pausing as needed.

**Note:** He uses the chart to paint skin tones; you will use the same mixtures for natural objects. Skip the short shop plug near the start.

---

### BACKUP VIDEO

#### Colour Mixing Demo: How to Mix Beautiful Neutrals

Louise Fletcher Art · 7:23

<https://www.youtube.com/watch?v=JxOeB3o-cCU>

Optional: another way to mix soft, natural colors by mixing complements.

## KEY TERMS

### limited palette

A small set of colors (often three to five) chosen on purpose for a painting.

### neutral

A low-intensity (dull) color, such as gray, brown, tan or olive, made by mixing complements or adding black or earth colors.

### Zorn palette

A limited palette of yellow ochre, a red, ivory black and white, named after the Swedish painter Anders Zorn.

### earth pigments

Pigments made from colored clays and iron oxides dug from the ground, such as yellow ochre, raw and burnt sienna, and raw and burnt umber.

### intensity (chroma)

How pure and bright a color is, compared with a gray of the same value.

## CORE IDEAS

A beginner tends to buy many colors and use them all at full strength, and the painting looks loud and disjointed. Experienced painters often do the opposite: they choose a **limited palette**. When every color in the painting is mixed from the same few tubes, the colors are related, like members of one family, and the painting has natural harmony.

Most colors in nature are **neutrals** of low intensity: the brown of earth, the gray-green of olive leaves, the tan of bread, the soft pink of skin. A limited palette of earth colors makes these easily, and it forces you to think about value, which matters more than hue.

The **Zorn palette** uses only yellow ochre, a red (cadmium red light or a similar warm red), ivory black and titanium white. Because black is a very dark, slightly blue color, it plays the part of blue: black plus white gives cool blue-grays; black plus yellow ochre gives surprising olive greens; red plus ochre gives warm oranges and browns; red plus white gives pinks; all four together give rich browns and skin tones. You cannot make a bright sky blue or a vivid green, but everything else is within reach.

Mix systematically. Make a grid: across the top, the pure colors and two-color mixtures; down the side, the same mixtures with more and more white. This chart becomes your map of what the palette can do. Painters also **gray down** a bright color by adding its complement (a little red to a green) instead of black; you can try both.

Painters before the 1800s had few bright pigments, so their palettes were naturally limited, dominated by earth colors, lead white and black. That is one reason old master paintings feel so unified. Millet's *The Angelus* is a perfect example: a whole evening of prayer in a few earthy tones.

## PICTURE STUDY



*The Angelus*, Jean-François Millet, 1857–1859 · Oil on canvas · Musée d'Orsay, Paris

Image: [Wikimedia Commons](#), public domain

At six in the evening the village church bell rings for the Angelus prayer, and a farming couple stop their work in the potato field to pray. Millet painted the scene with a quiet, limited palette of earth colors, which gives the whole picture its calm.

### Look closely

- Name the colors you see. How many are bright and how many are earthy or muted?
- Find the brightest, warmest spot in the sky. Where is it, compared with the two figures?
- Look at the ground. How many different browns and greens can you find?
- Find the church steeple on the horizon. Why is it important to the story?

### Talk about it

1. How do the colors help create the mood of this painting?
2. Why do you think Millet made the figures dark against the evening sky?
3. What does this painting suggest about work and prayer in an ordinary day?

## STUDIO PROJECT

### A Zorn Palette Chart and a Harvest Still Life

You will first make a color chart from four colors, then use only those four colors to paint a still life of natural things: bread, an onion, a potato, a clay pot, or a brown egg.

#### You will need

- Canvas paper (one sheet for the chart) and a canvas panel (8×10 in or 9×12 in)
- Acrylic paints: yellow ochre, a warm red (cadmium red light hue or naphthol red), black (ivory or mars black), titanium white
- Flat brushes #6 and #10, round #4, palette knife
- Ruler and pencil
- Two or three natural objects in earthy colors, a plain cloth, a lamp

#### Steps

1. Draw a grid on canvas paper: 6 columns and 4 rows of 1-inch squares.
2. Top row: paint pure yellow ochre, pure red, pure black, then ochre+red, ochre+black, red+black.
3. Rows 2, 3 and 4: repeat each top-row color with a little, more, and a lot of white. Label the columns. You now have 24 colors from four tubes.
4. Set up your still life with the lamp from one side. Tone the panel thinly with ochre and a little red and black (a warm brown).
5. Draw the objects with a thin mixture of red and black. Block in the shadows thinly.
6. Mix the background and cloth colors from your chart, painting the background a little cooler (more black and white) than the objects.
7. Paint the objects in light with thicker paint, using warm ochre-and-red mixtures in the light and cooler black-and-white mixtures in the halftones.
8. Add highlights last. Compare with your chart: did you use only the four colors? Sign and date.

#### Tips

- Black is very strong. Add it to other colors a tiny bit at a time.
- If your painting looks muddy, check the values: muddy color is usually the wrong value, not the wrong hue.

#### Check your work

- ☐ My chart shows at least 24 mixtures, all labeled.
- ☐ My still life uses only yellow ochre, red, black and white.
- ☐ The painting has a clear light side and shadow side, and the colors feel harmonious.

#### SKETCHBOOK PRACTICE

1. Mix and paint five greens from the Zorn palette (black plus ochre, with and without white and red).
2. Paint a small landscape strip (sky, distant hills, near field) using only the Zorn palette.
3. Make a second chart from a different limited palette: ultramarine blue, burnt sienna and white.

**From history.** Anders Zorn (1860–1920) was a Swedish painter famous for portraits and scenes of Swedish country life. Historians debate whether he always used only four colors, but the palette that carries his name is still taught in art schools because it trains painters to control value and temperature.

#### COMMON MISTAKES

- Sneaking in other tube colors, which breaks the harmony.
- Adding too much black, which quickly overpowers everything.
- Keeping every color at full strength; let some be grayed and quiet.

**Make it a game • Predict the Mix.** Your parent names a target color: olive green, a gray-blue or a warm brown. Before mixing, write a recipe using yellow ochre, a red, black and white. Test it and compare. An exact recipe earns two points, and a close one earns one. Say what the word neutral means. Play to ten points.

## 3.4 COLOR HARMONIES

### OBJECTIVES

- Identify analogous, complementary, split-complementary and triadic color schemes on the color wheel.
- Explain dominance: one temperature or hue should lead in a painting.
- Plan and paint a small landscape or still life using a chosen color harmony.

**Warm-up.** Draw a 12-part color wheel quickly with colored pencils (or use one you made earlier). Lay a pencil across it to find three pairs of complements. Then find one set of three colors spaced evenly around the wheel.

### WATCH

#### COLOR THEORY BASICS: Use the Color Wheel & Color Harmonies to Choose Colors that Work Well Together

Sarah Renae Clark · 6:58

<https://www.youtube.com/watch?v=Yel6Wqn4I78>

#### WHEN TO WATCH

After the warm-up. Keep your color wheel in front of you and find each harmony on it as she explains it.

### BACKUP VIDEO

#### Colour Harmony - 10 Minutes To Better Painting - Episode 5

Marco Bucci · 10:21

<https://www.youtube.com/watch?v=4LhcNbFMkTw>

Optional: a painter explains why one hue or temperature should lead in a harmonious picture.

### KEY TERMS

#### **color harmony**

A pleasing arrangement of colors chosen according to their positions on the color wheel.

#### **analogous**

Three to five colors next to each other on the color wheel, such as yellow, yellow-orange, orange and red-orange.

**complementary**

Two colors opposite each other on the color wheel, such as blue and orange; they make each other look brighter side by side.

**split-complementary**

One color plus the two colors on either side of its complement, such as blue with yellow-orange and red-orange.

**triadic**

Three colors evenly spaced around the color wheel, such as red, yellow and blue.

**dominance**

Letting one color or temperature take up most of a picture, with others as smaller accents.

**CORE IDEAS**

Harmony means that the parts belong together. In color, harmony comes from relationships on the color wheel. The four classic schemes are **analogous** (neighbors), **complementary** (opposites), **split-complementary** (one color and the two neighbors of its opposite) and **triadic** (three evenly spaced colors).

Each scheme has its own character. Analogous schemes are calm and unified, like an autumn hillside. Complementary schemes are vivid and full of contrast, because complements intensify each other when placed side by side; but mixed together, they neutralize each other into browns and grays. Split-complementary schemes keep much of that contrast with less harshness. Triadic schemes are lively and balanced.

The secret of using any scheme is **dominance**. Do not use your colors in equal amounts. Let one color (or one temperature) cover most of the picture, a second support it, and a third appear only as a small accent. A painting that is mostly cool blues and grays with one small spot of orange glows; a painting that is half blue and half orange fights itself.

Value and intensity work with hue. A scheme can be quiet if the colors are grayed and close in value, or loud if they are pure and contrasting. Most good paintings use mostly grayed colors with a few pure ones at the center of interest.

Turner's *The Fighting Temeraire* is built on a complementary harmony: a blazing warm sunset of orange and gold on one side, and a cool blue-silver sky and river on the other. The old ship, pale and silvery, sits in the cool half, while the setting sun echoes its passing.

## PICTURE STUDY



*The Fighting Temeraire*, J. M. W. Turner, 1839 · Oil on canvas · National Gallery, London

Image: [Wikimedia Commons](#), public domain

The *Temeraire* was a famous old warship from the Battle of Trafalgar. In 1838 she was towed up the River Thames by a steam tug to be broken up. Turner painted her last journey as a farewell, and color does most of the storytelling.

### Look closely

- Divide the picture in half with your eyes. Which side is warm and which is cool?
- Find the old ship. What colors is it painted? Is it in the warm or cool side?
- Find the small tugboat. How is it different in color and value from the old ship?
- Look at the reflections in the water. Do they repeat the colors of the sky?

### Talk about it

1. Which color harmony do you see here, and which part dominates?
2. How does the sunset help tell the story of the old ship's last journey?
3. Why might Turner make the new steam tug dark and the old sailing ship pale?

## STUDIO PROJECT

### A Sky in Two Harmonies

You will plan two small color sketches of the same simple sunset or evening landscape in different color harmonies, then paint the better one larger with a clear dominant color.

#### You will need

- Sketchbook and colored pencils for planning
- Two small pieces of canvas paper (5×7 in) and a canvas panel (8×10 in or 9×12 in)
- Acrylic paints (full palette)
- Flat brushes #6 and #10, round #4
- A color wheel

#### Steps

1. Draw a simple composition in your sketchbook: a low horizon, a sky with a setting or rising sun, water or a field, and one simple shape such as a boat, a barn, or a tree.
2. Choose two harmonies. For example: complementary (blue-violet and yellow-orange) and analogous (yellow, orange, red-orange, red).
3. Paint the first small sketch in the first harmony. Make one color clearly dominant. Use the complement or third color only as an accent.
4. Paint the second small sketch in the second harmony.
5. Compare the two. Which mood do you prefer? Write one sentence about each.
6. Paint your chosen version on the larger panel. Tone the panel, block in the sky and water first, then the land and the main shape.
7. Use your purest, brightest color only near the center of interest (perhaps the sun or its reflection). Gray down colors elsewhere by mixing in a little of their complement.
8. Sign and date. On the back, write the name of the harmony you used.

#### Tips

- Mix all your colors from the chosen hues plus white. Avoid sneaking in extra colors.
- If the painting feels harsh, gray down the large areas and keep pure color for small accents.

#### Check your work

- ☐ I can name the harmony I used and point to each color on the color wheel.
- ☐ One color or temperature clearly dominates.
- ☐ My brightest color is at the center of interest.

#### SKETCHBOOK PRACTICE

1. Find three paintings by masters in this course and name the harmony in each.
2. Make a small triadic color sketch of a simple still life with colored pencils.
3. Paint two swatches of a complementary pair side by side, then mix them together in three steps to see the neutrals they make.

**From history.** Turner was the son of a London barber and entered the Royal Academy schools at fourteen. He called *The Fighting Temeraire* his “darling” and refused every offer to sell it. When he died, he left it, with hundreds of other works, to the British nation.

#### COMMON MISTAKES

- Using every color in the scheme in equal amounts, so nothing dominates.
- Mixing complements by accident and creating mud where you wanted brightness.
- Forgetting value: a harmony of colors all the same value looks flat.

**Make it a game • Torn-Paper Harmonies.** In three minutes, tear colored paper scraps to build a sky in an analogous harmony. Your parent names the scheme and the dominant color. Then rebuild it in a complementary harmony. Say which temperature should lead. Switch turns and see who can pick the most obvious dominant color.

**Scripture.** “Moreover thou shalt make the tabernacle with ten curtains of fine twined linen, and blue, and purple, and scarlet” (Exodus 26:1, KJV)

God Himself chose a harmony of colors for the tabernacle curtains: blue, purple and scarlet, neighbors on the color wheel. Color chosen with care can serve beauty and worship.

## UNIT 3

# COLOR AND PAINTING

This unit puts a brush in your hand. You will learn to handle acrylic paint: how to mix it, how to lay it on thin and thick, and how to build a painting in layers from dark to light. Then you will learn three ideas that painters use every day: color temperature (warm and cool), the beauty of a limited palette of earthy colors, and color harmonies that make a whole painting hold together.

Our masters are painters of color and light: Van Gogh, whose thick, bright paint you will imitate; Monet, who painted the same haystacks in every kind of light; Millet, who made a prayerful evening from a few humble earth colors; and Turner, who set the sky on fire with warm and cool.

### PREREQUISITES

- Knows the primary, secondary and tertiary colors on the color wheel
- Knows the words hue, value and intensity (or chroma)
- Has acrylic paints, synthetic brushes, a palette and canvas panels or canvas paper

### MASTERY CHECKLIST

- ☐ I can set up an acrylic palette, keep paint wet, mix cleanly, and clean my brushes properly.
- ☐ I can paint in layers: a toned ground, a block-in, then opaque lights.
- ☐ I can explain warm and cool color temperature and use warm light with cool shadows (or the reverse).
- ☐ I can mix a range of natural colors from a limited palette of yellow ochre, red, black and white.
- ☐ I can choose and use a color harmony: analogous, complementary, split-complementary or triadic.

### LESSONS IN THIS UNIT

#### 3.1 Acrylic Painting Basics

2 sessions of 50–60 minutes

#### 3.2 Color Temperature: Warm and Cool

2 sessions of 50–60 minutes

#### 3.3 Natural Colors from a Limited Palette

2 sessions of 50–60 minutes

## UNIT 3 REVIEW

Answer each question in your own words. You may look at your own sketchbook and color charts but not at the lessons. Questions 11 and 12 ask for a few sentences. Total: 100 points.

1. (6 pts)

What is acrylic paint made of, and why does it become water-resistant when dry?

2. (6 pts)

Why do painters often tone the canvas before beginning?

3. (6 pts)

Finish the painter's saying: dark to \_\_\_\_, thin to \_\_\_\_, big brushes to \_\_\_\_.

4. (8 pts)

What happens to the color of shadows when the light is warm? When the light is cool?

5. (6 pts)

Why is black a poor choice for darkening shadows?

6. (8 pts)

Name the four colors of the Zorn palette. Which color plays the part of blue?

7. (6 pts)

What are earth pigments? Give two examples.

8. (8 pts)

Define analogous, complementary and triadic color schemes.

9. (6 pts)

What does dominance mean in a color harmony?

10. **8 pts**

Name the artist of: *Sunflowers*; the *Stacks of Wheat*; *The Angelus*; *The Fighting Temeraire*.

11. **16 pts**

In four or five sentences, explain how Turner uses color in *The Fighting Temeraire* to tell the story.

12. **16 pts**

In three or four sentences, explain why Monet painted the same stacks of wheat many times, and what he learned about color.

## ANSWER KEY

1. Pigment in an acrylic polymer emulsion. As the water evaporates, the polymer particles fuse into a tough plastic film.
2. A middle tone removes the glaring white, makes values easier to judge, and gives harmony to the colors painted over it.
3. Light; thick; small.
4. Warm light gives cool-looking shadows; cool light gives warm-looking shadows.
5. It deadens and dirties colors; it lowers intensity and loses the temperature of the shadow.
6. Yellow ochre, a red, ivory black, titanium white. Black acts as the blue.
7. Pigments from colored clays and iron oxides dug from the ground, such as yellow ochre, burnt sienna, raw umber.
8. Analogous: neighbors on the color wheel. Complementary: opposites. Triadic: three colors evenly spaced around the wheel.
9. One color or temperature takes up most of the picture; the others are supporting or small accents.
10. Van Gogh; Monet; Millet; Turner.
11. Model: Turner divides the picture into a warm half and a cool half, a complementary harmony. The blazing orange sunset on the right suggests an ending, like the end of the old ship's life. The old warship is pale and silvery in the cool half, almost like a memory, while the small modern tug is dark and solid. The reflections repeat the colors, so the whole scene glows. The warm sunset dominates and draws the eye.
12. Model: Monet wanted to show how changing light changes the colors we see. The same stacks look gold, pink, violet or blue depending on the season and time of day. He learned that the light, not the object's local color, controls what we see, and that shadows are full of color, often cool when the light is warm.

## PORTFOLIO PIECE: A HARVEST TABLE IN A CHOSEN HARMONY

Paint a still life (8×10 in or larger) of three or four natural objects such as bread, fruit, vegetables or a clay jug, on a cloth, with a single light. Plan it with a small color sketch, choose either a limited palette or a named color harmony, tone your canvas, and build the painting in layers. Show warm and cool temperature in the light and shadow.

| LOOK FOR                 | WHAT IT MEANS                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------|
| <b>Paint handling</b>    | Toned ground, thin shadows and thicker lights; clean mixtures; confident brushwork.               |
| <b>Color temperature</b> | Light and shadow are clearly different in temperature, and shadows are not made with black alone. |
| <b>Harmony</b>           | The palette or harmony is named and followed; one color or temperature dominates.                 |
| <b>Form and value</b>    | Objects look solid, with correct values for light, halftone, shadow and cast shadow.              |
| <b>Craftsmanship</b>     | Neat edges of the panel, no bare white canvas, signed and dated.                                  |

## UNIT 4

# LIGHT

Without light there is nothing to see, and without understanding light there is nothing convincing to draw. In this unit you will study light the way the old masters did: by simplifying a scene into a few big values, by finding the soft glow of reflected light inside shadows, by controlling edges so forms turn smoothly, and finally by painting a whole picture in grays alone, a method called *grisaille*.

The masters of this unit were all students of light: Joseph Wright of Derby, who painted scenes lit by a single lamp; Vermeer, whose daylight seems to fill the room; Leonardo, who invented the smoky softness called *sfumato*; and Jan van Eyck, who painted figures in gray so convincingly that they look like carved stone.

### PREREQUISITES

- Can draw and shade simple forms (sphere, cube, cylinder) with a light side, shadow side and cast shadow
- Understands hard, soft and lost edges (Unit 1)
- Can mix and apply acrylic paint in layers (Unit 3)

### MASTERY CHECKLIST

- ☐ I can make a small three- or four-value study that simplifies a scene before I draw or paint it.
- ☐ I can name the parts of light on a form: highlight, light, halftone, core shadow, reflected light, cast shadow and occlusion shadow.
- ☐ I can draw reflected light without making it as bright as the lit side.
- ☐ I can use soft edges where forms turn and hard edges where they break, and explain *sfumato*.
- ☐ I can paint a *grisaille* study in a range of grays from white to black.

### LESSONS IN THIS UNIT

#### 4.1 Value Studies: Seeing in Three Values

2 sessions of 50–60 minutes

#### 4.2 Reflected Light and the Anatomy of a Shadow

2 sessions of 50–60 minutes

#### 4.3 Edges and the Turning Form: *Sfumato*

2 sessions of 50–60 minutes

#### 4.4 *Grisaille*: Painting in Grays

2 sessions of 50–60 minutes

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## UNIT 4 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a drawing. Total: 100 points.

1. 6 pts

What is a value study, and why do artists make one before starting a picture?

2. 6 pts

What does squinting help an artist see?

3. 6 pts

What does chiaroscuro mean?

4. 10 pts

List the parts of light and shadow on a sphere, in order from the highlight to the cast shadow.

5. 8 pts

What is reflected light, and what is the rule about how bright it can be?

6. 6 pts

Why is the shadow edge on a ball soft but the shadow edge on a box hard?

7. 6 pts

What is sfumato, and where does the word come from?

8. 8 pts

Name two ways the old masters used grisaille.

9. 6 pts

Why should you mix a full value scale of grays before painting a grisaille?

10. 8 pts

Name the artist of: *A Philosopher Lecturing on the Orrery*; *The Milkmaid*; *Lady with an Ermine*; the *Madrid Annunciation Diptych*.

11. **15 pts**

In four or five sentences, describe how Vermeer shows light in *The Milkmaid*. Mention reflected light.

12. **15 pts**

Draw a sphere lit from the upper left on a table. Label the highlight, halftone, core shadow, reflected light, cast shadow and occlusion shadow.

## ANSWER KEY

1. A small, quick sketch in three or four flat values that shows the main pattern of light and dark; it plans the picture's light, contrast and center of interest before time is spent on details.
2. The large shapes of value, without distracting details.
3. "Light-dark": strong contrasts of light and shadow used to model form and create drama.
4. Highlight, light, halftone, terminator, core shadow, reflected light, cast shadow (with the occlusion shadow where it touches the surface).
5. Light bounced from nearby surfaces into the shadow side. It is part of the shadow, so it must always be darker than any value on the light side.
6. The ball turns away from the light gradually; the box turns sharply at its corner.
7. Leonardo's method of blending tones so gently that edges dissolve without lines; from the Italian word for smoke.
8. As finished paintings (such as altarpiece wings painted to look like stone statues) and as underpaintings to establish values before glazing color over them.
9. So the values stay consistent and controlled instead of drifting as you remix.
10. Joseph Wright of Derby; Vermeer; Leonardo da Vinci; Jan van Eyck.
11. Model: Daylight comes from the window on the left and falls on the maid's cap, face, arm and the bread. The white wall is not one flat value; it gets lighter near the window and darker farther away. Light bounces off the wall and table into the shadows, so the shadow sides of the jug, bowl and figure have soft reflected light. Vermeer paints small bright highlights on the bread and the jug. The calm, even light makes an ordinary task feel important.
12. Drawing shows a sphere with highlight at upper left, halftone, a core shadow band on the lower right inside the terminator, lighter reflected light near the lower right edge (still darker than the halftone), a cast shadow to the lower right, and the darkest occlusion shadow where the sphere touches the table.

## PORTFOLIO PIECE: A GRISAILLE STILL LIFE FROM A VALUE STUDY

Arrange a still life of three white or light-colored objects (for example, an egg, a white cup and a folded white napkin) under one lamp. Make three small value studies, choose the best, and then paint the still life in acrylic grisaille on a 9×12 in or larger panel. Show the full anatomy of light, soft edges where forms turn, and at least one lost edge.

| LOOK FOR             | WHAT IT MEANS                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------|
| <b>Value study</b>   | Three studies are attached; the painting follows the strongest one.                                  |
| <b>Value range</b>   | A full range of at least seven grays, with clear light, halftone, shadow and dark accents.           |
| <b>Light on form</b> | Core shadows, reflected light and occlusion shadows are placed correctly and the objects look solid. |
| <b>Edges</b>         | Soft edges on turning forms, hard edges where forms break, and at least one lost edge.               |
| <b>Craftsmanship</b> | Clean grays, careful brushwork, signed and dated.                                                    |

## 4.1 VALUE STUDIES: SEEING IN THREE VALUES

### OBJECTIVES

- Explain why artists make small value studies before beginning a picture.
- Simplify a scene into three or four values by squinting.
- Make several value studies from life and from a master painting.

**Warm-up.** Look at any room in your house and squint until details disappear. Draw a 3×4-inch box and fill it in with only three tones: the white of the paper, one middle gray and one dark. Take no more than three minutes.

### WATCH

#### Improve your painting with value studies ☆ sketching painting composition

Christina Kent Art • 8:07

<https://www.youtube.com/watch?v=Y2hAEgV56XY>

### WHEN TO WATCH

After the core ideas and before the picture study. Notice how small her studies are and how few values she uses.

### BACKUP VIDEO

#### How to Draw a Thumbnail Sketch - Value Study Drawing Guide

Art Studio Life • 12:13

<https://www.youtube.com/watch?v=VKwJdu3hPPI>

Optional: a second explanation that uses a still life, like your project.

### KEY TERMS

#### **value study**

A small, quick sketch that shows only the main shapes of light, middle and dark values in a picture, without detail.

#### **value pattern**

The overall arrangement of light and dark shapes in a picture, which is what we see first from across a room.

## **squinting**

Narrowing the eyes to blur details and reveal the large shapes of value.

## **chiaroscuro**

Italian for “light-dark”: the use of strong contrasts of light and shadow to model forms and create drama.

### **CORE IDEAS**

A painting is seen first from across a room, long before anyone notices the details. What we see from a distance is the **value pattern**: a few big shapes of light, middle and dark. If that pattern is strong and clear, the picture holds together; if it is scattered and spotty, no amount of detail will save it.

That is why artists make **value studies**: small sketches, usually no bigger than a playing card, in only three or four values. A value study takes five minutes and can save five hours. It answers the important questions early: Where is the light? Where are the darkest darks? Is the center of interest the place of strongest contrast?

To make one, squint at your subject until details disappear. Decide what will be **white** (the lightest lights), what will be **middle gray**, and what will be **dark**. Group neighboring areas of similar value into one shape, even if they are different objects. A dark coat and a dark background can merge into one dark shape. Then draw those shapes, filling them flatly with a marker, pencil or charcoal.

Three values are enough for most studies; four (adding a light gray) gives a little more subtlety. Use the same small range every time, so you train your eye to think in big steps instead of a thousand tiny ones.

Painters of **chiaroscuro**, such as Joseph Wright of Derby, often designed pictures around a single bright light surrounded by darkness. Their value pattern is easy to see: a bright center and dark edges. A value study of such a painting shows at once why our eye goes straight to the light.

## PICTURE STUDY



*A Philosopher Lecturing on the Orrery*, Joseph Wright of Derby, about 1766 · Oil on canvas · Derby Museum and Art Gallery, England

Image: [Wikimedia Commons](#), public domain

An orrery is a clockwork model of the solar system. Here a teacher shows one to a family and friends, and a lamp in the center, standing in for the sun, lights every face. Wright loved the drama of a single light in a dark room, and the value pattern of this picture is unforgettable.

### Look closely

- Squint. Where are the lightest values? Where are the darkest?
- Find the lamp. Can you see it, or only its effect on the faces around it?
- Look at the faces of the children. Which ones are fully lit and which are partly in shadow?
- Follow the brass rings of the orrery. How do they lead your eye around the circle of people?

### Talk about it

1. Why do you think Wright hid the lamp behind the boy in the front?
2. How does the value pattern show what the people are feeling about what they are learning?

3. If you had to paint this in three values, which areas would be white, gray and dark?

## STUDIO PROJECT

### Six Value Studies and One Charcoal Value Drawing

You will make a page of six small value studies (two from a master painting, four from life) and then one larger charcoal drawing of a still life lit by one lamp, developed from your best study.

#### You will need

- Sketchbook or drawing paper
- A gray marker (or 2B pencil) and a black marker (or 6B pencil), or vine and compressed charcoal
- Drawing paper (11×14 in) for the charcoal drawing
- A kneaded eraser
- A still life of 3–4 objects and a desk lamp

#### Steps

1. Draw six rectangles in your sketchbook, each about  $2\frac{1}{2} \times 3\frac{1}{2}$  inches, in the same proportion as your larger paper.
2. In the first two rectangles, make three-value studies of Wright's *Orrery* and one other painting from this course. Group shapes boldly.
3. Set up a still life in a darkened room with one lamp. Make four value studies from different viewpoints or with the lamp in different positions.
4. Choose the study with the strongest, simplest pattern of light and dark. Circle it.
5. On the large paper, cover the whole sheet with a light, even tone of vine charcoal rubbed in with a paper towel. This is your middle gray.
6. Lightly draw the big shapes of your still life. Then add the dark shapes with compressed charcoal, following your value study.
7. Use the kneaded eraser to lift out the lightest shapes, following your study.
8. Refine edges and add a few halftones, but keep the three big values clear. Wash your hands, sign and date.

#### Tips

- If your small study looks confusing, it has too many shapes. Merge them.
- Work over newspaper and tap off loose charcoal dust outside, not by blowing.

#### Check your work

- ☐ My value studies use only three (or four) flat values.
- ☐ My charcoal drawing follows the value pattern of my best study.
- ☐ The strongest contrast is at my center of interest.

#### SKETCHBOOK PRACTICE

1. Make five three-value studies of photographs from a magazine or book in one sitting, 3 minutes each.
2. Make a value study of your street or yard in the evening, when the lights and darks are simplest.
3. Make a four-value study of a painting by Rembrandt or Vermeer.

**From history.** Joseph Wright of Derby painted several scenes of scientific experiments and lectures in the 1760s, a time when traveling teachers gave popular science lessons in English towns. He was fascinated by candlelight and firelight, and painted many night scenes.

#### COMMON MISTAKES

- Putting in details, which defeats the purpose of a value study.
- Using too many values, so the shapes blur together.
- Keeping objects separate instead of merging shapes of the same value.

**Make it a game • Three-Tone Sprint.** Set a one-minute timer. Squint and draw a quick three-value study of a window view, a mug, then a pet or toy. Use only light, middle and dark. Your parent guesses each subject. Say why artists make small value studies before a big picture. Three guessed subjects is a perfect score.

**Scripture.** “And God saw the light, that it was good: and God divided the light from the darkness.” (Genesis 1:4, KJV)

On the first day of creation, God separated light from darkness. Every value study we make is a small echo of that act of ordering.

## 4.2 REFLECTED LIGHT AND THE ANATOMY OF A SHADOW

### OBJECTIVES

- Name and locate the parts of light and shadow on a form.
- Explain reflected light and why it is always darker than the light side.
- Draw or paint white and colored objects showing reflected light accurately.

**Warm-up.** Put a white egg on a sheet of bright colored paper (red or orange is best) under a lamp. Look into the shadow side of the egg. What color is it near the bottom? Make a quick sketch and write down what you notice.

### WATCH

#### Value Scale & Sphere Shading Exercise | Learn How To Shade

That Art Teacher • 12:16

<https://www.youtube.com/watch?v=qNju05AR3Kc>

### WHEN TO WATCH

After the warm-up and the core ideas. Watch for the moment she lightens the bottom edge of the shadow for reflected light, and notice that it stays darker than the light side.

**Note:** This is a review of sphere shading; the new idea for Grade 7 is to place the core shadow and reflected light exactly.

### KEY TERMS

#### **highlight**

The brightest spot on a form, where the light reflects directly toward your eye.

#### **core shadow**

The darkest band on the shadow side of a rounded form, just past where the form turns away from the light (the terminator).

#### **terminator**

The line on a form where light ends and shadow begins.

#### **reflected light**

Light that bounces off nearby surfaces back into the shadow side of a form, making part of the shadow a little lighter.

### **cast shadow**

The shadow an object throws onto another surface, darkest and sharpest where the object touches it.

### **occlusion shadow**

The very dark, thin shadow right where an object touches the surface it rests on, where almost no light can reach.

## **CORE IDEAS**

Every lit form shows a sequence of values that artists call the **anatomy of light and shadow**. On the light side: the **highlight**, the **light**, and the **halftone** where the form begins to turn away. Then comes the **terminator**, the edge between light and shadow. On the shadow side: the **core shadow**, the darkest part of the form shadow, then **reflected light**. Finally the **cast shadow** on the table, with its darkest part, the **occlusion shadow**, where the object touches the surface.

Reflected light is light that has bounced. Light from the lamp hits the table, the wall, or a nearby object, and some of it bounces back into the shadow side of the form. That is why the bottom of a ball's shadow side is a little lighter than the core shadow. It also carries color: an egg on red paper has a reddish glow in its shadow.

The great rule: **reflected light is part of the shadow**. It is always darker than any value on the light side, even the halftone. Beginners often make it too bright, and the form looks like it is glowing from inside or lit by two lamps. Keep it subtle: squint, and the whole shadow side should still read as one dark shape.

Why does the core shadow sit away from the edge? Because the part of the shadow nearest the edge is receiving reflected light, while the core is facing neither the lamp nor the bounce light. Placing the core shadow correctly is what makes a sphere look round instead of flat.

Vermeer was a master of this. In *The Milkmaid*, daylight from the window bounces off the white wall and the table, filling the shadows with soft, colored light. Look at the shadow side of the jug and the bread and you will find it.

## PICTURE STUDY



*The Milkmaid*, Johannes Vermeer, about 1657–1658 · Oil on canvas · Rijksmuseum, Amsterdam

Image: [Wikimedia Commons](#), public domain

A kitchen maid pours milk with great care in the quiet light of a window. Vermeer turns a simple household task into something almost holy. Every surface in the room glows with direct or reflected light.

### Look closely

- Find the window and follow the light to the maid's face, arm and cap.
- Look at the shadow side of the jug and the bowl. Can you find reflected light near their lower edges?
- Look at the white wall. Is it all the same value, or does it change?
- Find the brightest highlights on the bread. How did Vermeer paint them?

### Talk about it

1. Where does the reflected light in the shadows come from?
2. Why do you think Vermeer chose to paint a servant doing ordinary work?
3. How does the light help make this quiet moment feel important?

## STUDIO PROJECT

### The Anatomy of Light: Two Eggs on Colored Paper

You will draw a large, careful study of two white eggs (or white balls), one on white paper and one on bright colored paper, labeling every part of the light and shadow and showing how reflected light differs.

#### You will need

- Drawing paper (11×14 in)
- 2H, HB, 2B, 4B and 6B pencils or colored pencils
- Blending stump, kneaded eraser
- Two white eggs (hard-boiled) or white balls
- A sheet of white paper and a sheet of red or orange paper
- A desk lamp

#### Steps

1. Place one egg on white paper and one on colored paper, side by side, lit by one lamp from the side and slightly above. Darken the room.
2. Draw both eggs about 4 inches tall with their cast shadows.
3. Find the terminator on each egg and draw it lightly. Note that it curves around the form.
4. Shade the shadow side and cast shadow of each egg in one even, middle-dark tone.
5. Darken the core shadow just inside the terminator. Darken the occlusion shadow where each egg touches the paper.
6. Lift out a little reflected light near the bottom of each shadow side with the kneaded eraser. Check: it must stay darker than the light side.
7. Shade the halftones on the light side and leave the highlight as white paper.
8. If using colored pencil, add a touch of the paper's color into the reflected light of the second egg.
9. Label the parts with small arrows: highlight, light, halftone, terminator, core shadow, reflected light, cast shadow, occlusion shadow. Sign and date.

### Tips

- Squint often. If the reflected light jumps out when you squint, it is too bright.
- The cast shadow is sharpest near the egg and softer farther away.

### Check your work

- ☐ All eight parts of light and shadow are visible and labeled.
- ☐ My reflected light is lighter than the core shadow but darker than the halftone.
- ☐ The occlusion shadow is the darkest value in the drawing.

### SKETCHBOOK PRACTICE

1. Draw a white cup on a dark cloth and on a light cloth and compare the reflected light.
2. Shade a sphere, a cube and a cylinder lit from the same lamp, showing core shadow and reflected light on each.
3. Copy the jug from *The Milkmaid* in pencil, finding its core shadow and reflected light.

**From history.** Vermeer painted only about thirty-five paintings that survive. He worked slowly in Delft, and his paintings were nearly forgotten for two hundred years until a French critic, Théophile Thoré-Bürger, rediscovered him in the 1860s.

### COMMON MISTAKES

- Making reflected light as bright as the light side, so the form looks lit from two directions.
- Placing the darkest shadow right at the outer edge instead of at the core.
- Forgetting the occlusion shadow, so objects seem to float above the table.

**Make it a game • Shadow Anatomy Quiz.** Draw an egg with six numbered dots. Label the parts: highlight, core shadow, terminator, reflected light, cast shadow and occlusion shadow. Your parent labels one of yours, with one deliberate mistake. Catch it and explain why reflected light is always darker than the lit side. Switch roles.

## 4.3 EDGES AND THE TURNING FORM: SFUMATO

### OBJECTIVES

- Explain how edges show whether a form turns gradually or sharply.
- Describe sfumato and how Leonardo used it.
- Draw a portrait or a cast-like form with lost-and-found edges and smooth turning.

**Warm-up.** Shade a ball and a box under the same lamp in three minutes each. Notice: the shadow edge on the ball is soft; the shadow edge on the box is hard. Write one sentence explaining why.

### WATCH

#### How to Draw: Edges

Stephen Bauman · 10:20

[https://www.youtube.com/watch?v=Rz\\_c4FJQxXA](https://www.youtube.com/watch?v=Rz_c4FJQxXA)

#### WHEN TO WATCH

After the core ideas. He names several kinds of edges (transitional, form and shadow edges) on portrait drawings, a sphere and a plaster cast; pause after each and find the same edge in Leonardo's painting.

**Note:** All the portraits shown are clothed. The end is a short promotion for his lessons.

### BACKUP VIDEO

#### Lost & Found Edges

Walcott Fine Art · 7:01

<https://www.youtube.com/watch?v=OV6X5e25tPw>

Optional: lost and found edges shown in still-life paintings.

### KEY TERMS

#### **form shadow edge**

The edge of the shadow on the object itself, which is soft on rounded forms and hard on angular ones.

#### **lost-and-found edges**

Edges that alternate between clearly visible (found) and disappearing into the background (lost) along one contour.

## **sfumato**

From the Italian word for smoke:  
Leonardo's method of blending tones  
so gently that edges dissolve without  
lines, like smoke.

## **gradation**

A smooth, gradual change from one  
value to another.

### **CORE IDEAS**

In Unit 1 you learned to see hard, soft and lost edges. Now we use edges to describe **form**. The edge between light and shadow on an object tells the viewer how that object turns. A soft, gradual edge says “this form is round and turns slowly,” like a cheek or an egg. A hard edge says “this form turns sharply,” like the corner of a box or the bridge of a nose.

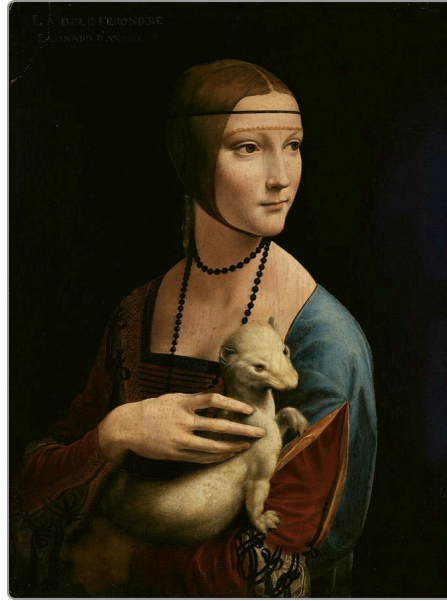
Contours behave the same way. Along the outline of a face, some edges are found (crisp, where a light cheek meets a dark background) and others are lost (where the shadow side of the face melts into an equally dark background). A drawing with every contour found looks like a cut-out pasted on paper; lost edges let the form sit in the air and turn away from us.

Leonardo da Vinci called his method **sfumato**, from the Italian *fumo*, smoke. He built up very thin layers of paint so that lights faded into shadows with no visible line or brushstroke, as though seen through a gentle haze. In his portraits the corners of the eyes and mouth are especially soft, which makes the expressions seem alive and hard to pin down.

To draw sfumato in pencil, work in many light layers with a sharp pencil, building the value slowly, and soften with a stump or tissue. Avoid outlines. Where the form turns, make the gradation long and gentle; where it breaks, make it short. Leave a few crisp edges near the center of interest, such as a highlight in the eye, so the drawing does not become foggy everywhere.

Leonardo wrote in his notebooks that an artist should draw shadows and lights “without lines or borders, in the manner of smoke.” He practiced this by studying faces in soft evening light or under an overcast sky, when edges are gentlest.

## PICTURE STUDY



*Lady with an Ermine*, Leonardo da Vinci, about 1489–1491 · Oil on walnut panel · Czartoryski Museum, Kraków, Poland

Image: [Wikimedia Commons](#), public domain

This young woman, Cecilia Gallerani, lived at the court of Milan. Leonardo painted her turning as if someone has just spoken to her, holding a sleek white ermine. Her face is modeled with the soft, smoky edges that became Leonardo's signature.

### Look closely

- Look at the shadow side of her face. Where is the edge between light and shadow soft? Is there anywhere it is sharp?
- Follow her outline against the dark background. Where is the edge found, and where is it nearly lost?
- Look at the corners of her eyes and mouth. Are there any hard lines?
- Compare the edges of her hand with the edges of the ermine's fur.

### Talk about it

1. How do the soft edges make her seem alive and thoughtful?
2. Why might Leonardo paint the background so dark?
3. How does the turn of her head and the ermine's pose show movement in a still picture?

## STUDIO PROJECT

### A Sfumato Study of an Egg and a Face

You will practice smooth gradations and lost-and-found edges in two steps: first a large egg in sfumato, then a portrait study (copied from a Leonardo or Raphael face, or drawn from a family member lit softly from the side).

#### You will need

- Smooth drawing paper (two sheets, 9×12 in)
- 2H, HB, 2B and 4B pencils, kept sharp
- Blending stump and tissue
- Kneaded eraser
- An egg on a dark cloth and a lamp
- A print of a Leonardo face, or a family member as a model

#### Steps

1. Place the egg on the dark cloth with the lamp from the side. Draw it about 5 inches tall with a very light outline.
2. Shade the background dark, leaving the egg. Along the egg's shadow side, let the background and the shadow meet without a line, so that edge is lost.
3. On the egg, build the gradation from light to core shadow in many thin layers, using small circular strokes. Blend gently with a tissue.
4. Keep one crisp edge where the bright side of the egg meets the dark background, and a crisp small highlight.
5. On the second sheet, lightly draw the head and features of your portrait subject using the proportions from Unit 2.
6. Squint to find the large shadow shape. Shade it lightly, then build value in layers. Make the transitions on the cheek and forehead long and gentle.
7. Soften the corners of the eyes and mouth: no hard outlines. Let part of the hair or the shadow side of the jaw be lost in the background.
8. Add a few found edges and the eye highlights near the center of interest. Sign and date both sheets.

### Tips

- Patience is the whole method. Ten light layers look smoother than two heavy ones.
- Do not blend with fingers; skin oils leave blotches.

### Check your work

- ☐ My egg has a smooth gradation with no visible line between light and shadow.
- ☐ Each drawing has at least one lost edge and at least one found edge.
- ☐ The corners of the eyes and mouth in my portrait are soft, not outlined.

### SKETCHBOOK PRACTICE

1. Draw a box and a ball side by side with one lamp, and label each form shadow edge as hard or soft.
2. Draw a family member in soft evening light, using only lost-and-found edges and no outlines.
3. Copy the eyes and mouth of *Lady with an Ermine*, building tone in thin layers.

**From history.** *Lady with an Ermine* is one of only four surviving portraits of women by Leonardo. It was hidden during the Second World War, taken to Germany, and returned to Kraków in 1946. It is painted on a thin walnut panel prepared with gesso, a support you will learn about in Unit 5.

### COMMON MISTAKES

- Outlining the whole face, which flattens it.
- Over-blending until everything is soft and mushy; keep a few found edges.
- Pressing hard and fast instead of building gently in layers.

**Make it a game • Smoky Edges.** Using soft pencil and your finger, make a gradation from dark to light in ninety seconds. Your parent tries to find the exact line where it changes. If your parent cannot, you win a point. Explain what sfumato means and how Leonardo used it on a face. Try a lost edge next.

## 4.4 GRISAILLE: PAINTING IN GRAYS

### OBJECTIVES

- Explain what grisaille is and two ways the old masters used it.
- Mix a value scale of grays in acrylic and match them to a subject.
- Paint a grisaille study of a white object or a plaster-like form.

**Warm-up.** With a pencil, draw a nine-box value scale from white to black. Then look at a black-and-white photograph of a statue and pick out three values from your scale that match its light, halftone and shadow.

### WATCH

#### GRISAILLE - Oil Painting Tutorial with Step by Step Demonstration

Florent Farges - arts · 17:01

<https://www.youtube.com/watch?v=hoCpj0vwmHU>

### WHEN TO WATCH

Before the studio project. He paints in oil, but every step of building a head in grays and lights works the same way in acrylic, only faster.

**Note:** Where he thins paint with oil-painting mediums, you will use water. Skip the short course advertisement in the middle.

### KEY TERMS

#### **grisaille**

A painting done entirely in shades of gray (from the French *gris*, gray), either as a finished work or as an underpainting.

#### **value scale**

A row of steps from white to black, used to judge and mix values.

#### **underpainting**

A first layer of a painting, often in one color or in grays, that establishes the values before color is added.

#### **trompe-l'œil**

French for “deceive the eye”: painting so realistic it seems to be a real object, such as a gray painting that looks like a carved stone statue.

## CORE IDEAS

**Grisaille** means painting in grays. It removes the problem of color so that you can concentrate entirely on value and form. If the values are right, a gray painting looks completely three-dimensional.

The old masters used grisaille in two ways. First, as a **finished work**: the outer wings of many Flemish altarpieces were painted in grisaille to look like stone statues standing in niches, so that when the altarpiece was closed (as in Lent) the worshipper saw quiet gray figures, and when it was opened on feast days, the full color appeared. Second, as an **underpainting**: Renaissance and Baroque painters often painted the whole picture first in grays or browns, then laid thin, transparent layers of color (glazes) over it.

To paint a grisaille, mix a value scale before you begin: at least five, preferably seven, grays from white to black, in separate puddles on the palette. Many painters warm or cool their grays slightly (with a touch of burnt umber or ultramarine) because pure black and white can look cold and dead.

Then paint as you have learned: block in the big shadow shapes with a middle-dark gray, paint the background, add the halftones and lights, and finish with the darkest accents and the brightest highlights. Blend the turning edges while wet; keep sharp edges where forms break.

Because acrylic dries quickly and darkens slightly, grisaille in acrylic works best in small sections. Keep the palette misted, and check values against your scale as you go.

## PICTURE STUDY



*Annunciation Diptych*, Jan van Eyck, about 1433–1435 · Oil on panel · Museo Thyssen-Bornemisza, Madrid

Image: [Wikimedia Commons](#), public domain

These two small panels show the angel Gabriel and the Virgin Mary, but van Eyck painted them to look like white stone statues standing in black marble niches. Even the frames are painted. It is grisaille used as a dazzling trick of the eye, and a lesson in perfect control of value.

### Look closely

- Look at the figures. What makes them look like stone and not like living people?
- Find the reflections of the statues in the polished black stone behind them.
- Look at the folds of Mary's and Gabriel's robes. How many values can you count?
- Find the edges of the painted frames. Where is the light coming from?

### Talk about it

1. Why might an artist choose to paint in grays when he could use color?
2. How does van Eyck make you believe the figures are carved, even though they are painted on a flat panel?

3. Compare this Annunciation with Leonardo's from Lesson 1.2. How are the two moods different?

## STUDIO PROJECT

### A Grisaille of a White Object

You will paint a white object (an egg, a white mug, a small white statue or a plaster form) in acrylic grays only, matching every value to a scale you mix first.

#### You will need

- Canvas panel (8×10 in)
- Acrylic paints: titanium white, black, and a touch of burnt umber (optional)
- Flat brushes #6 and #10, round #4, palette knife
- Palette, spray bottle, water jars, rags
- A white object, a plain background (gray or dark), and a lamp

#### Steps

1. Set up the white object against the background with a strong side light.
2. On the palette, mix seven grays in separate puddles from white (1) to black (7). Add a tiny touch of burnt umber to each if you want warmer grays. Paint a swatch of each along the edge of a scrap of paper to make a value strip.
3. Tone the panel with gray value 4. Let it dry.
4. With a small brush and gray 6, draw the object, its shadow side and its cast shadow.
5. Block in the shadow side and cast shadow with gray 5 and the background with the value you see (often 4–6).
6. Paint the light side of the object with grays 2 and 3, and blend the turning edge into the shadow while wet.
7. Add reflected light in the shadow with gray 4 (no lighter!), the core shadow with gray 6, and the occlusion shadow with gray 7.
8. Finish with a thick highlight of gray 1 (pure white). Compare everything with your value strip, correct, sign and date.

#### Tips

- Check each value by holding your value strip up next to the object and squinting.
- Mix plenty of each gray; running out halfway and remixing is the most common way to lose control of values.

#### Check your work

- ☐ I mixed and used at least seven separate values.
- ☐ My object looks three-dimensional without any color.
- ☐ The reflected light is darker than the halftone, and the occlusion shadow is the darkest value.

#### SKETCHBOOK PRACTICE

1. Paint a seven-step gray value scale in acrylic and glue it into your sketchbook for future reference.
2. Copy one of van Eyck's figures in pencil, using only five values.
3. Make a small grisaille of a fold of white cloth.

**From history.** Jan van Eyck worked in Bruges in the 1430s and was famous for his mastery of oil paint. His great Ghent Altarpiece also has grisaille figures painted to look like statues on its outer panels. Painters in his tradition kept using grisaille on altarpiece wings for over a hundred years.

#### COMMON MISTAKES

- Mixing grays on the fly instead of making a scale first, so the values drift.
- Painting the lights too bright too early, leaving nowhere to go for highlights.
- Letting paint dry before blending the turning edge.

**Make it a game • Gray Match.** Draw a nine-step gray scale with a pencil. Hold three gray household items against it and say which step each matches. Your parent checks. Then explain what grisaille is and two ways old masters used it. For a bonus point, tell what trompe-l'oeil means and give an example.

## UNIT 4

# LIGHT

Without light there is nothing to see, and without understanding light there is nothing convincing to draw. In this unit you will study light the way the old masters did: by simplifying a scene into a few big values, by finding the soft glow of reflected light inside shadows, by controlling edges so forms turn smoothly, and finally by painting a whole picture in grays alone, a method called *grisaille*.

The masters of this unit were all students of light: Joseph Wright of Derby, who painted scenes lit by a single lamp; Vermeer, whose daylight seems to fill the room; Leonardo, who invented the smoky softness called *sfumato*; and Jan van Eyck, who painted figures in gray so convincingly that they look like carved stone.

### PREREQUISITES

- Can draw and shade simple forms (sphere, cube, cylinder) with a light side, shadow side and cast shadow
- Understands hard, soft and lost edges (Unit 1)
- Can mix and apply acrylic paint in layers (Unit 3)

### MASTERY CHECKLIST

- ☐ I can make a small three- or four-value study that simplifies a scene before I draw or paint it.
- ☐ I can name the parts of light on a form: highlight, light, halftone, core shadow, reflected light, cast shadow and occlusion shadow.
- ☐ I can draw reflected light without making it as bright as the lit side.
- ☐ I can use soft edges where forms turn and hard edges where they break, and explain *sfumato*.
- ☐ I can paint a *grisaille* study in a range of grays from white to black.

### LESSONS IN THIS UNIT

#### 4.1 Value Studies: Seeing in Three Values

2 sessions of 50–60 minutes

#### 4.2 Reflected Light and the Anatomy of a Shadow

2 sessions of 50–60 minutes

#### 4.3 Edges and the Turning Form: *Sfumato*

2 sessions of 50–60 minutes

#### 4.4 *Grisaille*: Painting in Grays

2 sessions of 50–60 minutes

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## UNIT 4 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a drawing. Total: 100 points.

1. 6 pts

What is a value study, and why do artists make one before starting a picture?

2. 6 pts

What does squinting help an artist see?

3. 6 pts

What does chiaroscuro mean?

4. 10 pts

List the parts of light and shadow on a sphere, in order from the highlight to the cast shadow.

5. 8 pts

What is reflected light, and what is the rule about how bright it can be?

6. 6 pts

Why is the shadow edge on a ball soft but the shadow edge on a box hard?

7. 6 pts

What is sfumato, and where does the word come from?

8. 8 pts

Name two ways the old masters used grisaille.

9. 6 pts

Why should you mix a full value scale of grays before painting a grisaille?

10. 8 pts

Name the artist of: *A Philosopher Lecturing on the Orrery*; *The Milkmaid*; *Lady with an Ermine*; the *Madrid Annunciation Diptych*.

11. **15 pts**

In four or five sentences, describe how Vermeer shows light in *The Milkmaid*.  
Mention reflected light.

12. **15 pts**

Draw a sphere lit from the upper left on a table. Label the highlight, halftone, core shadow, reflected light, cast shadow and occlusion shadow.

## ANSWER KEY

1. A small, quick sketch in three or four flat values that shows the main pattern of light and dark; it plans the picture's light, contrast and center of interest before time is spent on details.
2. The large shapes of value, without distracting details.
3. "Light-dark": strong contrasts of light and shadow used to model form and create drama.
4. Highlight, light, halftone, terminator, core shadow, reflected light, cast shadow (with the occlusion shadow where it touches the surface).
5. Light bounced from nearby surfaces into the shadow side. It is part of the shadow, so it must always be darker than any value on the light side.
6. The ball turns away from the light gradually; the box turns sharply at its corner.
7. Leonardo's method of blending tones so gently that edges dissolve without lines; from the Italian word for smoke.
8. As finished paintings (such as altarpiece wings painted to look like stone statues) and as underpaintings to establish values before glazing color over them.
9. So the values stay consistent and controlled instead of drifting as you remix.
10. Joseph Wright of Derby; Vermeer; Leonardo da Vinci; Jan van Eyck.
11. Model: Daylight comes from the window on the left and falls on the maid's cap, face, arm and the bread. The white wall is not one flat value; it gets lighter near the window and darker farther away. Light bounces off the wall and table into the shadows, so the shadow sides of the jug, bowl and figure have soft reflected light. Vermeer paints small bright highlights on the bread and the jug. The calm, even light makes an ordinary task feel important.
12. Drawing shows a sphere with highlight at upper left, halftone, a core shadow band on the lower right inside the terminator, lighter reflected light near the lower right edge (still darker than the halftone), a cast shadow to the lower right, and the darkest occlusion shadow where the sphere touches the table.

## PORTFOLIO PIECE: A GRISAILLE STILL LIFE FROM A VALUE STUDY

Arrange a still life of three white or light-colored objects (for example, an egg, a white cup and a folded white napkin) under one lamp. Make three small value studies, choose the best, and then paint the still life in acrylic grisaille on a 9×12 in or larger panel. Show the full anatomy of light, soft edges where forms turn, and at least one lost edge.

| LOOK FOR             | WHAT IT MEANS                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------|
| <b>Value study</b>   | Three studies are attached; the painting follows the strongest one.                                  |
| <b>Value range</b>   | A full range of at least seven grays, with clear light, halftone, shadow and dark accents.           |
| <b>Light on form</b> | Core shadows, reflected light and occlusion shadows are placed correctly and the objects look solid. |
| <b>Edges</b>         | Soft edges on turning forms, hard edges where forms break, and at least one lost edge.               |
| <b>Craftsmanship</b> | Clean grays, careful brushwork, signed and dated.                                                    |

## MATERIAL SCIENCE: PAINT

Every paint in the world is made of two things: **pigment**, the colored powder, and **binder**, the glue that holds the powder together and sticks it to the surface. Change the binder and you change everything: how the paint flows, how fast it dries, whether it is transparent or opaque, and how long it lasts. In this unit you will become a small-scale materials scientist, testing paints, preparing your own painting surfaces, learning the anatomy of a brush, and running a lightfastness experiment that takes weeks to finish.

Knowing your materials is part of good craftsmanship. Bezalel, the craftsman God filled with skill to build the tabernacle, knew gold, silver, wood, stone and dyes. Our masters for this unit are Jan van Eyck, the great early master of oil paint; Duccio, who painted in egg tempera on gessoed wood; Frans Hals, whose brushwork is a lesson in itself; and Van Gogh, whose fading colors teach us why permanence matters.

### PREREQUISITES

- Has painted with acrylic and watercolor (Unit 3)
- Knows the words opaque, transparent and impasto
- Can follow safety directions and work carefully with an adult nearby

### MASTERY CHECKLIST

- ☐ I can explain that paint is pigment plus binder, and name the binder in oil, acrylic, watercolor and egg tempera.
- ☐ I can explain how each paint dries (by evaporation, by oxidation, or both) and what that means for the painter.
- ☐ I can describe canvas, wood panel and paper as supports, and explain what gesso and sizing do.
- ☐ I can name brush shapes and hair types and clean and store my brushes correctly.
- ☐ I can explain lightfastness, read a paint label, and follow the rules of a safe studio.

## LESSONS IN THIS UNIT

### 5.1 Pigment and Binder: Oil, Acrylic, Watercolor and Tempera

2 sessions of 50–60 minutes

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### 5.2 Supports and Grounds: Panel, Canvas, Paper and Gesso

2 sessions of 50–60 minutes

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### 5.3 Brushes: Shapes, Hairs and Care

2 sessions of 50–60 minutes

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### 5.4 Colors That Last: Lightfastness and a Safe Studio

2 sessions of 50–60 minutes

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## UNIT 5 REVIEW

Answer each question in your own words. You may look at your own sketchbook and experiment charts but not at the lessons. Questions 11 and 12 ask for a few sentences. Total: 100 points.

1. **6 pts**

What are the two ingredients of every paint, and what does each do?

2. **10 pts**

Name the binder in each: watercolor, acrylic, oil paint, egg tempera, gouache.

3. **8 pts**

How does oil paint dry, and how is that different from acrylic?

4. **6 pts**

Why can dry watercolor be lifted with water, but dry acrylic cannot?

5. **8 pts**

What is traditional gesso made of, and what support was it used on?

6. **6 pts**

Why must canvas be sized and primed before oil painting?

7. **8 pts**

Match the brush to its use: round, flat, filbert, liner.

8. (6 pts)

Describe the correct way to clean an acrylic brush.

9. (6 pts)

What does lightfastness mean? What rating is best in the ASTM system?

10. (6 pts)

Name four rules of a safe studio.

11. (15 pts)

In four or five sentences, explain what happened to the colors of Van Gogh's *Bedroom* and what lesson it teaches painters.

12. (15 pts)

In four or five sentences, compare egg tempera and oil paint. Mention drying, blending and the support each needs.

## ANSWER KEY

1. Pigment gives the color; binder holds the pigment particles together and glues them to the surface.
2. Gum arabic; acrylic polymer emulsion; drying oil (usually linseed oil); egg yolk; gum arabic.
3. Oil dries by oxidation, reacting with oxygen over days to months; acrylic dries by evaporation of water and the fusing of polymer particles in minutes.
4. Dried gum arabic redissolves in water; the fused acrylic film does not.
5. Chalk or gypsum mixed with animal (rabbit-skin) glue, applied in many layers to wooden panels.
6. To seal the fibers so oil does not soak in and rot them, and to give a stable surface for the paint.
7. Round: lines and details; flat: broad strokes and crisp edges; filbert: soft-edged strokes and blending; liner: long thin lines like branches.
8. Wipe off excess paint, rinse in cool water, wash gently with mild soap until clean, rinse, reshape the tip and dry flat or handle-down; never let paint dry in it.
9. A pigment's resistance to fading in light; ASTM I is best.
10. Any four: no eating or drinking while painting; no brushes in the mouth; wash hands after painting; avoid breathing pigment or sanding dust; spray fixative and varnish only outdoors with an adult; look for the AP seal; keep paint water away from food.
11. Model: Van Gogh wrote that the walls were pale violet, but they look blue today. He mixed violet from blue and a red lake pigment that was fugitive, so the red faded in the light and left mostly blue. Scientists confirmed this by studying the paint. Some of his yellows have also darkened. The lesson is to choose lightfast pigments and protect finished work from strong light.
12. Model: Egg tempera uses egg yolk as a binder and dries in seconds, so it cannot be blended much; painters build form with tiny hatched strokes. It is brittle and must be painted on a rigid gessoed panel. Oil paint uses linseed oil and dries slowly by oxidation, so colors can be blended softly and glazed in transparent layers. Oil is more flexible and can be used on canvas as well as panels.

## PORTFOLIO PIECE: A PAINTING ON A PANEL YOU PREPARED

On the gessoed panel you made in Lesson 5.2, paint a small still life or a study of a single object in acrylic, using at least three brush shapes on purpose and only colors rated lightfast (ASTM I or II, or Blue Wool 7–8) if your paints show ratings. On the back of the panel, write a materials label like a museum’s: support, ground, paint and binder, and the date.

| LOOK FOR                  | WHAT IT MEANS                                                                                                    |
|---------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Prepared surface</b>   | The panel has smooth, even gesso coats and no bare board showing.                                                |
| <b>Brushwork</b>          | At least three brush shapes are used on purpose, with confident strokes suited to the subject.                   |
| <b>Material knowledge</b> | The materials label on the back correctly names support, ground, paint and binder; lightfast colors were chosen. |
| <b>Form and color</b>     | The subject looks solid, with clear light and shadow and harmonious color.                                       |
| <b>Care and safety</b>    | Brushes and palette were cleaned properly and studio rules followed; the work is signed and dated.               |

## 5.1 PIGMENT AND BINDER: OIL, ACRYLIC, WATERCOLOR AND TEMPERA

### OBJECTIVES

- Explain the difference between pigment and binder.
- Name the binder in oil paint, acrylic, watercolor, gouache and egg tempera, and explain how each dries.
- Test and compare three paints in a controlled experiment.

**Warm-up.** Scrape a little color from a watercolor pan onto a plate with a damp brush, then add a drop of water. Now put a drop of water on a dry swatch of acrylic you painted in Unit 3. Which one moves and which one does not? Write down a guess about why.

### WATCH

#### The Types of Paint Oil Acrylic Watercolor the Pros and Cons

Lets Create Something · 7:33

<https://www.youtube.com/watch?v=tw2KzPpBrww>

### WHEN TO WATCH

After the core ideas. Make a three-column chart in your sketchbook (oil, acrylic, watercolor) and fill it in as you watch.

### KEY TERMS

#### **pigment**

A finely ground colored powder that does not dissolve in the binder. Pigments come from minerals and earths, from plants and insects, or are made in factories.

#### **vehicle**

The liquid part of a paint, the binder plus anything used to thin it (such as water).

#### **binder**

The substance that holds pigment particles together and glues them to the surface: linseed oil, acrylic polymer, gum arabic or egg yolk.

#### **oxidation**

A chemical reaction with oxygen in the air. Oil paint dries by oxidation, not by evaporation.

**gum arabic**

A natural gum made from the hardened sap of acacia trees, used as the binder in watercolor and gouache.

**egg tempera**

Paint made of pigment bound with egg yolk, used for most panel paintings in Europe before about 1500.

**CORE IDEAS**

All paint is **pigment + binder**. Pigment alone is just colored dust; it would blow away. The binder surrounds each tiny particle and glues it to its neighbors and to the surface. The same blue pigment can become watercolor, acrylic, oil paint or tempera, depending on the binder. The binder decides how the paint handles, dries and ages.

**Watercolor:** pigment + gum arabic (from acacia trees), usually with a little honey or glycerin to keep it moist. It dries by evaporation, but the dried gum dissolves again in water, so watercolor can always be rewetted and lifted. It is used in thin, transparent layers, so the white paper shines through and acts as the light. **Gouache** uses the same binder with more pigment (and sometimes white filler), so it is opaque.

**Acrylic:** pigment + acrylic polymer emulsion, tiny droplets of plastic floating in water. As the water evaporates, the droplets crowd together and fuse into a continuous, flexible film. Once fused, the film will not redissolve in water. That is why acrylic dries in minutes, can be layered quickly, and must be washed out of brushes before it dries.

**Oil paint:** pigment + a drying oil, usually linseed oil pressed from flax seeds. Oil does not evaporate. Instead it slowly reacts with oxygen in the air (**oxidation**) and links into a solid, rubbery film. This takes days to be dry to the touch and months to cure fully. Painters love the slow drying because colors can be blended softly for hours; the oil also makes colors deep and glowing. Oil painting requires solvents to clean up, which is why we do not use it in this course.

**Egg tempera:** pigment + egg yolk (a natural emulsion of oil and water). It dries in seconds by evaporation, then slowly hardens over months into a tough film. It cannot be blended much, so painters build form with many tiny hatched strokes. It must be painted on a rigid panel because it cracks if bent. For about three hundred years before van Eyck, nearly every European panel painting was egg tempera. (The “tempera paint” in school bottles today is a different, inexpensive poster paint.)

## PICTURE STUDY



*Arnolfini Portrait*, Jan van Eyck, 1434 · Oil on oak panel · National Gallery, London

Image: [Wikimedia Commons](#), public domain

Jan van Eyck did not invent oil paint, but he was one of the first to master it. Using thin, transparent layers of oil color (glazes) over a white panel, he made colors glow like jewels and painted details so fine you need a magnifying glass to see them. This portrait of a merchant and his wife in their home in Bruges is a showcase of what oil paint can do.

### Look closely

- Look at the brass chandelier. How does van Eyck make it shine?
- Find the round mirror on the back wall. What can you see reflected in it?
- Look at the deep green of the woman's gown. Does it look flat or glowing?
- Find the fur trim on the clothing and the dog's coat. How are the textures different?

### Talk about it

1. Which details would be very hard to paint in fast-drying egg tempera? Why?
2. Why do you think oil painting spread across Europe after painters saw works like this?
3. What does the care in this painting tell you about the painter's attitude toward his craft?

## The Binder Experiment

You will make a small batch of egg tempera, then test it side by side with watercolor and acrylic, recording your observations like a scientist.

### You will need

- A sheet of heavy paper or watercolor paper (9×12 in) and a piece of gessoed cardboard (or a canvas panel)
- Watercolor pans, acrylic paint (one blue, such as ultramarine)
- For egg tempera: one egg, a small cup, a teaspoon of water, and a pigment such as powdered tempera paint or finely crushed chalk pastel
- A black permanent marker
- Small brushes, water jars, paper towels, a timer, a ruler

### Steps

1. Make egg tempera: crack the egg and separate the yolk (an adult can help). Roll the yolk on a paper towel to dry it, pinch the yolk sack over a cup and let the yolk run out. Add about one teaspoon of water and stir. On a plate, mix a small heap of powdered pigment with a few drops of the yolk mixture into a smooth paint.
2. With the marker and ruler, draw a thick black line across the top of the paper and another across the cardboard. Let them dry.
3. Paint three swatches over each black line: watercolor, acrylic and egg tempera, each about 1×2 inches. Label them in pencil.
4. Drying test: start the timer and touch the edge of each swatch lightly every two minutes. Record how long each takes to feel dry.
5. Transparency test: look at the black line under each swatch. Which hides it, and which lets it show through?
6. Rewetting test: after all are dry (wait at least 30 minutes), brush clean water over one corner of each swatch and blot it with a paper towel. Which ones lift?

7. Flexibility test: gently bend the paper. Do any of the swatches crack? (Do not bend the cardboard.)
8. Make a results chart in your sketchbook with columns for paint, binder, drying time, transparency, rewettable (yes or no), and cracking. Write two sentences explaining your results using the words binder and evaporation.

#### **Tips**

- Wash your hands after handling raw egg, and throw away leftover tempera at the end of the day; it spoils.
- Do not breathe pigment dust. Crush chalk pastel gently inside a folded paper, and do this near an open window.

#### **Check your work**

- ☐ I made all three paints and tested them on the same surface.
- ☐ My chart records drying time, transparency, rewetting and cracking for each paint.
- ☐ I can explain my results by naming each binder.

#### **SKETCHBOOK PRACTICE**

1. Draw and label a diagram showing pigment particles surrounded by binder.
2. List five paints or coatings in your house (wall paint, nail polish, markers, crayons, wood stain) and guess the binder of each, then look it up with a parent.
3. Make a small painting with your leftover egg tempera using hatched strokes, the way medieval painters did.

**From history.** The painter and writer Giorgio Vasari later claimed that Jan van Eyck invented oil painting. In fact, oil paint was known for centuries before him, but van Eyck and his fellow Netherlandish painters perfected the method of thin, glowing glazes. By about 1500, Italian painters too were switching from egg tempera to oil.

#### **COMMON MISTAKES**

- Confusing pigment with dye. Dyes dissolve completely; pigments are tiny solid particles that stay suspended.
- Saying oil paint dries by evaporation. It dries by oxidation, a chemical reaction with air.
- Calling school poster paint “egg tempera.” True tempera uses egg yolk.

**Make it a game • Binder Rapid Fire.** Your parent names a paint: oil, acrylic, watercolor, gouache or egg tempera. Within five seconds, say the binder and how it dries. Mix up the order. Then answer with only the definition: 'a powder that gives color.' One point per right answer. Fifteen rounds, then reverse roles.

**Scripture.** “And I have filled him with the spirit of God, in wisdom, and in understanding, and in knowledge, and in all manner of workmanship, To devise cunning works, to work in gold, and in silver, and in brass,” (Exodus 31:3-4, KJV)

God gave Bezalel knowledge of his materials as well as skill of hand. Understanding what paint is made of is part of becoming a wise and skillful maker.

## 5.2 SUPPORTS AND GROUNDS: PANEL, CANVAS, PAPER AND GESSO

### OBJECTIVES

- Name the main painting supports and their strengths and weaknesses.
- Explain what sizing, gesso and a ground are and why they are needed.
- Prepare a painting surface with gesso and compare it with an unprimed one.

**Warm-up.** Brush a stripe of water across a piece of plain cardboard, a piece of printer paper, and a piece of watercolor paper. Watch for one minute. Which absorbs the water fastest? Which buckles? Which stays flattest?

### WATCH

#### How to Prime and Prepare Canvases for Acrylic & Oil Paintings

Marianne Vander Dussen · 11:24

<https://www.youtube.com/watch?v=oZkCF4AIEu4>

### WHEN TO WATCH

Before the studio project. Watch how she brushes on thin coats of acrylic gesso, crossing directions and sanding between coats.

### KEY TERMS

#### **support**

The physical surface a painting is made on: a wooden panel, stretched canvas, paper, copper or a wall.

#### **ground**

The prepared layer between the support and the paint, which gives the paint a stable, even surface to stick to.

#### **gesso**

Traditionally a mixture of chalk or gypsum with animal glue, applied in many layers to wood panels. Modern “acrylic gesso” is acrylic polymer with white pigment and chalk.

#### **sizing**

A thin layer of glue or gelatin that seals the fibers of canvas or paper, so paint and oil do not soak in.

**tooth**

The slight roughness of a surface that grips the paint or drawing material.

**linen and cotton duck**

The two main canvas fabrics: linen is woven from flax fibers and is strong and fine; cotton duck is cheaper and softer.

**CORE IDEAS**

A painting is a sandwich of layers: the **support** (what it is painted on), the **ground** (the preparation layer), the **paint layers**, and sometimes a protective **varnish**. Each layer must stick to the next and survive changes in heat and moisture for centuries.

**Wood panel** was the main support in Europe until the 1500s. It is rigid, so brittle paints like egg tempera do not crack, but it is heavy and can split or warp as it swells and shrinks with humidity. Painters prepared panels with traditional **gesso**: chalk or gypsum mixed with warm rabbit-skin glue, brushed on in as many as ten or more layers and then scraped and sanded until it was as smooth and white as ivory. That brilliant white ground is why early panel paintings glow.

**Canvas**, cloth stretched over a wooden frame, became popular in the 1500s, first in damp Venice, where frescoes and panels suffered. Canvas is light, can cover huge areas, and can even be rolled for travel. But raw canvas is a problem: oil soaks into it and slowly rots the fibers, and the cloth expands and contracts. So it is first **sized** with glue to seal the fibers and then given a flexible ground. Today most canvases are primed with **acrylic gesso**, which stays flexible and works under both acrylic and oil.

**Paper** is a mat of plant cellulose fibers. Cheap paper made from wood pulp contains acids that make it yellow and brittle; good art paper is acid-free, and the best watercolor paper is made of cotton. Paper is sized (with gelatin or other sizing) so that watercolor sits on the surface instead of soaking in like a paper towel. Paper weight tells its thickness: 140 lb (300 gsm) watercolor paper resists buckling much better than thin paper.

The surface changes the painting. A smooth panel suits fine detail; a canvas with tooth breaks up the brushstroke and gives texture; rough watercolor paper makes sparkling broken washes. Choosing and preparing your support well is the first step of every good painting.

## PICTURE STUDY



*Rucellai Madonna*, Duccio di Buoninsegna, 1285 · Tempera and gold on wood panel · Uffizi Gallery, Florence

Image: [Wikimedia Commons](#), public domain

This huge altarpiece, more than fourteen feet tall, was painted for a chapel in Florence. Duccio painted it in egg tempera and gold leaf on a wooden panel built of several planks and covered with layers of gesso. It is one of the great works of early Italian sacred art.

### Look closely

- Look at the gold background. It is real gold leaf laid over the gesso. How does it change the feeling of the picture?
- Look at the angels' robes. Can you see the soft, pale colors typical of egg tempera?
- Find the edge of Mary's blue robe trimmed with gold. How is the gold line drawn?
- Look at the size of Mary compared with the angels. What does this tell you?

### Talk about it

1. Why would a painting this large be painted on several wooden planks joined together, and what could go wrong over time?
2. Why do you think artists used real gold for the background of sacred paintings?

3. How is this Madonna different from the realistic room in van Eyck's *Arnolfini Portrait*?

## STUDIO PROJECT

### Prepare a Panel, Then Test It

You will prepare your own painting panel from heavy cardboard or hardboard with acrylic gesso, sanding between coats, and compare how paint behaves on primed and unprimed surfaces.

#### You will need

- Two pieces of heavy cardboard or hardboard (about 8×10 in)
- Acrylic gesso
- A 1-inch flat brush or foam brush
- Fine sandpaper (220 grit) and a paper towel
- Acrylic paint and watercolor, a small brush
- Newspaper to cover the table

#### Steps

1. Cover the table. On the back of one board, write “primed” and on the other “raw.”
2. On the primed board, brush on a thin coat of gesso, all strokes going one direction (for example, side to side). Let it dry (20–30 minutes). Wash the brush at once.
3. Brush on a second thin coat in the other direction (top to bottom). Let it dry.
4. Sand lightly with fine sandpaper until smooth, and wipe off the dust with a barely damp paper towel. Do this outdoors or near a window, and do not breathe the dust.
5. Add a third coat, crossing the second. Let it dry and sand once more if you want a very smooth surface.
6. Paint a stripe of acrylic and a stripe of watercolor across both boards.
7. Compare: Does the paint soak in or sit on top? Does the color look dull or bright? Does the raw cardboard warp?
8. Write a short report (5 or 6 sentences) explaining the difference, using the words support, ground and absorbent. Keep the primed board for the portfolio piece.

### Tips

- Thin coats are better than thick ones; thick gesso cracks and leaves ridges.
- If you have a strip of canvas fabric, gesso a piece of it too and feel how much stiffer it becomes.

### Check your work

- ☐ My primed panel has at least three smooth, crossed coats of gesso.
- ☐ I tested paint on both primed and raw surfaces.
- ☐ My report explains why the primed surface behaves differently.

### SKETCHBOOK PRACTICE

1. Draw a cross-section diagram of a painting: support, ground, paint layers, varnish. Label each.
2. Collect five papers from around the house (printer paper, newspaper, cardstock, watercolor paper, a paper bag) and test a watercolor stripe on each. Note which buckle and which bleed.
3. Draw a stretcher frame with canvas wrapped around it, showing how the canvas is stapled on the back.

**From history.** Duccio's altarpiece was ordered in 1285 by a religious brotherhood in Florence for the church of Santa Maria Novella. For centuries it was thought to be by Cimabue, until scholars found the original contract naming Duccio. It now hangs in the Uffizi, next to great altarpieces by Cimabue and Giotto.

### COMMON MISTAKES

- Painting directly on raw cardboard or wood, which soaks up paint and may warp.
- Putting gesso on thickly in one coat instead of several thin ones.
- Thinking "gesso" always means the same thing: traditional gesso is rigid and for panels; acrylic gesso is flexible.

**Make it a game • Art Supply Shop.** You are the shopkeeper. Your parent is a customer with a need, such as a large lightweight painting that can roll up or a small panel for fine detail. Recommend a support, gesso, sizing or ground, and explain why. Customer may argue. Score a point for each sensible recommendation.

## 5.3 BRUSHES: SHAPES, HAIRS AND CARE

### OBJECTIVES

- Name the parts of a brush and the main brush shapes.
- Explain which hairs or fibers suit which paints.
- Practice the marks of each brush shape and clean and store brushes correctly.

**Warm-up.** Lay out every brush you own. Sort them by shape. Then, with water only on a dark paper bag or a chalkboard, make one stroke with each brush and see what mark it makes.

### WATCH

#### **PAINTBRUSHES 101: All about paintbrushes! Acrylic painting tips for beginners.**

Jennifer Funnell · 5:34

<https://www.youtube.com/watch?v=3daCD6INXRs>

### WHEN TO WATCH

After the core ideas and before the studio project.

### KEY TERMS

#### **ferrule**

The metal sleeve that holds the hairs and attaches them to the handle.

#### **flat**

A brush with long hairs cut square, for broad strokes, crisp edges and covering areas.

#### **bristle and sable**

Hog bristle is stiff and springy, used for thick oil paint; sable (from the tail of a weasel-like animal) is soft and holds a fine point, prized for watercolor. Synthetic (nylon) fibers imitate both.

#### **round**

A brush with a pointed tip, for lines, details and washes.

#### **filbert**

A flat brush with a rounded, oval tip, for soft-edged strokes and blending.

#### **alla prima**

Italian for “at the first attempt”: painting wet into wet in one session, with confident visible strokes.

## CORE IDEAS

A brush has three parts: the **handle**, the **ferrule** (the metal sleeve), and the **head** of hairs, which has a **heel** (near the ferrule), a **belly** (which holds the paint) and a **toe** or **tip**. Paint should stay in the front two-thirds of the hairs. If paint dries in the heel, the brush splays and is ruined.

Each **shape** makes its own marks. A **round** makes lines that swell and thin with pressure. A **flat** makes broad strokes with crisp edges and, turned on its edge, thin lines. A **bright** is a short flat for short, controlled strokes. A **filbert** makes soft-edged strokes, ideal for blending and for petals and faces. A **fan** is for textures like grass and foliage, and a **liner** (rigger) with very long hairs makes long, fine lines like branches and rigging.

The **hair** must suit the paint. Thick oil paint needs stiff hog **bristle**. Watercolor needs soft, absorbent hair that holds a point, traditionally **sable**. Acrylic is best with **synthetic** (nylon) brushes, because acrylic is hard on natural hair and synthetic fibers are tough and easy to clean. Cheap brushes that shed hairs are a false economy; a few good synthetic brushes will serve you for years.

Care: Never let acrylic dry in a brush. While painting, rest brushes flat or in water for only short periods, never standing on their tips. When finished, wipe off excess paint on a paper towel, rinse in cool water, wash gently with mild soap in your palm until the suds are clean, rinse, reshape the tip with your fingers, and dry the brushes lying flat or standing handle-down. Hot water can loosen the glue in the ferrule.

Great painters made brushwork part of their art. Frans Hals painted **alla prima**, laying each stroke once, quickly and confidently, so that a few flicks of a loaded brush become lace, a smile or a gleaming button. Up close his paintings look like a storm of strokes; from a few steps back, they come alive.

## PICTURE STUDY



*The Laughing Cavalier*, Frans Hals, 1624 · Oil on canvas · The Wallace Collection, London

Image: [Wikimedia Commons](#), public domain

This gentleman is not actually laughing, but his sly smile and the lively brushwork make him seem about to. Hals worked in Haarlem in the Netherlands and was famous for his fast, bold strokes. Notice how the brushwork is different in each part of the picture.

### Look closely

- Look at the lace collar. Can you see single brushstrokes? Are they long or short?
- Look at the embroidered sleeve. How do the strokes differ from those on the face?
- Find the highlights on the moustache and eyes. Were they painted with a round or a flat brush, do you think?
- Look at the background. Is it smooth or brushy?

### Talk about it

1. Why might Hals paint the face more smoothly and the clothing more loosely?
2. How does visible brushwork make a portrait feel lively?
3. Which brush shapes from this lesson do you think Hals used most?

## STUDIO PROJECT

### A Brushstroke Sampler and an Alla Prima Study

You will make a chart of the marks each brush can make, then paint a quick alla prima study of a simple object (a piece of cloth, a flower or a feathered hat if you have one) in one session, laying strokes boldly like Hals.

#### You will need

- Canvas paper (two sheets)
- Acrylic paints (white, black, burnt umber, a warm red, ultramarine blue, yellow ochre)
- All your brushes: rounds, flats, filbert, and a liner or fan if you have them
- Palette, water jars, paper towels, mild soap

#### Steps

1. On the first sheet, draw a grid of rows, one row for each brush you own. Label each row with the brush shape and size.
2. In each row, make five marks: a straight stroke, a stroke with pressure changing from light to heavy, a stroke on the edge, a dab, and a short twisted stroke.
3. Add one more row: make the same color stroke with a soft synthetic brush and with a stiff brush (or an old toothbrush). Note the difference in texture.
4. On the second sheet, set up a simple subject: a white cloth with folds, a flower, or a piece of lace on a dark background.
5. Tone the sheet with a middle brown. Mix your colors ahead of time: a dark, a middle and a light for your subject.
6. Paint the darks and the background with a large flat in broad strokes. Do not go back over strokes.
7. Paint the middle tones with a filbert, following the form of the folds or petals.
8. Finish with the lights and highlights using a round or liner, one confident stroke each. Stop when the subject reads from across the room, even if it looks rough up close.

9. Clean every brush following the steps in the core ideas, reshape the tips, and dry them flat.

#### Tips

- Load the brush fully for alla prima; dry, scratchy strokes look timid.
- Say each stroke in your head before you make it: where it starts, where it ends.

#### Check your work

- ☐ My sampler shows five kinds of marks for every brush I own.
- ☐ My alla prima study was finished in one session without overworking.
- ☐ My brushes are clean, reshaped and stored correctly.

#### SKETCHBOOK PRACTICE

1. Draw a labeled diagram of a brush: handle, ferrule, crimp, heel, belly, toe.
2. With one round brush and ink or watercolor, paint ten leaves using only pressure to change the stroke width.
3. Make a quick copy of the lace collar of *The Laughing Cavalier* in white paint on dark paper.

**From history.** Frans Hals spent nearly his whole life in Haarlem and painted portraits of its citizens, militia companies and charitable boards. Two hundred years after his death, painters such as Édouard Manet and John Singer Sargent studied his loose, quick brushwork closely.

#### COMMON MISTAKES

- Leaving brushes standing in the water jar on their tips, which bends them permanently.
- Letting paint creep up into the ferrule.
- Using tiny brushes for large areas, which makes paintings fussy and slow.

**Make it a game • Name That Brush.** Your parent draws strokes on paper: a thin line, a wide band, a rounded end. Name the brush shape that made each one: round, flat or filbert. Then answer which hairs, bristle or sable, suit which paints. Trade roles. Draw a stroke for a parent to guess in under five seconds.

**Scripture.** “And whatsoever ye do, do it heartily, as to the Lord, and not unto men;” (Colossians 3:23, KJV)

Even cleaning brushes can be done heartily and well. Caring for tools is part of faithful work.

## 5.4 COLORS THAT LAST: LIGHTFASTNESS AND A SAFE STUDIO

### OBJECTIVES

- Explain lightfastness and why some pigments fade.
- Read the lightfastness and safety information on a paint label.
- Set up a lightfastness experiment and a safe-studio checklist.

**Warm-up.** Look for something in your house that has faded in the sun: a book spine, a curtain, a poster or a toy. Compare a faded part with an unfaded part (such as the inside of a fold). Sketch it and write which colors faded most.

### WATCH

#### Under Cover: The Science of Van Gogh's Bedrooms

The Art Institute of Chicago • 8:52

<https://www.youtube.com/watch?v=9SsUzaIDsHo>

### WHEN TO WATCH

After the picture study. Listen for how scientists discovered the original wall color of the bedroom.

### BACKUP VIDEO

#### What is Lightfastness?

Cinder Block Studios • 4:25

[https://www.youtube.com/watch?v=-JQd\\_YxNzt8](https://www.youtube.com/watch?v=-JQd_YxNzt8)

Before the studio project, to learn how lightfastness is rated on paint tubes.

### KEY TERMS

#### **lightfastness**

How well a pigment resists fading or changing color when exposed to light, especially the ultraviolet light in sunlight.

#### **fugitive**

Describes a pigment or dye that fades quickly in light.

### **lake pigment**

A pigment made by fixing a dye onto a colorless mineral powder, such as the red lakes made from cochineal insects or madder root. Many lakes are fugitive.

### **ASTM and Blue Wool ratings**

Standard lightfastness ratings printed on good paint tubes: ASTM I is excellent and II very good; on the Blue Wool Scale, 8 is the most lightfast and 1 the least.

### **AP seal**

A label (“Approved Product”) from the Art and Creative Materials Institute showing that a product has been reviewed and is considered non-toxic when used as directed.

## **CORE IDEAS**

Light carries energy. Over time, especially the ultraviolet part of sunlight can break the chemical bonds in some colored substances. Many earth and mineral pigments (ochres, iron oxides, ultramarine, titanium white) are extremely **lightfast** and look the same after centuries. Others, especially many dyes and **lake pigments** made from plants or insects, are **fugitive** and fade in months or years.

Van Gogh’s *Bedroom* is a famous example. In a letter to his brother Theo, Vincent described the walls as pale violet. Today they look blue. Scientists studying the paintings found that the red pigment Van Gogh mixed with blue to make his violet was a fugitive red lake that has faded, leaving mostly blue. Some of his chrome yellows have also darkened. The painting we see is not quite the painting he made.

Good paint tubes print a **lightfastness rating**. In the ASTM system, I is excellent and II very good; avoid III for serious work. In the Blue Wool system, 7 and 8 are best. Student paints and many markers, felt pens and cheap colored pencils use dyes that fade quickly, which is fine for practice but not for a gift or a portfolio piece you want to keep for years. Keep finished work out of direct sunlight.

A **safe studio** is part of good craftsmanship. The materials in this course are safe when used sensibly, but some pigments (such as cadmiums and cobalts) are harmful if swallowed or breathed as dust. So: never eat or drink while painting, and never put a brush in your mouth; wash your hands after painting or using charcoal; do not

create or breathe pigment or sanding dust; use spray fixative and varnish only outdoors with an adult; look for the AP seal on products; and keep paint water away from food and drink.

Care for the earth and the household too. Wipe excess acrylic off brushes and palettes with a paper towel before rinsing, so less paint goes down the drain. Let used acrylic rinse water sit in a jar until the solids settle, pour off the clear water, and throw the sludge away with household trash. Cap tubes tightly and store paints away from heat and freezing.

## PICTURE STUDY



*Bedroom in Arles*, Vincent van Gogh, 1888 · Oil on canvas · Van Gogh Museum, Amsterdam (first of three versions)

Image: [Wikimedia Commons](#), public domain

Van Gogh painted his own bedroom in the Yellow House in Arles to express rest and calm. He made three versions. This first one has been studied closely by scientists, who discovered that some of its colors have changed since he painted it.

### Look closely

- Name the colors of the walls, the floor, the bed and the doors as they look today.
- Van Gogh said the walls were pale violet. Imagine them violet. How would the mood change?
- Find the pictures on the walls and the small things on the table. How simply are they painted?
- Look at the floor. Is it painted with smooth color or visible strokes?

### Talk about it

1. How does it change your idea of the painting to know that its colors have faded?
2. Why is it important for artists to choose lasting materials?

3. What did Van Gogh want this painting to make the viewer feel?

## STUDIO PROJECT

### The Window Test and a Safe-Studio Checklist

You will start a lightfastness test that will run for at least four weeks, and write a safe-studio checklist for your own work space.

#### You will need

- White cardstock or watercolor paper (two strips, about 3×10 in)
- As many coloring materials as you have: markers, highlighters, colored pencils, crayons, watercolors, acrylics, gel pens
- Scissors, tape, a pencil
- A sunny window and a dark place (a book or drawer)
- Paper for the checklist

#### Steps

1. Draw a column of small boxes down a strip of cardstock. In each box, put a different material and color (for example: yellow marker, pink highlighter, red colored pencil, red watercolor, red acrylic, blue crayon). Label each in pencil.
2. Make a second strip exactly the same, or cut one wide strip in half lengthwise so each half has every color.
3. Tape one strip to the inside of a sunny window, facing out to the light. Put the other strip inside a closed book.
4. On the calendar, mark the date. Check in two weeks and again in four weeks (or longer), comparing the two strips side by side.
5. Meanwhile, read the labels on your paints, pencils and markers. Record any lightfastness ratings and any AP or CL seals in your sketchbook.
6. Write a safe-studio checklist of at least eight rules for your own art space, using the core ideas. Decorate it and post it where you paint.
7. At the end of the test, write a short report: which materials faded, which did not, and which you would choose for a painting meant to last.

#### Tips

- Fluorescent highlighters and pink and purple markers usually fade fastest; watch them closely.
- Ask a parent before taping anything to a window.

#### Check your work

- ☐ My two test strips are identical and labeled, with one in light and one in the dark.
- ☐ My safe-studio checklist has at least eight clear rules and is posted.
- ☐ My final report names which materials are fugitive and which are lightfast.

#### SKETCHBOOK PRACTICE

1. Copy the label from a tube of paint and circle the pigment code, lightfastness rating and safety seal.
2. Make a small sketch of Van Gogh's bedroom with the walls pale violet as he described them.
3. List three places in your home where you would hang a painting to protect it from fading, and three you would avoid.

**From history.** Painters have always worried about fading. Medieval and Renaissance handbooks, such as Cennino Cennini's *Il Libro dell'Arte* (about 1400), warn painters which colors are trustworthy and which are not. Today museums protect fragile works with low light and filtered windows.

#### COMMON MISTAKES

- Assuming bright, cheap colors will last; many fade quickly.
- Washing large amounts of paint down the sink instead of wiping and settling.
- Using spray fixative indoors.

**Make it a game • Safe Studio Inspector.** Your parent sets up an art table with four deliberate safety mistakes, using only empty cups and harmless props. Inspect it for sixty seconds and find them all. Then read a real marker or glue label and tell what it says about safety. Explain what lightfastness and fugitive mean.

## MATERIAL SCIENCE: PAINT

Every paint in the world is made of two things: **pigment**, the colored powder, and **binder**, the glue that holds the powder together and sticks it to the surface. Change the binder and you change everything: how the paint flows, how fast it dries, whether it is transparent or opaque, and how long it lasts. In this unit you will become a small-scale materials scientist, testing paints, preparing your own painting surfaces, learning the anatomy of a brush, and running a lightfastness experiment that takes weeks to finish.

Knowing your materials is part of good craftsmanship. Bezalel, the craftsman God filled with skill to build the tabernacle, knew gold, silver, wood, stone and dyes. Our masters for this unit are Jan van Eyck, the great early master of oil paint; Duccio, who painted in egg tempera on gessoed wood; Frans Hals, whose brushwork is a lesson in itself; and Van Gogh, whose fading colors teach us why permanence matters.

### PREREQUISITES

- Has painted with acrylic and watercolor (Unit 3)
- Knows the words opaque, transparent and impasto
- Can follow safety directions and work carefully with an adult nearby

### MASTERY CHECKLIST

- ☐ I can explain that paint is pigment plus binder, and name the binder in oil, acrylic, watercolor and egg tempera.
- ☐ I can explain how each paint dries (by evaporation, by oxidation, or both) and what that means for the painter.
- ☐ I can describe canvas, wood panel and paper as supports, and explain what gesso and sizing do.
- ☐ I can name brush shapes and hair types and clean and store my brushes correctly.
- ☐ I can explain lightfastness, read a paint label, and follow the rules of a safe studio.

## LESSONS IN THIS UNIT

### 5.1 Pigment and Binder: Oil, Acrylic, Watercolor and Tempera

2 sessions of 50–60 minutes

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### 5.2 Supports and Grounds: Panel, Canvas, Paper and Gesso

2 sessions of 50–60 minutes

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### 5.3 Brushes: Shapes, Hairs and Care

2 sessions of 50–60 minutes

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### 5.4 Colors That Last: Lightfastness and a Safe Studio

2 sessions of 50–60 minutes

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## UNIT 5 REVIEW

Answer each question in your own words. You may look at your own sketchbook and experiment charts but not at the lessons. Questions 11 and 12 ask for a few sentences. Total: 100 points.

1. **6 pts**

What are the two ingredients of every paint, and what does each do?

2. **10 pts**

Name the binder in each: watercolor, acrylic, oil paint, egg tempera, gouache.

3. **8 pts**

How does oil paint dry, and how is that different from acrylic?

4. **6 pts**

Why can dry watercolor be lifted with water, but dry acrylic cannot?

5. **8 pts**

What is traditional gesso made of, and what support was it used on?

6. **6 pts**

Why must canvas be sized and primed before oil painting?

7. **8 pts**

Match the brush to its use: round, flat, filbert, liner.

8. (6 pts)

Describe the correct way to clean an acrylic brush.

9. (6 pts)

What does lightfastness mean? What rating is best in the ASTM system?

10. (6 pts)

Name four rules of a safe studio.

11. (15 pts)

In four or five sentences, explain what happened to the colors of Van Gogh's *Bedroom* and what lesson it teaches painters.

12. (15 pts)

In four or five sentences, compare egg tempera and oil paint. Mention drying, blending and the support each needs.

## ANSWER KEY

1. Pigment gives the color; binder holds the pigment particles together and glues them to the surface.
2. Gum arabic; acrylic polymer emulsion; drying oil (usually linseed oil); egg yolk; gum arabic.
3. Oil dries by oxidation, reacting with oxygen over days to months; acrylic dries by evaporation of water and the fusing of polymer particles in minutes.
4. Dried gum arabic redissolves in water; the fused acrylic film does not.
5. Chalk or gypsum mixed with animal (rabbit-skin) glue, applied in many layers to wooden panels.
6. To seal the fibers so oil does not soak in and rot them, and to give a stable surface for the paint.
7. Round: lines and details; flat: broad strokes and crisp edges; filbert: soft-edged strokes and blending; liner: long thin lines like branches.
8. Wipe off excess paint, rinse in cool water, wash gently with mild soap until clean, rinse, reshape the tip and dry flat or handle-down; never let paint dry in it.
9. A pigment's resistance to fading in light; ASTM I is best.
10. Any four: no eating or drinking while painting; no brushes in the mouth; wash hands after painting; avoid breathing pigment or sanding dust; spray fixative and varnish only outdoors with an adult; look for the AP seal; keep paint water away from food.
11. Model: Van Gogh wrote that the walls were pale violet, but they look blue today. He mixed violet from blue and a red lake pigment that was fugitive, so the red faded in the light and left mostly blue. Scientists confirmed this by studying the paint. Some of his yellows have also darkened. The lesson is to choose lightfast pigments and protect finished work from strong light.
12. Model: Egg tempera uses egg yolk as a binder and dries in seconds, so it cannot be blended much; painters build form with tiny hatched strokes. It is brittle and must be painted on a rigid gessoed panel. Oil paint uses linseed oil and dries slowly by oxidation, so colors can be blended softly and glazed in transparent layers. Oil is more flexible and can be used on canvas as well as panels.

**PORTFOLIO PIECE: A PAINTING ON A PANEL YOU PREPARED**

On the gessoed panel you made in Lesson 5.2, paint a small still life or a study of a single object in acrylic, using at least three brush shapes on purpose and only colors rated lightfast (ASTM I or II, or Blue Wool 7–8) if your paints show ratings. On the back of the panel, write a materials label like a museum’s: support, ground, paint and binder, and the date.

| LOOK FOR                  | WHAT IT MEANS                                                                                                    |
|---------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Prepared surface</b>   | The panel has smooth, even gesso coats and no bare board showing.                                                |
| <b>Brushwork</b>          | At least three brush shapes are used on purpose, with confident strokes suited to the subject.                   |
| <b>Material knowledge</b> | The materials label on the back correctly names support, ground, paint and binder; lightfast colors were chosen. |
| <b>Form and color</b>     | The subject looks solid, with clear light and shadow and harmonious color.                                       |
| <b>Care and safety</b>    | Brushes and palette were cleaned properly and studio rules followed; the work is signed and dated.               |

UNIT 6

PERSPECTIVE AND LANDSCAPE

Landscape painting asks a hard question: how do you fit miles of space onto a flat sheet of paper? Artists have two great answers. **Linear perspective** uses lines that meet at a vanishing point on the horizon, so a road or a row of trees seems to stretch away. **Atmospheric perspective** uses the air itself: distant things grow paler, bluer and softer. In this unit you will use both, learn to paint trees and skies, and finally take your paints outdoors to paint from nature.

Our masters are the great landscape painters: Meindert Hobbema, whose avenue of trees is the most famous perspective lesson in Dutch art; Albert Bierstadt, who painted the vast mountains of the American West; John Constable, who studied clouds like a scientist; and Claude Monet, who carried his easel into the fields and painted the wind.

PREREQUISITES

- Knows what a horizon line and vanishing point are (one-point perspective)
- Can mix and layer acrylic paint, and use warm and cool color (Unit 3)
- Can make a value study (Unit 4)

MASTERY CHECKLIST

- ☐ I can find the horizon line and vanishing point in a landscape and use them to draw a road, river or row of trees.
- ☐ I can use four clues of atmospheric perspective: lighter value, less contrast, cooler color and less detail in the distance.
- ☐ I can paint skies with gradation and believable clouds, and trees as masses of light and shadow with sky holes.
- ☐ I can prepare for, and paint, a small landscape study outdoors.

LESSONS IN THIS UNIT

|     |                                     |                             |
|-----|-------------------------------------|-----------------------------|
| 6.1 | Linear Perspective in the Landscape | 2 sessions of 50–60 minutes |
| 6.2 | Atmospheric Perspective             | 2 sessions of 50–60 minutes |
| 6.3 | Trees and Skies                     | 2 sessions of 50–60 minutes |

## UNIT 6 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a drawing. Total: 100 points.

1. 6 pts

Where is the horizon line in a picture, and what happens to it if the viewer sits down?

2. 6 pts

What is a vanishing point?

3. 6 pts

What is diminution? Give an example.

4. 10 pts

List the four clues of atmospheric perspective.

5. 6 pts

Why do distant mountains look blue?

6. 6 pts

Describe how a clear sky usually changes from top to horizon.

7. 8 pts

How should a painter approach painting a large tree?

8. 6 pts

What does plein air mean?

9. 8 pts

Give three practical tips for painting outdoors.

10. **8 pts**

Name the artist of: *The Avenue at Middelharnis*; *Among the Sierra Nevada, California*; *The Hay Wain*; *Woman with a Parasol*.

11. **15 pts**

In four or five sentences, explain how Hobbema and Bierstadt each create deep space. Use the words linear and atmospheric.

12. **15 pts**

Draw a simple landscape with a horizon line, a road going to a vanishing point, three trees on each side diminishing correctly, and two ranges of hills behind, the farther one lighter.

## ANSWER KEY

1. At the viewer's eye level; it drops when the viewer sits down.
2. The point on the horizon where parallel lines going away from the viewer seem to meet.
3. Objects of equal size look smaller, and the gaps between them smaller, as they recede; for example, a row of equal trees along a road.
4. Distant things are lighter in value, lower in contrast, cooler (bluer) and grayer in color, and softer with less detail.
5. The air scatters blue light more than other colors, so we see distant objects through a veil of scattered blue light.
6. It is deepest and most intense blue overhead and paler, warmer and grayer near the horizon.
7. Squint and paint it as a few large masses of light and shadow; then add trunk and branches, sky holes, and only a few leaves at the edges.
8. "Open air": painting outdoors directly from nature.
9. Any three: work small and fast; paint in the shade; use a viewfinder and value study; commit to one light direction; keep acrylics wet with a spray bottle; simplify; bring water, hat and trash bag; paint with an adult nearby.
10. Hobbema; Bierstadt; Constable; Monet.
11. Model: Hobbema uses linear perspective: the road and the rows of trees run to a vanishing point on a low horizon, and the trees shrink and crowd together as they recede. Bierstadt relies mostly on atmospheric perspective: each range of mountains is lighter, softer, less detailed and hazier than the one in front, so the valley seems to go on for miles. Both use small figures or animals to show scale. Both keep the strongest contrast in the foreground.
12. Drawing should show one horizon line, road edges meeting at a vanishing point, trees whose tops and bases follow orthogonals and shrink with shrinking gaps, and two hill ranges with the farther lighter and less detailed.

## PORTFOLIO PIECE: A LANDSCAPE OF DEEP SPACE

Paint a landscape (9×12 in or larger) from your own outdoor studies or sketches that uses both linear and atmospheric perspective: a road, path, river, fence or row of trees going back into the distance, and at least three planes of distance that grow lighter, cooler and softer. Include a sky with gradation and clouds, and trees massed in light and shadow.

| LOOK FOR                       | WHAT IT MEANS                                                                                            |
|--------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Linear perspective</b>      | One consistent horizon; receding lines meet at a vanishing point; objects diminish correctly.            |
| <b>Atmospheric perspective</b> | At least three planes of distance, each lighter, cooler, softer and less detailed than the one in front. |
| <b>Sky and trees</b>           | Sky shows gradation and clouds have form; trees are massed with light, shadow and sky holes.             |
| <b>Observation</b>             | The painting is based on the student's own outdoor sketches or color notes, which are attached.          |
| <b>Craftsmanship</b>           | Confident brushwork, clean color, signed and dated.                                                      |

## 6.1 LINEAR PERSPECTIVE IN THE LANDSCAPE

### OBJECTIVES

- Find the horizon line and vanishing point in a landscape painting.
- Use one-point perspective to draw a road or avenue with trees that diminish correctly.
- Explain why the horizon line is always at the viewer's eye level.

**Warm-up.** Look down a long hallway, a road, or a fence line. Hold your pencil horizontally at eye level: that is your horizon line. Now hold the pencil along the edge of the road or hallway. Where do those edges seem to meet? Sketch what you see in two minutes.

### WATCH

#### How to Draw a Road of Trees using 1-Point Perspective Step by Step

Circle Line Art School · 9:10

<https://www.youtube.com/watch?v=wFSNjbZ8TR4>

### WHEN TO WATCH

Before the studio project. Draw along with him; then use the same method for your own avenue.

### BACKUP VIDEO

#### How to Draw a Road with Trees in One-Point Perspective

Circle Line Art School · 14:29

<https://www.youtube.com/watch?v=shlbPsrxoag>

Optional: a longer, narrated version with more explanation.

### KEY TERMS

#### **horizon line**

The line where the sky seems to meet the land or sea; in a picture, it is always at the viewer's eye level.

#### **vanishing point**

The point on the horizon line where parallel lines going away from the viewer seem to meet.

### **orthogonals**

Lines that run toward the vanishing point, such as the edges of a road, the tops of a row of trees, or a fence line.

### **diminution**

The way objects of the same size look smaller and closer together the farther away they are.

### **CORE IDEAS**

In Grade 6 you learned one- and two-point perspective for boxes and buildings. In a landscape the same rules apply, though nature hides them. The **horizon line** is always at your eye level: if you sit down, it drops; if you climb a hill, it rises. Deciding where the horizon goes is the first decision in any landscape.

Parallel lines that go straight away from you, such as the two edges of a straight road, the rails of a track, or the tops and bottoms of a row of trees, appear to meet at a **vanishing point** on the horizon. These lines are called **orthogonals**. Draw them first, lightly, with a ruler, and they become a guide for placing everything else.

Trees of equal height planted in a row get smaller as they go back (**diminution**), and the spaces between them shrink too. A simple trick to space them correctly: draw the first two trees, then draw a diagonal from the top of the first tree through the middle of the second; where it hits the ground line is the base of the third tree. Keep the tops and bases of all the trees on their orthogonals.

Real landscapes are rarely perfect grids. Roads curve, ground rises and falls, and trees vary. But even a winding river or a curving path obeys perspective: the curves get flatter and tighter as they recede, and widths shrink toward the horizon. Once you understand the straight-line case, you can feel it in irregular nature.

A low horizon gives a big sky and a feeling of openness; a high horizon gives more ground and a feeling of depth and detail. Hobbema chose a low horizon and a road leading straight to the vanishing point, so our eye travels down the avenue like a walker.

## PICTURE STUDY



*The Avenue at Middelharnis*, Meindert Hobbema, 1689 · Oil on canvas · National Gallery, London

Image: [Wikimedia Commons](#), public domain

Hobbema painted this avenue of young alder trees near the village of Middelharnis in Holland. The road runs straight to a vanishing point near the village, and the tall trees shrink in a perfect rhythm. It is one of the clearest lessons in landscape perspective ever painted.

### Look closely

- Find the horizon line. Is it high or low in the picture?
- Follow the edges of the road with your finger. Where do they meet?
- Look at the tops of the trees on the left. Do they form a line going to the same point?
- Find the tiny figures and the church tower. How do they help you feel the distance?

### Talk about it

1. Why do you think Hobbema placed the vanishing point slightly off-center?
2. How would the painting feel if the horizon were high, near the top?
3. What makes this ordinary country road so satisfying to look at?

## STUDIO PROJECT

### An Avenue of Trees

You will draw, then shade or paint, an avenue of trees in one-point perspective inspired by Hobbema, with correct diminution and a low horizon.

#### You will need

- Drawing paper or canvas paper (11×14 in)
- Ruler and HB and 2B pencils
- Kneaded eraser
- Optional: acrylic paints or colored pencils to finish

#### Steps

1. Draw a horizon line about one-third of the way up the page. Mark a vanishing point slightly off-center on it.
2. Draw two orthogonals from the bottom edge of the page to the vanishing point for the edges of the road.
3. Draw two more orthogonals on each side for the tops of the trees, starting high near the top edge of the page and running to the same vanishing point.
4. Draw the first, nearest tree on each side as a tall trunk reaching from the ground line to the top orthogonal.
5. Place the second tree a short way behind it, then use the diagonal method from the core ideas to place the third, fourth and fifth trees on each side.
6. Add simple, feathery crowns of leaves at the tops of the trunks, keeping them inside the orthogonals and smaller as they recede.
7. Add a few things to give scale: a farmhouse, a small figure walking, a church tower at the vanishing point, ditches or fences following orthogonals.
8. Shade (or paint) with stronger darks in the near trees and lighter, softer values in the distance. Sign and date.

#### Tips

- Keep the orthogonals very light so they can be erased later.

- Remember that small figures in the middle distance have their heads on the horizon line if they are about your height and on level ground.

#### Check your work

- ☐ My horizon is low and my road meets at one vanishing point.
- ☐ My trees get smaller and closer together as they recede, and their tops and bases follow the orthogonals.
- ☐ I added at least one detail that shows scale.

#### SKETCHBOOK PRACTICE

1. Sit, then stand, at the same window and sketch the view both times. Mark where the horizon line falls each time.
2. Draw a curving path or river going back into the distance, letting the curves flatten as they recede.
3. Trace the orthogonals on a printed copy of Hobbema's painting and mark the vanishing point.

**From history.** Meindert Hobbema was a pupil of Jacob van Ruisdael in Amsterdam. He painted less after he took a job as a wine gauger (a tax official measuring wine barrels) in 1668, which makes this late masterpiece even more remarkable.

#### COMMON MISTAKES

- Placing the horizon line at different heights in different parts of the picture.
- Spacing trees evenly instead of letting the gaps shrink.
- Drawing distant trees with as much detail as near ones.

**Make it a game • Shrinking Cups.** Line up five identical cups on a long table or floor. Look from one end and use your pencil to sight each cup's height at arm's length. Record the numbers. Predict the next number, then check. The difference shrinks in a pattern. Say what diminution means. Closest prediction wins.

## 6.2 ATMOSPHERIC PERSPECTIVE

### OBJECTIVES

- List the four changes atmospheric perspective causes in distant objects.
- Explain why air makes distant things look bluer and paler.
- Paint a landscape with at least three planes of distance.

**Warm-up.** Look out a window at the farthest thing you can see (hills, trees, buildings). Compare its color and value with something close. Make a quick color-pencil note of each.

### WATCH

#### Oil painting step by step tutorial: creating depth with color

Paint Coach · 13:02

<https://www.youtube.com/watch?v=8K3KtfiRiaA>

#### WHEN TO WATCH

After the core ideas. Watch how each layer of hills becomes lighter, bluer and grayer than the one in front of it.

**Note:** He paints in oil, but the color ideas are the same in acrylic.

### BACKUP VIDEO

#### Mastering Atmospheric Depth: Top MISTAKES to Avoid in Landscape Painting

Malcolm Dewey · 16:29

[https://www.youtube.com/watch?v=tUG78Zbly\\_I](https://www.youtube.com/watch?v=tUG78Zbly_I)

Optional: a fuller lesson on painting atmosphere and depth in a simple landscape.

### KEY TERMS

#### **atmospheric perspective**

The illusion of depth created by the way air changes the look of distant things: lighter, bluer, softer and less detailed (also called aerial perspective).

#### **foreground, middle ground, background**

The three main planes of distance in a landscape: nearest, middle and farthest.

### **scattering**

The way tiny particles of air and moisture bounce light around, especially blue light, which makes the sky and distant hills look blue.

### **planes of distance**

Separate layers of a landscape, each a step farther away and a step lighter and cooler.

## **CORE IDEAS**

Between your eye and a distant mountain lie miles of air, full of tiny particles of gas, water and dust. These particles **scatter** light, and they scatter blue light more than red. That is why the sky is blue, and why distant hills look blue too: you are seeing them through a veil of blue, scattered light.

The result is four clues of distance. Compared with near things, distant things are: **lighter in value** (darks become paler); **lower in contrast** (lights and darks move closer together); **cooler and grayer in color** (moving toward blue or blue-violet, with less intensity); and **softer, with less detail** (edges blur and textures disappear).

To paint it, think in **planes of distance**. Mix the farthest plane first: the sky color with a little of the mountain color and white. Each plane closer gets a little darker, warmer and more intense, with sharper edges and more detail. The foreground has your strongest darks, warmest colors and crispest details.

Leonardo wrote about this in his notebooks, and painters from the Renaissance on used it in the blue mountains behind their Madonnas. The painters of the American West, such as Albert Bierstadt, made it dramatic: valleys and peaks dissolving in glowing haze, receding mile after mile.

Atmospheric perspective works with linear perspective, not against it. A road gets narrower as it recedes (linear) and also paler and softer (atmospheric). Using both together makes a landscape deep and convincing.

## PICTURE STUDY



*Among the Sierra Nevada, California*, Albert Bierstadt, 1868 · Oil on canvas · Smithsonian American Art Museum, Washington, D.C.

Image: [Wikimedia Commons](#), public domain

Bierstadt was a German-born American painter who traveled west to paint the Rocky Mountains and the Sierra Nevada. This enormous canvas, painted from sketches after his travels, shows a mountain lake bathed in light breaking through storm clouds. The distance seems to go on forever.

### Look closely

- Count the planes of distance from the lake shore to the farthest peak.
- Compare the darkest value in the foreground with the darkest value in the far mountains.
- Look at the color of the distant peaks. Is it warm, cool, or both?
- Find the edges of the far mountains. Are they sharp or soft?

### Talk about it

1. How does Bierstadt use light breaking through the clouds to draw your eye?
2. Bierstadt's landscapes made many people want to visit the West. What in this painting makes it so inviting?
3. Is this exactly what the place looked like, or did the painter arrange it? Why might he do that?

## STUDIO PROJECT

### Mountains in Five Planes

You will paint a landscape of layered hills or mountains with at least five planes of distance, using value, temperature, intensity and detail to push each plane back.

#### You will need

- Canvas panel or canvas paper (9×12 in)
- Acrylic paints: white, ultramarine blue, a warm red, warm yellow, yellow ochre, burnt sienna
- Flat brushes #6 and #10, a round #4
- Palette, water, paper towels
- Pencil and sketchbook for a value study

#### Steps

1. Make a quick value study in your sketchbook: a sky, five overlapping ridges of hills or mountains, and a simple foreground (rocks, a tree, a fence or a lake shore).
2. Paint the sky: white with a little blue, slightly warmer and lighter near the horizon (add a touch of yellow ochre). Let it dry.
3. Mix the farthest ridge color: your sky color plus a little blue and a touch of red. It should be only slightly darker than the sky. Paint the farthest ridge with a soft top edge.
4. Mix the next ridge: take the first mixture and add a little more blue and a touch of the foreground green or brown. Paint it overlapping the first.
5. Continue for the third and fourth ridges, each a little darker, warmer, more intense and with a crisper edge.
6. Paint the foreground with your darkest, warmest colors (greens from blue and yellow, browns from burnt sienna). Add texture and detail here only.
7. Add one detail near the front, such as a tree, a fence post or a small cabin, with sharp edges and strong contrast.
8. Let it dry. Sign and date, and label the five planes on the back.

### Tips

- Mix each new ridge color from the previous one so the colors stay related.
- If two ridges blend into one, the value step between them is too small; adjust one of them.

### Check your work

- ☐ My painting has at least five clear planes of distance.
- ☐ Each farther plane is lighter, cooler, softer and less detailed than the one in front of it.
- ☐ My strongest contrast and sharpest detail are in the foreground.

### SKETCHBOOK PRACTICE

1. Make a four-step pencil study of ridges, each lighter than the last.
2. Find a photograph of distant hills and list the four clues of atmospheric perspective you can see in it.
3. Copy the background of a Renaissance Madonna painting and note how the distant hills turn blue.

**From history.** Albert Bierstadt was born in Germany in 1830 and raised in Massachusetts. His huge paintings of the American West were exhibited like events, with crowds paying to see them. He is often grouped with the Hudson River School painters, who saw the American wilderness as a sign of God's glory.

### COMMON MISTAKES

- Painting distant mountains as dark as near ones.
- Adding detail to faraway trees and rocks.
- Making the distance gray only, without the shift toward blue.

**Make it a game • Crayon Planes.** Lay out five crayons from dark to pale. Your parent calls a plane number from one, the foreground, to five. You grab the right crayon and list the four changes of atmospheric perspective for that plane. Then explain why air makes distant mountains look blue. Ten rounds.

## 6.3 TREES AND SKIES

### OBJECTIVES

- Paint a sky with gradation and clouds that have light, shadow and form.
- Paint trees as large masses of light and shadow with sky holes, not as separate leaves.
- Observe and record clouds and trees in a sketchbook, as Constable did.

**Warm-up.** Go outside or to a window. In five minutes, sketch the shape of one tree as a single silhouette (no leaves or branches inside). Then sketch one cloud, shading only its shadow side.

### WATCH

#### Painting Clouds in Acrylics lesson

Acrylic Painting Techniques · 11:20

<https://www.youtube.com/watch?v=tN1J47FcNH8>

### WHEN TO WATCH

Before the studio project. Pause and practice one cloud on a scrap before painting your landscape.

### BACKUP VIDEO

#### Easiest Way To Paint Trees Like A Professional (Acrylics)

Wild Creates · 10:28

<https://www.youtube.com/watch?v=6AV4ZKCD2mU>

Watch before painting the trees in your project.

### KEY TERMS

#### **gradation (in the sky)**

The gradual change of the sky's color and value, usually deeper blue overhead and paler, warmer near the horizon.

#### **cumulus**

Puffy, heaped clouds with flat bottoms and rounded tops, which show clear light and shadow sides.

**sky holes**

Small openings in a tree's foliage where the sky shows through, which make a tree look airy instead of solid.

**silhouette**

The overall outline shape of an object, filled in as one value.

**massing**

Grouping many small parts (leaves, branches) into a few large shapes of light and shadow.

**CORE IDEAS**

The sky is the source of light in a landscape and sets its whole mood. A clear sky is not one flat blue: it is usually deepest and most intense straight overhead (the top of your picture) and paler, warmer and grayer toward the horizon, because you look through more air near the horizon. Paint this **gradation** with wet paint, blending from top to bottom.

Clouds are forms, like eggs made of mist. A cumulus cloud has a sunlit side, a shadow side (often a gray-violet or blue-gray, not just gray), and a flatter bottom. Clouds also obey perspective: near clouds overhead are large; clouds near the horizon are smaller, flatter and closer together. Keep edges soft on most of a cloud, with a few crisper edges where the light hits the tops.

Trees are not collections of leaves; they are **masses**. Squint at a tree and you will see a few big clumps of foliage, each with a light top and a darker underside. Paint those clumps first, in two or three values. Add a few branches and the trunk, which disappears into the foliage and reappears. Then add some **sky holes**, small gaps of sky color, so the tree breathes. Leave individual leaves to the very end, and only at the edges.

Different trees have different silhouettes: an oak is broad and knobbly, a poplar tall and narrow, a willow drooping, a pine layered and pointed. Learn the silhouette first and the tree will be recognizable even in a small sketch.

John Constable spent the summers of 1821 and 1822 making dozens of oil sketches of clouds on Hampstead Heath, writing on the back the date, the time, and the direction of the wind. He believed that the sky was “the chief organ of sentiment” in

a landscape. His careful observation of trees and skies made *The Hay Wain* feel like a real summer day.

## PICTURE STUDY



*The Hay Wain*, John Constable, 1821 · Oil on canvas · National Gallery, London

Image: [Wikimedia Commons](#), public domain

Constable painted the countryside of his boyhood in Suffolk, England. Here a hay wagon (a “wain”) crosses a shallow river on a summer day. The trees and the sky are painted from years of careful outdoor sketches.

### Look closely

- Look at the sky. Where are the clouds lightest? Where are their shadow sides?
- Look at the big trees on the right. Can you see them as a few large masses of light and shadow?
- Find sky holes in the trees.
- Look at the distant fields. How do they change in color and detail compared with the river and the wagon?

### Talk about it

1. How does the sky help you feel the weather and the time of day?
2. Constable said, “I should paint my own places best.” Why might an artist paint best what he knows and loves?
3. Where do you see small spots of white or bright color? What do they do for the painting?

## STUDIO PROJECT

### A Summer Sky over Trees

You will paint a landscape of trees under a sky of cumulus clouds, using sky gradation, clouds with light and shadow, and trees massed in values with sky holes.

#### You will need

- Canvas panel (9×12 in or 11×14 in)
- Acrylic paints: white, ultramarine blue, a warm red, warm yellow, lemon yellow, yellow ochre, burnt sienna, burnt umber
- Flat brushes #6 and #10, a filbert #6, a round #2 or liner
- Palette, water, paper towels, spray bottle
- Your sketchbook studies of trees and clouds

#### Steps

1. Plan with a small value study: a low horizon, one or two large trees on one side, a smaller group farther away, and three or four clouds.
2. Paint the sky gradation: deeper blue at the top, blending to a paler, slightly warm blue near the horizon. Work quickly while wet.
3. Block in the clouds with a gray-violet (white, blue and a touch of red) for their shadow sides.
4. Add the sunlit tops of the clouds with white and a hint of yellow, softening most edges with a clean, damp brush. Make clouds smaller and flatter near the horizon.
5. Paint the distant trees and fields with cool, pale greens (blue, yellow and white with a touch of red).
6. Block in the near trees as dark silhouettes in a deep green (blue, burnt umber and a little yellow).
7. Add the middle and light greens on the tops of each foliage mass, where the sunlight hits. Use a filbert and dabbing strokes.
8. Add sky holes with your sky colors, then a few branches and the trunk with a liner. Add a ground plane, perhaps a path or water reflecting the sky. Sign

and date.

### Tips

- Paint the sky first and let it dry; then trees can be painted cleanly over it.
- Mix your greens rather than using green from a tube; mixed greens look more natural.

### Check your work

- ☐ My sky shows gradation from top to horizon.
- ☐ My clouds have light and shadow sides and get smaller near the horizon.
- ☐ My trees are painted as masses of light and shadow, with sky holes.

## SKETCHBOOK PRACTICE

1. Like Constable, make three cloud sketches on different days. Write the date, time and wind direction on each.
2. Draw silhouettes of five different kinds of trees in your neighborhood.
3. Paint a strip of sky gradation from deep blue to pale horizon in watercolor or acrylic.

**From history.** When *The Hay Wain* was shown at the Paris Salon in 1824, it won a gold medal, and French painters were amazed by Constable's fresh, broken touches of color. The cottage in the painting, Willy Lott's Cottage, still stands in Suffolk today.

## COMMON MISTAKES

- Painting clouds as flat white cotton balls with no shadow side.
- Painting every leaf instead of massing the foliage.
- Using one flat green for all the trees.

**Make it a game • Mass or Leaves?.** Draw a tree in sixty seconds as a mass of light and shadow with sky holes, never as separate leaves. Your parent counts the sky holes. Each hole earns a point, and every drawn leaf loses one. Then add a sky gradation. Say what makes a cumulus cloud look round.

**Scripture.** "The heavens declare the glory of God; and the firmament sheweth his handywork." (Psalms 19:1, KJV)

When we study clouds and sky as Constable did, we are reading God's handiwork, which changes every hour and is never twice the same.

## 6.4 PAINTING OUTDOORS: PLEIN AIR

### OBJECTIVES

- Explain what plein air painting is and why painters work outdoors.
- Prepare a simple outdoor painting kit and plan a painting quickly with a viewfinder and value study.
- Complete a small painting or color study outdoors in about an hour.

**Warm-up.** Make a viewfinder by cutting a 2×3-inch window in a piece of cardboard. Hold it up at a window and move it around to find three different good compositions. Sketch each one as a tiny thumbnail.

### WATCH

#### 10 EASY TIPS for You to get Better Paintings Quick | +Plein Air Demo

Plein Air School with Roy Boswell • 8:01

<https://www.youtube.com/watch?v=2CWxRp65u0M>

### WHEN TO WATCH

During session 1, before you plan your outdoor painting. Write down three of his tips.

### KEY TERMS

#### **plein air**

French for “open air”: painting outdoors, directly from nature.

#### **viewfinder**

A small card with a rectangular opening, used to choose and frame a composition from a large scene.

#### **color note**

A quick, small painting that records the main colors and values of a scene, to be used later as reference.

#### **simplify**

To leave out or combine details so that the main shapes and light of a scene are clear.

### CORE IDEAS

For centuries most landscapes were painted in the studio from drawings and memory. In the 1800s, with portable easels and paint in tubes, painters such as Constable, Corot and Monet began to paint outdoors, **en plein air**, to catch the real

colors and light of nature. Outdoor painting trains the eye as nothing else can: real light is far richer than a photograph.

Outdoors the light changes constantly. In about an hour the shadows move and colors shift. So plein air painters work small (5×7 to 9×12 in), fast and simply. Decide on your light and shadow pattern at the start and stick to it, even if the sun moves.

Plan quickly. Use a **viewfinder** to choose a simple subject with a clear center of interest: a tree and a path, a barn, a corner of a garden. Make a 2-minute value study. Then paint big shapes first: sky, distant land, middle ground, foreground. Add details only at the end, and only a few.

Practical tips: choose a spot in the shade, so the sun is not on your painting or palette (bright sun makes everything look lighter than it is). Bring water, a hat, a trash bag, paper towels, and a spray bottle to keep acrylics wet. Keep your kit light. Always tell a parent where you are, or paint with an adult in your own yard or a park.

Plein air paintings are often rough, but they are honest records of a real moment. Monet's *Woman with a Parasol* was painted outdoors in a few hours, and you can almost feel the wind. Painting outdoors also teaches gratitude: it makes us slow down and notice the world we usually rush past.

## PICTURE STUDY



*Woman with a Parasol – Madame Monet and Her Son*, Claude Monet, 1875 · Oil on canvas · National Gallery of Art, Washington, D.C.

Image: [Wikimedia Commons](#), public domain

Monet painted his wife Camille and their son Jean on a hillside on a breezy summer day, probably in a single session outdoors. He looked up at her from below, against the sky. The quick brushstrokes catch the wind, the light and the passing moment.

### Look closely

- Look at the brushstrokes in the grass and the clouds. Are they careful or quick?
- Find the shadow side of the white dress. What colors do you see in it?
- Look at the veil and the dress. How does Monet show the wind?
- Find the shadows on the grass. Which direction is the sun?

### Talk about it

1. Why might Monet have painted this quickly instead of carefully finishing every detail?
2. How does looking up from below change the feeling of the picture?
3. What would be lost if this were painted indoors from memory?

## STUDIO PROJECT

### One Hour Outdoors

You will paint a small landscape outdoors in about an hour, using a viewfinder, a value study and a big-shapes-first approach.

#### You will need

- A small canvas panel or canvas paper (6×8 in or 8×10 in) taped to a board
- A limited acrylic palette: white, ultramarine blue, a warm red, a warm yellow, yellow ochre (or watercolors and watercolor paper if you prefer)
- Two or three brushes (a #8 flat, a #6 filbert, a small round)
- Palette, spray bottle, water in a closed jar, paper towels, a trash bag
- Viewfinder, pencil and sketchbook
- A chair or stool, a hat, and an adult nearby

#### Steps

1. Choose a spot in the shade with a view of a simple subject (a tree, a building, a garden corner, a path). Set up so the sun is not shining on your panel.
2. Use the viewfinder to frame the scene. Make two thumbnail sketches and choose one.
3. Make a 2-minute value study: three values only. Note where the light is coming from with an arrow.
4. Sketch the big shapes on the panel with a thin brush and diluted blue.
5. Block in the sky first, then the distant shapes, then the middle ground, then the foreground, each in a simple, flat color.
6. Go back and add the light and shadow on the main shapes, sticking to the light direction from your arrow even if the sun moves.
7. With the time left, add a few details at your center of interest: a window, a fence post, a highlight on leaves.
8. Stop at one hour. Write the date, time, place and weather on the back. Pack up everything and leave the spot clean.

#### Tips

- Squint often outdoors; nature has endless detail and you must simplify.
- Do not chase the changing light. Commit to the light you chose at the start.

#### Check your work

- ☐ I finished a small painting outdoors from life in about an hour.
- ☐ My painting shows a consistent direction of light.
- ☐ I wrote the date, time, place and weather on the back.

#### SKETCHBOOK PRACTICE

1. Make three quick color notes outdoors (10 minutes each) of the same view at morning, noon and evening.
2. Draw your plein air kit, labeling everything you would pack.
3. Write a short paragraph about what you noticed outdoors that you had never noticed before.

**From history.** The invention of the collapsible metal paint tube in 1841 by the American portrait painter John Goffe Rand made outdoor painting much easier. Before that, painters carried oil paint in pig bladders. Monet's friend Renoir later said that without paint in tubes there would have been no Impressionism.

#### COMMON MISTAKES

- Choosing a scene that is too complicated.
- Painting in direct sun, which makes values look wrong.
- Changing the shadows as the sun moves, so the light becomes confused.

**Make it a game • Pack Light.** Spread twelve items on the floor, with a few useless ones. Set a timer for sixty seconds and pack a plein air kit, explaining why each item belongs. Then make a viewfinder from paper and a three-value sketch of the room in three minutes. Your parent judges whether the plan is simple.

**Scripture.** "O LORD, how manifold are thy works! in wisdom hast thou made them all: the earth is full of thy riches." (Psalms 104:24, KJV)

Painting outdoors fills our eyes with the riches of the earth. The longer we look, the more manifold they become.

## UNIT 6

# PERSPECTIVE AND LANDSCAPE

Landscape painting asks a hard question: how do you fit miles of space onto a flat sheet of paper? Artists have two great answers. **Linear perspective** uses lines that meet at a vanishing point on the horizon, so a road or a row of trees seems to stretch away. **Atmospheric perspective** uses the air itself: distant things grow paler, bluer and softer. In this unit you will use both, learn to paint trees and skies, and finally take your paints outdoors to paint from nature.

Our masters are the great landscape painters: Meindert Hobbema, whose avenue of trees is the most famous perspective lesson in Dutch art; Albert Bierstadt, who painted the vast mountains of the American West; John Constable, who studied clouds like a scientist; and Claude Monet, who carried his easel into the fields and painted the wind.

### PREREQUISITES

- Knows what a horizon line and vanishing point are (one-point perspective)
- Can mix and layer acrylic paint, and use warm and cool color (Unit 3)
- Can make a value study (Unit 4)

### MASTERY CHECKLIST

- ☐ I can find the horizon line and vanishing point in a landscape and use them to draw a road, river or row of trees.
- ☐ I can use four clues of atmospheric perspective: lighter value, less contrast, cooler color and less detail in the distance.
- ☐ I can paint skies with gradation and believable clouds, and trees as masses of light and shadow with sky holes.
- ☐ I can prepare for, and paint, a small landscape study outdoors.

### LESSONS IN THIS UNIT

#### 6.1 Linear Perspective in the Landscape

2 sessions of 50–60 minutes

#### 6.2 Atmospheric Perspective

2 sessions of 50–60 minutes

#### 6.3 Trees and Skies

2 sessions of 50–60 minutes

## UNIT 6 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a drawing. Total: 100 points.

1. 6 pts

Where is the horizon line in a picture, and what happens to it if the viewer sits down?

2. 6 pts

What is a vanishing point?

3. 6 pts

What is diminution? Give an example.

4. 10 pts

List the four clues of atmospheric perspective.

5. 6 pts

Why do distant mountains look blue?

6. 6 pts

Describe how a clear sky usually changes from top to horizon.

7. 8 pts

How should a painter approach painting a large tree?

8. 6 pts

What does plein air mean?

9. 8 pts

Give three practical tips for painting outdoors.

10. **8 pts**

Name the artist of: *The Avenue at Middelharnis*; *Among the Sierra Nevada, California*; *The Hay Wain*; *Woman with a Parasol*.

11. **15 pts**

In four or five sentences, explain how Hobbema and Bierstadt each create deep space. Use the words linear and atmospheric.

12. **15 pts**

Draw a simple landscape with a horizon line, a road going to a vanishing point, three trees on each side diminishing correctly, and two ranges of hills behind, the farther one lighter.

## ANSWER KEY

1. At the viewer's eye level; it drops when the viewer sits down.
2. The point on the horizon where parallel lines going away from the viewer seem to meet.
3. Objects of equal size look smaller, and the gaps between them smaller, as they recede; for example, a row of equal trees along a road.
4. Distant things are lighter in value, lower in contrast, cooler (bluer) and grayer in color, and softer with less detail.
5. The air scatters blue light more than other colors, so we see distant objects through a veil of scattered blue light.
6. It is deepest and most intense blue overhead and paler, warmer and grayer near the horizon.
7. Squint and paint it as a few large masses of light and shadow; then add trunk and branches, sky holes, and only a few leaves at the edges.
8. "Open air": painting outdoors directly from nature.
9. Any three: work small and fast; paint in the shade; use a viewfinder and value study; commit to one light direction; keep acrylics wet with a spray bottle; simplify; bring water, hat and trash bag; paint with an adult nearby.
10. Hobbema; Bierstadt; Constable; Monet.
11. Model: Hobbema uses linear perspective: the road and the rows of trees run to a vanishing point on a low horizon, and the trees shrink and crowd together as they recede. Bierstadt relies mostly on atmospheric perspective: each range of mountains is lighter, softer, less detailed and hazier than the one in front, so the valley seems to go on for miles. Both use small figures or animals to show scale. Both keep the strongest contrast in the foreground.
12. Drawing should show one horizon line, road edges meeting at a vanishing point, trees whose tops and bases follow orthogonals and shrink with shrinking gaps, and two hill ranges with the farther lighter and less detailed.

## PORTFOLIO PIECE: A LANDSCAPE OF DEEP SPACE

Paint a landscape (9×12 in or larger) from your own outdoor studies or sketches that uses both linear and atmospheric perspective: a road, path, river, fence or row of trees going back into the distance, and at least three planes of distance that grow lighter, cooler and softer. Include a sky with gradation and clouds, and trees massed in light and shadow.

| LOOK FOR                       | WHAT IT MEANS                                                                                            |
|--------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Linear perspective</b>      | One consistent horizon; receding lines meet at a vanishing point; objects diminish correctly.            |
| <b>Atmospheric perspective</b> | At least three planes of distance, each lighter, cooler, softer and less detailed than the one in front. |
| <b>Sky and trees</b>           | Sky shows gradation and clouds have form; trees are massed with light, shadow and sky holes.             |
| <b>Observation</b>             | The painting is based on the student's own outdoor sketches or color notes, which are attached.          |
| <b>Craftsmanship</b>           | Confident brushwork, clean color, signed and dated.                                                      |

## UNIT 7

# COMPOSITION AND NARRATIVE

Composition is the art of arrangement: deciding what goes where in a picture, how big, how light or dark, and in what order the viewer will see it. A strong composition is planned, not stumbled upon. In this unit you will plan pictures with thumbnail sketches, build them around a clear focal point, design them in black and white with notan, and finally tell a story in a single image, as the great painters of Bible stories did.

Our masters are designers and storytellers: Hokusai, who planned his great wave for decades; Henry Ossawa Tanner, who made a quiet glow of light the center of the Annunciation; Hiroshige, whose rain-swept bridge is a lesson in black-and-white design; and Rembrandt, whose *Return of the Prodigal Son* tells the whole of Christ's parable in a single embrace.

### PREREQUISITES

- Can make a value study in three values (Unit 4)
- Can draw figures in proportion and gesture (Unit 2)
- Knows warm and cool color and color harmony (Unit 3)

### MASTERY CHECKLIST

- ☐ I can make several quick thumbnail sketches to explore a composition before starting.
- ☐ I can create a focal point using contrast, edges, color, placement and leading lines.
- ☐ I can design a notan (two-value design) that balances black and white shapes.
- ☐ I can plan a narrative picture that shows the most telling moment of a story through gesture, expression, setting and light.

### LESSONS IN THIS UNIT

#### 7.1 Thumbnail Sketches: Planning a Picture

2 sessions of 50–60 minutes

#### 7.2 The Focal Point

2 sessions of 50–60 minutes

#### 7.3 Notan: Designing in Light and Dark

2 sessions of 50–60 minutes

## UNIT 7 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a design. Total: 100 points.

1. (6 pts)

What is a thumbnail sketch, and why should an artist make several?

2. (6 pts)

Name three questions a thumbnail can help answer.

3. (10 pts)

List five ways to create a focal point.

4. (6 pts)

What is subordination?

5. (6 pts)

What does notan mean, and how many values does it use?

6. (6 pts)

Why is a notan that is exactly half black and half white usually weak?

7. (6 pts)

What are interlocking shapes?

8. (8 pts)

What is the telling moment in a narrative picture?

9. (8 pts)

Name four tools a painter uses to tell a story besides words.

10. **8 pts**

Name the artist of: *The Great Wave off Kanagawa*; *The Annunciation* (1898); *Sudden Shower over Shin-Ōhashi Bridge and Atake*; *The Return of the Prodigal Son*.

11. **15 pts**

In four or five sentences, describe how Rembrandt tells the story of the prodigal son in one picture.

12. **15 pts**

Draw a notan (two values only) of a tree beside a path, in a 3×4-inch box. Make one value dominant and show where the focal point is with an arrow.

## ANSWER KEY

1. A very small, quick sketch of big shapes and values used to plan a composition; making several lets the artist try many ideas quickly and choose the best.
2. Any three: format (vertical, horizontal, square); horizon placement; size of the main subject; cropping; viewpoint; where the eye will go; value pattern.
3. Strongest value contrast; sharpest edges and most detail; most intense or contrasting color; deliberate off-center placement; leading lines pointing to it (also faces, hands, or anything different).
4. Making the rest of the picture quieter (less contrast, softer edges, duller color) so the focal point stands out.
5. “Light-dark”; it uses only two values, black and white.
6. Equal amounts feel static and nothing dominates; one value should clearly dominate.
7. Dark and light shapes that fit into each other like puzzle pieces, so the design is unified rather than a subject sitting on a background.
8. The single instant that best reveals what happened before and what will happen next, usually the turning point of the story.
9. Gesture and body language, facial expression, setting, light, composition (grouping and leading the eye), costume and objects.
10. Hokusai; Henry Ossawa Tanner; Hiroshige; Rembrandt.
11. Model: Rembrandt chose the moment the father embraces his returning son, the turning point of the parable. The son’s shaved head, ragged clothes and worn-out shoe show his poverty and shame. The father bends over him with gentle hands on his back, showing forgiveness and love. Light falls most brightly on the father’s face and the son’s back, making them the focal point. The older brother stands apart on the right, upright and unmoving, reminding us of the rest of the story.
12. Design shows only black and white, interlocking shapes (for example a dark tree reaching into a light sky and a light path through a dark field), one value clearly dominant, varied shape sizes, and an arrow at the strongest black-white contrast.

## PORTFOLIO PIECE: A STORY PICTURE

Complete the Bible narrative or parable picture from Lesson 7.4 as your portfolio piece, at 11×14 in or larger, in pencil, charcoal or acrylic. Mount your thumbnails and notan beside it. The finished work should have a clearly chosen telling moment, a strong focal point, a planned light-dark design and clothed figures whose gestures carry the story.

| LOOK FOR                   | WHAT IT MEANS                                                                                                            |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Planning</b>            | At least six thumbnails and a notan are attached, and the finished work follows the chosen plan.                         |
| <b>Telling moment</b>      | The moment chosen reveals the story; the student's written sentence explains the choice.                                 |
| <b>Focal point</b>         | The main action is the clear focal point through contrast, edges, placement and leading lines; the rest is subordinated. |
| <b>Figures and gesture</b> | Figures are proportioned and their gestures and body language carry the story.                                           |
| <b>Craftsmanship</b>       | Careful, finished work with a consistent light source; signed, dated and labeled with the Scripture reference.           |

## 7.1 THUMBNAIL SKETCHES: PLANNING A PICTURE

### OBJECTIVES

- Explain what thumbnail sketches are and why artists make many of them.
- Explore format, horizon placement, cropping and the size of the main subject in thumbnails.
- Choose and develop the strongest of eight thumbnails into a finished drawing.

**Warm-up.** Draw four small rectangles (about 2×3 in). In each, draw the same subject, a single tree and a house, but change one thing: put the horizon high, then low; make the tree huge, then tiny. Which is most interesting?

### WATCH

#### About Thumbnail Sketches

Owings Art · 6:42

<https://www.youtube.com/watch?v=gYTuKZ3TbMk>

### WHEN TO WATCH

After the core ideas. Notice how small and fast his thumbnails are.

**Note:** The description has links to supplies and a donation page; they are not needed.

### KEY TERMS

#### **composition**

The arrangement of the parts of a picture: shapes, values, colors and lines within the frame.

#### **format**

The shape and orientation of the picture: horizontal (landscape), vertical (portrait) or square.

#### **thumbnail sketch**

A very small, quick sketch (often only an inch or two wide) used to try out ideas for a composition.

#### **cropping**

Deciding where the edges of the picture cut off the scene.

## **big shapes**

The three to five largest areas in a composition, which carry the design before any details are added.

### **CORE IDEAS**

Every finished picture began as a decision about arrangement. Beginners usually make that decision without noticing: they put the subject in the middle, at a medium size, and start drawing details. Masters make it on purpose, and they make it many times over, in **thumbnail sketches**.

A thumbnail is small (one to three inches) and fast (a minute or two). It has no details, only **big shapes** and two or three values. Because it is small and quick, you can try eight ideas in ten minutes and throw away seven of them. Draw a rectangle with the same proportions as your final paper first, so the thumbnail is a true plan.

Use thumbnails to ask questions: Should the **format** be horizontal, vertical or square? Where should the horizon go (high, low, never in the exact middle)? How big should the main subject be? Where should the edges **crop** the scene? Which way should the main lines lead? Try the obvious idea first, then push yourself to try unusual ones: a very low viewpoint, a subject cut by the edge, a big empty sky.

Look for variety in your big shapes: not all the same size, not evenly spaced, not lined up in a row. A good composition usually has one large shape, a medium shape and a small shape, and a mix of busy and quiet areas.

Hokusai designed waves for decades before *The Great Wave*. Earlier prints show smaller, softer waves with the boats in different places. By the time he made this design in his seventies, he had found the perfect arrangement: a huge claw of a wave, three boats caught beneath it, and tiny Mount Fuji framed in the hollow.

## PICTURE STUDY



*The Great Wave off Kanagawa*, Katsushika Hokusai, about 1831 · Color woodblock print · Many impressions survive, including those in the Metropolitan Museum of Art, New York, and the British Museum, London

Image: [Wikimedia Commons](#), public domain

This is a Japanese woodblock print, one of a series of thirty-six views of Mount Fuji. It is one of the most famous designs in the world. We study it as a masterpiece of composition: every shape has been planned.

### Look closely

- Find the three biggest shapes in the picture. Which is largest?
- Find Mount Fuji. How big is it, and where is it placed?
- Look at the curve of the great wave. Where does it lead your eye?
- Look at the small wave in front. What shape does it echo?

### Talk about it

1. Why do you think Hokusai made the mountain so small and the wave so large?
2. How would the picture change if the wave were in the center?
3. What feeling does the composition create? How do the shapes create it?

## STUDIO PROJECT

### Eight Thumbnails and One Drawing

You will choose a subject (a view from your window, a still life, or a scene with one or two figures), make eight different thumbnails of it, and develop the best into a finished value drawing.

#### You will need

- Sketchbook
- Drawing paper (11×14 in or 9×12 in)
- Ruler, HB and 4B pencils (or a gray and a black marker for the thumbnails)
- Viewfinder
- Kneaded eraser

#### Steps

1. Choose a subject you can see: a view from a window or porch, a still life, or a family member reading in a chair.
2. Draw eight rectangles in your sketchbook, each about 2×3 inches, in the same proportion as your final paper. Turn some vertical and some horizontal.
3. Fill each with a different composition, 2 minutes each, using only big shapes and three values. Change the viewpoint, horizon, size of the subject or cropping each time.
4. Number them. Under each, write one word describing its feeling (calm, crowded, dramatic, lonely, peaceful).
5. Choose the strongest. Ask: Is there one clear main shape? Are the big shapes different in size? Is the horizon off-center? Does the eye know where to go?
6. Enlarge it to your paper: draw light lines dividing the thumbnail and the paper into quarters, and copy the big shapes square by square.
7. Develop the drawing from life, shading with the same value plan as your thumbnail.

8. Paste or keep the eight thumbnails beside the finished drawing. Sign and date.

#### **Tips**

- Speed matters: if a thumbnail takes more than two minutes, it has too much detail.
- Your first idea is rarely your best. The fifth or sixth thumbnail often surprises you.

#### **Check your work**

- ☐ I made eight different thumbnails, each with a one-word label.
- ☐ My finished drawing follows the big shapes and values of my chosen thumbnail.
- ☐ My composition has an off-center horizon or main subject and varied shape sizes.

#### **SKETCHBOOK PRACTICE**

1. Make six thumbnails of famous paintings from this course to see how the masters arranged their big shapes.
2. Make five thumbnails of your kitchen from five different spots in the room.
3. Draw the same tree in a vertical, a horizontal and a square thumbnail.

**From history.** Hokusai produced about thirty thousand works in his long life and changed his artist's name more than thirty times. Near the end he wrote that nothing he had made before the age of seventy was worth noticing, and that he hoped to keep improving until he was over a hundred.

#### **COMMON MISTAKES**

- Putting details into thumbnails.
- Making all eight thumbnails nearly the same.
- Drawing thumbnails in a different proportion from the final paper.

**Make it a game • Eight in Five.** Draw eight small rectangles. In five minutes, make a different thumbnail of the same scene in each: high horizon, low horizon, close up, far away, cropped. Your parent chooses a favorite and asks why. Explain why artists make many thumbnails. Choose one to draw larger.

## 7.2 THE FOCAL POINT

### OBJECTIVES

- Name five ways artists create a focal point.
- Analyze how a master painting leads the eye to its focal point.
- Create a painting with one clear focal point and a planned path for the eye.

**Warm-up.** Look at Tanner's *The Annunciation* for ten seconds, then close your eyes. What do you remember seeing first? Open your eyes and trace the path your eye took with your finger in the air.

### WATCH

#### How to Create Focal Points in Art

Drawing & Painting - The Virtual Instructor • 2:02

[https://www.youtube.com/watch?v=bFEC9v4\\_TUM](https://www.youtube.com/watch?v=bFEC9v4_TUM)

#### WHEN TO WATCH

After the core ideas and before the picture study. It is short: list the ways he creates a focal point and compare them with the five in the core ideas.

### BACKUP VIDEO

#### Focal Points in Art

Cinder Block Studios • 7:13

[https://www.youtube.com/watch?v=OC1\\_zwGY3iU](https://www.youtube.com/watch?v=OC1_zwGY3iU)

Optional: a longer talk about focal points with more examples.

### KEY TERMS

#### **focal point**

The area of a picture that draws the eye first and holds the most attention (also called the center of interest).

#### **emphasis**

The principle of design by which one part of a work is made to stand out.

### **leading lines**

Lines, edges or rows of shapes that guide the eye toward the focal point.

### **subordination**

Making other parts of a picture quieter (lower contrast, softer edges, duller color) so the focal point can stand out.

## **CORE IDEAS**

A picture with no focal point feels like a crowd where everyone talks at once. A picture with one clear **focal point** feels like a conversation: the eye knows where to go first, then where to wander, and where to come back.

Artists create a focal point in several ways, often at the same time: (1) **the strongest value contrast**, lightest light against darkest dark; (2) **the sharpest edges** and most detail; (3) **the most intense or the only contrasting color**, like one spot of red in a green field; (4) **placement**, usually off-center, near one of the “thirds” points; and (5) **leading lines**, such as roads, arms, gazes and edges that point toward it. People also look first at faces and hands, and at anything that is different from its surroundings.

Just as important is **subordination**: quieting everything else. Soften edges away from the focal point, lower the contrast at the corners and edges of the picture, and gray down colors there. Many beginners make everything equally sharp and bright, so nothing stands out.

There should be one main focal point, though there may be smaller secondary ones. Plan a path: the eye enters the picture (often at the bottom), travels along leading lines to the focal point, visits secondary points, and is guided back, not out of the frame.

Henry Ossawa Tanner painted the Annunciation without a winged angel. Instead, a column of golden light stands in Mary’s plain bedroom. The light is the brightest value, the warmest color and the sharpest shape in the room, and Mary’s face and folded hands are the second focal point. Our eye moves between the two, just as the story moves between God’s messenger and Mary’s answer.

## PICTURE STUDY



*The Annunciation*, Henry Ossawa Tanner, 1898 · Oil on canvas · Philadelphia Museum of Art

Image: [Wikimedia Commons](#), public domain

Tanner was an American painter who studied in Paris and traveled to the Holy Land to see its people and places. He painted Mary as a young Middle Eastern girl in a plain room, at the moment the angel Gabriel appears to her (Luke 1:26–38). The angel is shown only as light.

### Look closely

- What do you look at first? Is it the lightest, warmest or sharpest part of the picture?
- Find Mary's face and hands. How do they become a second focal point?
- Look at the corners and edges of the painting. Are they bright or quiet?
- Find the lines in the room (the shelf, the arch, the rug) and see where they lead.

### Talk about it

1. Why might Tanner show the angel as a column of light instead of a figure with wings?
2. What does Mary's face and posture tell you about how she is receiving the message?
3. How does Tanner's use of focal point help tell the story?

## STUDIO PROJECT

### A Single Light in a Quiet Room

You will paint a simple interior or still life lit by a single light (a lamp, a candle in a holder, or a sunny window) in which the light source or what it touches is the clear focal point.

#### You will need

- Canvas panel (9×12 in)
- Acrylic paints (full palette)
- Brushes: flats #6 and #10, filbert #6, round #4
- Sketchbook and pencil for thumbnails
- A small room corner, a table with a lamp, or a window scene

#### Steps

1. Set up a corner of a room or a table with one strong light. Turn off other lights.
2. Make four thumbnails. Choose one with the focal point (the light or what it falls on) off-center.
3. Draw arrows on your chosen thumbnail showing how the eye will enter, reach the focal point and travel.
4. Tone the panel with a dark, warm brown. Draw the big shapes with thin paint.
5. Paint the dark areas first, keeping them quiet: low contrast, soft edges, grayed colors.
6. Paint the focal area with your lightest values, warmest or most intense color and sharpest edges.
7. Add leading lines (the edge of a table, a shelf, a window frame) that point toward the focal point.
8. Step back. Is there only one place that shouts? If something else competes, soften or darken it. Sign and date.

#### Tips

- Save your lightest light and your sharpest edge for the focal point only.
- If you are painting candlelight, use a candle in a safe holder with an adult present, or use a lamp instead.

#### Check your work

- ☐ The focal point is the first thing a viewer sees, and it is off-center.
- ☐ I used at least three of the five methods to create emphasis.
- ☐ Areas away from the focal point are quieter.

#### SKETCHBOOK PRACTICE

1. Choose three paintings from this course and draw thumbnails with arrows showing the path of the eye.
2. Draw one simple scene twice: once with the focal point created by contrast, once by color.
3. Find a photograph in a magazine with a strong focal point and list the methods the photographer used.

**From history.** Henry Ossawa Tanner was born in Pittsburgh in 1859, the son of a minister, and studied with Thomas Eakins in Philadelphia. He moved to Paris and became famous for his religious paintings. *The Annunciation* was bought for the Wiltach Collection in Philadelphia in 1899 and is now in the Philadelphia Museum of Art; it was the first of his paintings to enter an American museum.

#### COMMON MISTAKES

- Making several areas equally bright and sharp, so the eye is torn.
- Placing the focal point dead center or right at the edge.
- Leading lines that point out of the picture.

**Make it a game • Eye Tracker.** Your parent shows a painting or illustration for three seconds, then covers it. Say where your eye went first and why: contrast, a leading line, isolation, color or detail. Naming the right cause earns a point. Take turns. Your parent also names five ways to make a focal point.

## 7.3 NOTAN: DESIGNING IN LIGHT AND DARK

### OBJECTIVES

- Explain notan and how it differs from a value study.
- Balance black and white shapes in a two-value design.
- Use a notan to plan a landscape or still life painting.

**Warm-up.** Squint at Hiroshige's *Sudden Shower* until you see only two values. In a 2×3-inch box, fill in everything dark with a black marker and leave everything light as white paper. Take 3 minutes.

### WATCH

#### Learn painting composition \* How to do a notan painting

Christina Kent Art · 12:17

[https://www.youtube.com/watch?v=al\\_o5kZE8zY](https://www.youtube.com/watch?v=al_o5kZE8zY)

### WHEN TO WATCH

After the core ideas. Watch how she decides which shapes become dark and which light, and how she uses the notan to plan a painting.

### KEY TERMS

#### **notan**

A Japanese word meaning “light-dark”: a design made in only two values, black and white, to show the basic pattern of a composition.

#### **positive and negative space**

Positive space is the subject; negative space is the area around it. In notan both are designed shapes.

#### **interlocking shapes**

Dark and light shapes that fit into each other like puzzle pieces, so neither simply sits on top of a background.

#### **balance**

A pleasing distribution of visual weight across a picture, symmetrical or asymmetrical.

### CORE IDEAS

In Unit 4 you made value studies in three or four values. **Notan** goes one step further: only two values, black and white. Every part of the picture must be decided: light or

dark? This forces you to see the design underneath the subject, the pattern a viewer feels before recognizing a single object.

In a good notan, the black and white shapes are both interesting. The light shapes are not just “background”; they are designed as carefully as the dark. Look for **interlocking shapes**: a dark tree reaching into a light sky, a light path cutting through a dark field. Shapes that interlock make a picture feel unified.

Aim for unequal amounts. A design that is half black and half white feels static. One that is mostly light with dark accents, or mostly dark with a few light shapes, has more energy. Vary the sizes of the shapes, and put the strongest meeting of black and white at your focal point.

To make a notan from a subject, squint until it splits into two families of values. Everything in the lighter half becomes white; everything in the darker half becomes black. You may need to combine objects (a dark coat and a dark wall become one shape) and you may need to decide arbitrarily for middle values. Then judge it as a design, not as a picture: is it balanced? Is there a focal point? Are the shapes varied?

Japanese printmakers such as Hiroshige were masters of flat, bold shape design, and when their prints reached Europe in the 1800s, painters such as Van Gogh and Whistler studied them eagerly. Hiroshige’s rainstorm is almost a notan already: dark sky, dark river, light bridge, and slanting lines of rain.

## PICTURE STUDY



*Sudden Shower over Shin-Ōhashi Bridge and Atake*, Utagawa Hiroshige, 1857 · Color woodblock print · Many impressions survive, including those in the Brooklyn Museum, New York, and the British Museum, London

Image: [Wikimedia Commons](#), public domain

This print is from Hiroshige's series *One Hundred Famous Views of Edo* (old Tokyo). A sudden summer downpour catches people crossing a bridge. Van Gogh admired it so much that he painted a copy of it. Its strong pattern of light and dark makes it perfect for studying *notan*.

### Look closely

- Squint. Which shapes are dark and which are light?
- Follow the diagonal of the bridge. How does it divide the picture?
- Find the small figures. How are they shaped as light and dark?
- Look at the lines of rain. Do they cross dark areas, light areas, or both?

### Talk about it

1. Why do you think Hiroshige placed the bridge on a diagonal instead of straight across?
2. How does the dark sky at the top help create the feeling of a storm?
3. Would this design still work in only black and white? Why?

## STUDIO PROJECT

### Cut-Paper Notan and a Notan-Planned Painting

You will make two cut-paper notan designs of a landscape or still life, then use the better one to plan a small painting in a limited palette.

#### You will need

- Black and white construction paper
- Scissors and a glue stick
- Sketchbook and a black marker
- Canvas paper (9×12 in) and acrylic paints (a limited palette of three colors plus white)
- Brushes and palette

#### Steps

1. Choose a subject: a view from a window, a tree against the sky, a bridge or a still life. Make four quick two-value thumbnails with the marker.
2. Pick the two strongest. For each, cut a white paper rectangle (5×7 in) as your base.
3. Cut the dark shapes from black paper and arrange them on the white. Move them until the black and white shapes interlock and one area clearly has the strongest contrast.
4. Check the balance: is one value clearly dominant? Are the shapes varied in size? Glue them down.
5. Compare the two notans. Choose one and write two sentences about why it is stronger.
6. Choose a limited palette: one dark color, one middle color and one light color, plus white.
7. On canvas paper, lightly draw your notan shapes. Paint all the black shapes with darks and all the white shapes with lights. Then add a middle value only where it helps, without breaking the two big families.
8. Sign and date the painting and mount it beside its notan.

#### Tips

- Cut boldly with large shapes first; tiny pieces make a notan fussy.
- If you cannot decide whether a middle value is light or dark, decide by what makes the stronger design.

#### Check your work

- ☐ My notans use only two values and the shapes interlock.
- ☐ One value clearly dominates.
- ☐ My painting keeps the light and dark pattern of the notan.

#### SKETCHBOOK PRACTICE

1. Make two-value notans of three paintings from this course.
2. Make a notan of a family member's silhouette against a window.
3. Draw a design in which black and white are reversed (light subject on dark, then dark subject on light). Which is stronger?

**From history.** The American teacher Arthur Wesley Dow introduced the word notan to Western art students in his book *Composition* (1899). He had studied Japanese prints at the Museum of Fine Arts in Boston and believed that the design of light and dark was the foundation of every good picture.

#### COMMON MISTAKES

- Using grays: notan is two values only.
- Making half black and half white with nothing dominant.
- Treating the white areas as empty instead of designing them.

**Make it a game • Percent Black.** Make a two-value notan on a grid of sixteen squares. Your parent guesses what percent of it is black, and you check by counting. Closest guess wins. Then balance it so no corner feels too heavy. Say how notan differs from a value study. Switch roles.

## 7.4 TELLING A STORY IN A PICTURE

### OBJECTIVES

- Explain how a single picture can tell a story by choosing the telling moment.
- Use gesture, expression, setting, light and composition to carry a narrative.
- Plan and draw or paint a scene from a Bible narrative or a parable.

**Warm-up.** Choose a familiar story (Noah building the ark, the Good Samaritan, Mary and Martha, Jesus calming the storm). In 3 minutes, list three possible moments you could show. Circle the one that tells the most about the whole story.

### WATCH

#### Rembrandt's Prodigal Son | Behind The Canvas

Good Catholic • 10:00

<https://www.youtube.com/watch?v=IIeILdkeyvc>

### WHEN TO WATCH

After the picture study. Listen for how Rembrandt uses light, gesture and the placement of each figure to tell the parable.

**Note:** This video is from a Catholic ministry; the opening and closing mention their paid video series, which is not needed.

### KEY TERMS

#### **narrative art**

Art that tells a story or shows an event from a story.

#### **body language**

What gesture, posture and expression tell us about a person's feelings.

#### **the telling moment**

The single instant an artist chooses that best reveals what came before and what will come after.

#### **history painting**

In the tradition of European art, large paintings of scenes from Scripture, history or literature, once considered the highest kind of painting.

## CORE IDEAS

A story happens in time, but a picture shows only one instant. The narrative painter's first and most important choice is **which moment to show**. The best moment is usually not the beginning or the end but the turning point, a moment that lets the viewer remember what came before and imagine what will come next.

Everything in the composition should serve the story. **Gesture and body language** carry most of it: a bowed head, an outstretched hand, a figure turning away.

**Expression** shows feeling, but faces can be small; often the whole body says more.

**Setting** tells where and when. **Light** shows what is most important, often falling on the central figures. **Composition** groups the figures and leads the eye from the main action to the reactions around it.

Count your characters and decide their roles. Who is the main actor? Who reacts? Who watches? Place the main figures at the focal point, give them the strongest light and contrast, and arrange the onlookers so their gazes and gestures lead toward the center.

For centuries, Christian artists told the stories of Scripture this way, for people who could not read and for people who could. A good Bible painting is a kind of quiet reflection: it asks us to stand in the scene and feel its meaning.

Rembrandt's *Return of the Prodigal Son* shows the moment of Luke 15:20 when the father embraces his returning son. We do not see the son's journey, his waste or his hunger, but we feel all of it in his shaved head, worn clothes and broken shoe. We do not hear the father's words, but we see his love in his bent body and gentle hands. The older brother stands apart, lit but unmoved, and the story's question is left open for us.

## PICTURE STUDY



*The Return of the Prodigal Son*, Rembrandt van Rijn, about 1661–1669 · Oil on canvas · Hermitage Museum, St Petersburg

Image: [Wikimedia Commons](#), public domain

This was one of Rembrandt's last great paintings. It shows Jesus's parable of the lost son who wastes his inheritance and comes home in shame, to be welcomed by his father. Rembrandt tells the whole story in a single embrace, through gesture, light and composition.

### Look closely

- Where does the light fall most brightly? Whose faces and hands does it touch?
- Look at the son. What do his clothes, his head and his feet tell you about where he has been?
- Look at the father's two hands. Are they the same?
- Find the older brother on the right. How is his pose different from the father's?

### Talk about it

1. Why do you think Rembrandt chose this moment of the story rather than another?
2. How does the composition separate the welcoming father from the standing older brother?

3. Read Luke 15:11–32. Which part of the parable do you think this painting helps you understand best?

## STUDIO PROJECT

### A Parable or Bible Story in One Picture

You will choose a story from Scripture, decide on its telling moment, plan it with thumbnails and a notan, and make a finished drawing or painting with clothed figures, a setting and directed light.

#### You will need

- Sketchbook and pencil
- Drawing paper (11×14 in) or a canvas panel
- Pencils and charcoal, or acrylic paints
- A Bible
- Family members (fully clothed, perhaps in simple robes or towels for costume) to pose for gestures, or a mannequin

#### Steps

1. Choose a story with only two to four main characters, for example: the Good Samaritan (Luke 10), the lost sheep (Luke 15), Ruth and Naomi (Ruth 1), the boy Samuel hearing God's call (1 Samuel 3), Mary and Martha (Luke 10), or Jesus blessing the children (Mark 10).
2. Read the story twice. List three possible moments, then choose the telling moment and write one sentence explaining your choice.
3. Make six thumbnails exploring different arrangements of the figures and setting. Choose one.
4. Make a notan of your chosen thumbnail to plan the light: where will the strongest light fall?
5. Pose family members (clothed) or a mannequin in the gestures you need and make quick gesture drawings from them.
6. Draw the composition on your final paper, beginning with gestures and big shapes, then the setting.
7. Develop the main figures with the strongest light, contrast and detail. Keep onlookers and background quieter.

8. Finish in pencil, charcoal or paint. On the back, write the Bible reference and your sentence about the telling moment. Sign and date.

#### **Tips**

- Gesture tells the story more than faces do; exaggerate it a little.
- Keep the setting simple: a doorway, a road, a hillside is enough.

#### **Check your work**

- ☐ I chose a telling moment and can explain why.
- ☐ The main figures are at the focal point with the strongest light and contrast.
- ☐ Gestures and composition carry the story clearly to someone who knows it.

### **SKETCHBOOK PRACTICE**

1. Draw three different moments from the same story as thumbnails and compare them.
2. Make gesture drawings of family members acting out emotions: welcome, sorrow, surprise, prayer.
3. Copy the father and son group from Rembrandt's painting as a value study.

**From history.** Rembrandt painted *The Return of the Prodigal Son* near the end of his life, after the deaths of his wife, his son Titus and many of his children, and after losing his house and possessions. Many viewers see in it his own understanding of mercy. Catherine the Great bought it for the Hermitage in 1766.

### **COMMON MISTAKES**

- Choosing a moment that needs words to be understood.
- Lining up all the figures in a row facing the viewer.
- Giving every figure equal light and detail, so the main action is lost.

**Make it a game • Freeze the Telling Moment.** Choose a parable, such as the Prodigal Son or the Good Samaritan. Freeze in the moment that tells the story best, with body language and a face that show it. Your parent guesses the parable and the moment. Then explain why you chose that moment over the start or the end.

**Scripture.** “But when he was yet a great way off, his father saw him, and had compassion” (Luke 15:20, KJV)

Rembrandt painted the moment just after this verse: the father’s compassion turned into an embrace. A great narrative picture helps us dwell on a single moment of the story until we feel its meaning.

## UNIT 7

# COMPOSITION AND NARRATIVE

Composition is the art of arrangement: deciding what goes where in a picture, how big, how light or dark, and in what order the viewer will see it. A strong composition is planned, not stumbled upon. In this unit you will plan pictures with thumbnail sketches, build them around a clear focal point, design them in black and white with notan, and finally tell a story in a single image, as the great painters of Bible stories did.

Our masters are designers and storytellers: Hokusai, who planned his great wave for decades; Henry Ossawa Tanner, who made a quiet glow of light the center of the Annunciation; Hiroshige, whose rain-swept bridge is a lesson in black-and-white design; and Rembrandt, whose *Return of the Prodigal Son* tells the whole of Christ's parable in a single embrace.

### PREREQUISITES

- Can make a value study in three values (Unit 4)
- Can draw figures in proportion and gesture (Unit 2)
- Knows warm and cool color and color harmony (Unit 3)

### MASTERY CHECKLIST

- ☐ I can make several quick thumbnail sketches to explore a composition before starting.
- ☐ I can create a focal point using contrast, edges, color, placement and leading lines.
- ☐ I can design a notan (two-value design) that balances black and white shapes.
- ☐ I can plan a narrative picture that shows the most telling moment of a story through gesture, expression, setting and light.

### LESSONS IN THIS UNIT

#### 7.1 Thumbnail Sketches: Planning a Picture

2 sessions of 50–60 minutes

#### 7.2 The Focal Point

2 sessions of 50–60 minutes

#### 7.3 Notan: Designing in Light and Dark

2 sessions of 50–60 minutes

## UNIT 7 REVIEW

Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences and a design. Total: 100 points.

1. (6 pts)

What is a thumbnail sketch, and why should an artist make several?

2. (6 pts)

Name three questions a thumbnail can help answer.

3. (10 pts)

List five ways to create a focal point.

4. (6 pts)

What is subordination?

5. (6 pts)

What does notan mean, and how many values does it use?

6. (6 pts)

Why is a notan that is exactly half black and half white usually weak?

7. (6 pts)

What are interlocking shapes?

8. (8 pts)

What is the telling moment in a narrative picture?

9. (8 pts)

Name four tools a painter uses to tell a story besides words.

10. **8 pts**

Name the artist of: *The Great Wave off Kanagawa*; *The Annunciation* (1898); *Sudden Shower over Shin-Ōhashi Bridge and Atake*; *The Return of the Prodigal Son*.

11. **15 pts**

In four or five sentences, describe how Rembrandt tells the story of the prodigal son in one picture.

12. **15 pts**

Draw a notan (two values only) of a tree beside a path, in a 3×4-inch box. Make one value dominant and show where the focal point is with an arrow.

## ANSWER KEY

1. A very small, quick sketch of big shapes and values used to plan a composition; making several lets the artist try many ideas quickly and choose the best.
2. Any three: format (vertical, horizontal, square); horizon placement; size of the main subject; cropping; viewpoint; where the eye will go; value pattern.
3. Strongest value contrast; sharpest edges and most detail; most intense or contrasting color; deliberate off-center placement; leading lines pointing to it (also faces, hands, or anything different).
4. Making the rest of the picture quieter (less contrast, softer edges, duller color) so the focal point stands out.
5. “Light-dark”; it uses only two values, black and white.
6. Equal amounts feel static and nothing dominates; one value should clearly dominate.
7. Dark and light shapes that fit into each other like puzzle pieces, so the design is unified rather than a subject sitting on a background.
8. The single instant that best reveals what happened before and what will happen next, usually the turning point of the story.
9. Gesture and body language, facial expression, setting, light, composition (grouping and leading the eye), costume and objects.
10. Hokusai; Henry Ossawa Tanner; Hiroshige; Rembrandt.
11. Model: Rembrandt chose the moment the father embraces his returning son, the turning point of the parable. The son’s shaved head, ragged clothes and worn-out shoe show his poverty and shame. The father bends over him with gentle hands on his back, showing forgiveness and love. Light falls most brightly on the father’s face and the son’s back, making them the focal point. The older brother stands apart on the right, upright and unmoving, reminding us of the rest of the story.
12. Design shows only black and white, interlocking shapes (for example a dark tree reaching into a light sky and a light path through a dark field), one value clearly dominant, varied shape sizes, and an arrow at the strongest black-white contrast.

## PORTFOLIO PIECE: A STORY PICTURE

Complete the Bible narrative or parable picture from Lesson 7.4 as your portfolio piece, at 11×14 in or larger, in pencil, charcoal or acrylic. Mount your thumbnails and notan beside it. The finished work should have a clearly chosen telling moment, a strong focal point, a planned light-dark design and clothed figures whose gestures carry the story.

| LOOK FOR                   | WHAT IT MEANS                                                                                                            |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Planning</b>            | At least six thumbnails and a notan are attached, and the finished work follows the chosen plan.                         |
| <b>Telling moment</b>      | The moment chosen reveals the story; the student's written sentence explains the choice.                                 |
| <b>Focal point</b>         | The main action is the clear focal point through contrast, edges, placement and leading lines; the rest is subordinated. |
| <b>Figures and gesture</b> | Figures are proportioned and their gestures and body language carry the story.                                           |
| <b>Craftsmanship</b>       | Careful, finished work with a consistent light source; signed, dated and labeled with the Scripture reference.           |

## UNIT 8

# RENAISSANCE AND BAROQUE MASTERS

This unit gathers the whole year together in the company of the greatest painters of the Renaissance (about 1400–1600) and the Baroque (about 1600–1700). You already know their methods from the inside: you have measured like Dürer, drawn drapery like Leonardo’s workshop, studied light like Vermeer and painted in grays like van Eyck. Now you will study four masters more closely and learn from them by the oldest method of all: copying.

Leonardo da Vinci, the restless inventor who filled notebooks with drawings; Raphael, the master of grace and harmony; Rembrandt, the painter of light, shadow and the human soul; and Diego Velázquez, whose *Las Meninas* is perhaps the most studied painting in the world, set beside his Dutch contemporary Johannes Vermeer. Each lesson ends with a master study, and the year ends with a capstone piece made in the manner of one of these masters.

### PREREQUISITES

- The skills of Units 1–7: observation, proportion, color, value and light, materials, perspective and composition
- A sketchbook full of the year’s practice to refer back to

### MASTERY CHECKLIST

- ☐ I can describe the main achievements of Leonardo, Raphael, Rembrandt, Velázquez and Vermeer and recognize a work by each.
- ☐ I can explain the difference between Renaissance harmony and Baroque drama.
- ☐ I can make a careful master copy, using a grid or sighting, and explain what I learned from it.
- ☐ I can make a finished work that uses a method learned from a master.

### LESSONS IN THIS UNIT

#### 8.1 Leonardo: The Last Supper and the Notebooks

2 sessions of 50–60 minutes

#### 8.2 Raphael: Harmony and Grace

2 sessions of 50–60 minutes

## UNIT 8 REVIEW

This final review covers Unit 8 and the year. Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences. Total: 100 points.

1. 6 pts

What moment does Leonardo show in *The Last Supper*?

2. 8 pts

Why has *The Last Supper* deteriorated so badly? Use the words fresco and secco.

3. 6 pts

Where is the vanishing point in *The Last Supper*, and why is that important?

4. 8 pts

Name three qualities of Raphael's art.

5. 6 pts

From whom did Raphael learn, and what did he do with the composition of *The Marriage of the Virgin*?

6. 8 pts

How is Baroque art different from High Renaissance art?

7. 8 pts

Describe Rembrandt's way of handling paint in lights and shadows.

8. 6 pts

Who is reflected in the mirror in *Las Meninas*?

9. 6 pts

Why do artists make master copies?

10. **8 pts**

Match each artist to a work you studied this year: Leonardo, Raphael, Rembrandt, Velázquez, Vermeer.

11. **15 pts**

In four or five sentences, compare how Velázquez and Vermeer paint light and space.

12. **16 pts**

Looking back on the year, choose one master you studied and write five or six sentences about what you learned from him and how you used it in your own work.

## ANSWER KEY

1. The moment just after Christ says, “One of you shall betray me,” and the apostles react.
2. Instead of true fresco on wet plaster, Leonardo painted secco, with tempera and oil on dry plaster, so the paint did not bond well and began to flake.
3. At Christ’s head; all the lines lead the eye to Him, making Him the focal point.
4. Any three: harmony, balance, symmetry, clarity, grace, calm, soft modeling.
5. His teacher Perugino; he based it on Perugino’s painting but improved it with a larger temple, deeper space and more natural figures.
6. Baroque art is more dramatic, with stronger light and shadow, more movement and deeper emotion; High Renaissance art is calmer, balanced and harmonious.
7. Thick paint (impasto) in the lights and thin, transparent glazes in the shadows, so the lights come forward and the shadows sink back.
8. The king and queen of Spain, King Philip IV and Queen Mariana.
9. To learn a master’s methods by looking extremely closely and repeating the decisions the master made.
10. For example: Leonardo, *The Last Supper* or *Lady with an Ermine*; Raphael, *The Marriage of the Virgin*; Rembrandt, *Self-Portrait with Two Circles* or *The Return of the Prodigal Son*; Velázquez, *Las Meninas*; Vermeer, *The Milkmaid*.
11. Model: Both painters observe light honestly and use it to create space. Velázquez paints a tall, deep room in layers of light and shadow, with a bright doorway at the back and loose, quick brushstrokes that look real from a distance. Vermeer paints small, quiet rooms lit by a side window, with smooth, precise paint and tiny points of light. Velázquez’s painting is a complex scene with many people; Vermeer usually shows one person in a calm moment. Both make ordinary moments feel important.
12. Answers will vary. A strong answer names a specific master and work, a specific technique or idea (for example, Vermeer’s reflected light, Leonardo’s sfumato, Rembrandt’s thin shadows and thick lights, Constable’s cloud studies, Raphael’s perspective and balance), and a specific project where the student used it, with honest reflection.

## PORTFOLIO PIECE: CAPSTONE: A WORK IN THE MANNER OF A MASTER

Make a finished painting or drawing (11×14 in or larger) of your own subject, a still life, portrait, landscape or story scene, using a method you learned from one of the masters this year: for example, a grisaille underpainting like van Eyck's, Rembrandt's chiaroscuro and thick lights, Vermeer's window light and reflected light, Raphael's perspective and symmetry, or Constable's observed sky. Attach your thumbnails and value study, and write a paragraph on the back naming the master, the method and what you learned. Hang it with your best piece from each unit in a family art show.

| LOOK FOR                       | WHAT IT MEANS                                                                           |
|--------------------------------|-----------------------------------------------------------------------------------------|
| <b>Learning from a master</b>  | The work clearly uses a named method from a master, explained in the written paragraph. |
| <b>Planning</b>                | Thumbnails and a value study are attached and the work follows the plan.                |
| <b>Drawing and composition</b> | Accurate proportion and perspective; a clear focal point and strong design.             |
| <b>Light, value and color</b>  | Consistent light, a full value range and harmonious color (or a controlled monochrome). |
| <b>Craftsmanship</b>           | Careful finish and presentation, signed and dated, ready to hang.                       |

## 8.1 LEONARDO: THE LAST SUPPER AND THE NOTEBOOKS

### OBJECTIVES

- Describe how Leonardo composed *The Last Supper* around Christ and the apostles' reactions.
- Explain why the painting has deteriorated, using what you learned about binders and grounds.
- Make a sheet of expressive head studies in the manner of Leonardo's preparatory drawings.

**Warm-up.** Read John 13:21–22. Then, in 3 minutes, sketch three small faces showing three different reactions to the words “one of you shall betray me”: shock, sorrow and questioning.

### WATCH

#### How “The Last Supper” was Painted | Leonardo da Vinci | PBS

PBS • 12:22

<https://www.youtube.com/watch?v=XSlU2Vji1pg>

### WHEN TO WATCH

After the core ideas, as part of the picture study. Watch for Leonardo's preparatory drawings, the perspective lines that lead to Christ's head, and why his experimental paint began to flake.

### KEY TERMS

#### **Renaissance**

The “rebirth” of learning and art in Europe from about 1400 to 1600, marked by the study of nature, perspective, anatomy and ancient models.

#### **secco**

Painting on dry plaster. It allows slower work but bonds less well and flakes more easily.

#### **fresco**

Painting with water-based pigments on fresh, wet lime plaster, so that the color becomes part of the wall as it dries.

#### **preparatory drawing**

A study made to plan part of a larger work, such as a head, hand or fold of drapery.

### **red chalk (sanguine)**

A natural reddish-brown chalk colored by iron oxide, used by Leonardo and many Renaissance artists for figure and head studies.

### **CORE IDEAS**

Leonardo painted *The Last Supper* between about 1495 and 1498 on the wall of the dining hall of a monastery in Milan, so the monks ate their meals beneath Christ and the apostles. He chose the dramatic moment just after Christ says, “One of you shall betray me.” Each apostle reacts differently: one recoils, one questions, one points to himself, one lays his hand on his heart.

The composition is a lesson in focal point and perspective. All the lines of the ceiling and walls run to a vanishing point at Christ’s head. He sits in the center, framed by the bright window behind him, calm and still in the middle of the storm of gestures. The twelve apostles are arranged in four groups of three, with movement rippling outward from him like waves.

Leonardo prepared with many drawings: heads of people he found in the streets of Milan, studies of hands, of drapery, of gestures. He believed that the movements of the body should show the movements of the soul. His notebooks, written in mirror writing, contain thousands of pages of drawings of faces, plants, water, machines and anatomy, all made by close observation.

The painting began to deteriorate within Leonardo’s lifetime. Instead of true **fresco**, which must be painted quickly on wet plaster, Leonardo wanted to work slowly and revise, so he experimented with tempera and oil on dry plaster (**secco**). The paint did not bond well with the damp wall and began to flake. After centuries of damage and repair, a twenty-year restoration finished in 1999 revealed what remains of the original. It is a lesson in why materials matter.

Studying Leonardo’s preparatory drawings teaches patience. Before painting a single apostle, he studied faces until he understood how surprise, grief and love change the muscles of the face.

## PICTURE STUDY



*The Last Supper*, Leonardo da Vinci, about 1495–1498 · Tempera and oil on dry plaster (secco) ·  
Refectory of Santa Maria delle Grazie, Milan  
Image: [Wikimedia Commons](#), public domain

This wall painting shows Christ's last Passover meal with His disciples, at the moment He announces that one of them will betray Him (John 13:21). Though damaged, it remains one of the most influential paintings ever made.

### Look closely

- Find the vanishing point. Follow the lines of the ceiling and the walls to it.
- Count the apostles in each of the four groups. How do their gestures connect them?
- Compare Christ's pose with the apostles' poses. How is He different?
- Find Judas. He is the one leaning back into shadow, clutching a small bag. How does Leonardo set him apart?

### Talk about it

1. Why do you think Leonardo placed the window directly behind Christ?
2. Which apostle's reaction do you find most convincing, and why?
3. How does knowing about the painting's materials change the way you see its damage?

## STUDIO PROJECT

### A Sheet of Heads in Red Chalk

Like Leonardo preparing *The Last Supper*, you will fill a sheet with studies of heads showing different reactions, drawn from family members (clothed, of course), in a reddish-brown pencil on toned paper.

#### You will need

- Cream or tan toned paper (11×14 in)
- A sanguine (red-brown) pastel pencil, conté pencil or terracotta colored pencil, and a white pencil
- HB pencil for light lay-in
- Kneaded eraser
- Two or three family members willing to make expressions, and a mirror

#### Steps

1. Plan a sheet with five or six heads at different angles and sizes, overlapping slightly in a pleasing arrangement as on Leonardo's study sheets.
2. Ask your first model to react to imaginary surprising news. Have them hold the expression for a few seconds at a time while you lay in the egg shape, center line and eye line.
3. Draw the features, noting how the expression changes them: raised brows, open mouth, narrowed eyes.
4. Shade the shadow side with hatching in the red-brown pencil, following the form (diagonal hatching was Leonardo's habit; as a left-hander, his strokes slant from upper left to lower right).
5. Repeat for other expressions: sorrow, questioning, deep thought, tender concern. Use the mirror to draw your own face for one of them.
6. Add a few white highlights on the brightest planes (forehead, nose, cheekbone).
7. Beside each head, write a one-word label of the emotion, in small, neat letters.
8. Sign and date the sheet.

### Tips

- Expressions are hard to hold. Ask your model to repeat the expression several times while you watch, then draw from memory between looks.
- Keep the hatching consistent in direction across the whole sheet for unity.

### Check your work

- ☐ My sheet has five or six heads, each with a clearly different expression.
- ☐ I used hatching to shade with one consistent light direction.
- ☐ My heads are proportioned correctly (eyes halfway down).

### SKETCHBOOK PRACTICE

1. Write a short page in mirror writing (hold it up to a mirror to check), as Leonardo did.
2. Make a page of studies of a single object (a leaf, a shell, a hand) from five angles, like a page from Leonardo's notebooks.
3. Copy one apostle's head and hands from *The Last Supper*.

**From history.** In 1943, during the Second World War, a bomb destroyed much of the monastery around the dining hall, but the wall with *The Last Supper* had been protected with sandbags and survived. Today visitors are admitted in small groups for fifteen minutes at a time to protect the painting.

### COMMON MISTAKES

- Exaggerating expressions until they become cartoons.
- Forgetting that the whole head tilts and turns with an expression, not just the mouth.
- Hatching in random directions.

**Make it a game • Apostle Reaction Charades.** Act out how one apostle might react when Jesus says one of them will betray him: shock, doubt or protest. Your parent guesses the feeling. Then answer how Leonardo composed the scene around Christ and why the painting has decayed: a dry wall and experimental binder. Take turns acting.

**Scripture.** “When Jesus had thus said, he was troubled in spirit, and testified, and said, Verily, verily, I say unto you, that one of you shall betray me.” (John 13:21, KJV)

Leonardo painted the moment just after these words. Every gesture at the table is a response to what Christ has said.

## 8.2 RAPHAEL: HARMONY AND GRACE

### OBJECTIVES

- Describe the qualities of Raphael's art: clarity, balance, grace and harmony.
- Analyze how perspective and symmetry structure *The Marriage of the Virgin*.
- Design a composition with a central building in one-point perspective and a balanced group of clothed figures.

**Warm-up.** Draw a 4-inch square. Mark its center. Draw a horizon line through the middle and a vanishing point at the center. In 3 minutes, draw a tiled floor (a checkerboard) receding to that point.

### WATCH

#### Raphael, Marriage of the Virgin, 1504

[Smarthistory](#) · 5:03

[https://www.youtube.com/watch?v=H\\_Guv2Mk1E0](https://www.youtube.com/watch?v=H_Guv2Mk1E0)

### WHEN TO WATCH

After the core ideas, as part of the picture study.

### KEY TERMS

#### High Renaissance

The peak of the Italian Renaissance, about 1495–1520, the time of Leonardo, Raphael and Michelangelo.

#### symmetry

Balance in which the two halves of a composition mirror each other around a central axis.

#### centrally planned building

A building arranged around a central point, such as a round or many-sided temple with a dome.

#### frieze arrangement

Figures placed side by side across the foreground, like a carved band of figures on a building.

### CORE IDEAS

Raphael (Raffaello Sanzio, 1483–1520) was trained by his father and then by the painter Perugino. He absorbed everything he saw, from Perugino's calm clarity to Leonardo's soft modeling, and combined them into an art of perfect balance and

grace. In a short life of thirty-seven years he painted some of the most beloved Madonnas and frescoes in the world.

*The Marriage of the Virgin*, painted when Raphael was about twenty-one, shows the betrothal of Mary and Joseph, a scene from Christian tradition. According to the old story, many suitors brought rods to the temple, and only Joseph's rod flowered, showing he was God's choice. Joseph places the ring on Mary's finger while a disappointed suitor breaks his rod over his knee.

The composition is built on **perspective** and **symmetry**. A great temple with sixteen sides stands at the top center, and the lines of the paved square run to a vanishing point in its open doorway, where we glimpse the sky beyond. The priest stands on the central axis, between Mary and Joseph. The figures in the foreground form a gentle curve that echoes the round temple. Everything is calm, clear and ordered.

Compare this with Leonardo's storm of gestures in *The Last Supper*. Raphael's ideal is **harmony**: graceful poses, balanced groups, soft transitions of light, and figures that seem to move like music. His paintings became the model of beauty for art academies for three hundred years.

Raphael based this composition on a similar painting by his teacher Perugino, but improved it: he made the temple larger and more open, the space deeper and the figures more natural. Learning from a master and then going further is the classical way of growing as an artist.

## PICTURE STUDY



*The Marriage of the Virgin*, Raphael, 1504 · Oil on panel · Pinacoteca di Brera, Milan

Image: [Wikimedia Commons](#), public domain

This early masterpiece shows the betrothal of Mary and Joseph before the temple. Raphael was only about twenty-one. It shows how perspective, symmetry and graceful figures can create a feeling of perfect calm and order.

### Look closely

- Find the vanishing point. Is it inside the temple doorway?
- Follow the lines of the paving stones to the temple.
- Find the central axis. Who stands on it?
- Look at the curve of the foreground figures. What shape does it echo?

### Talk about it

1. Why might Raphael place the vanishing point in the open door of the temple?
2. How does the painting's symmetry make you feel, compared with *The Last Supper*?
3. Raphael learned from his teacher Perugino and then surpassed him. What does that teach about learning?

## STUDIO PROJECT

### A Harmonious Piazza

You will design a balanced composition in the manner of Raphael: a building (a church, a gazebo, or a temple) at the vanishing point of a paved square, with a curved group of clothed figures in the foreground.

#### You will need

- Drawing paper (11×14 in), vertical
- Ruler, HB and 2B pencils, kneaded eraser
- Optional: watercolor or colored pencils to finish
- Sketchbook for thumbnails

#### Steps

1. Make three thumbnails, each with a central building and a group of figures. Choose the most balanced.
2. On the final paper, draw a vertical center line. Draw the horizon line about halfway up and mark the vanishing point on the center line.
3. Draw the paved square: lines from the bottom edge to the vanishing point, and horizontal lines spaced closer together as they recede (use the diagonal method from Lesson 6.1).
4. Draw the building centered at the top of the square, with its doorway at the vanishing point. Make it symmetrical: measure each side from the center line.
5. Draw five to seven small, clothed figures in the middle distance, sizing them so their heads are near the horizon line.
6. In the foreground, draw a curved group of three to five larger, clothed figures, balanced on either side of the center line, with graceful gestures (family members can pose).
7. Add light from one side and shade the building and figures with soft gradations.
8. Finish with watercolor or colored pencil if you like, keeping colors harmonious. Sign and date.

### Tips

- Symmetry need not be exact: balance the figures on each side by visual weight, not by copying them.
- Keep the sky and pavement simple, so the building and figures stand out.

### Check your work

- ☐ My perspective lines meet at a vanishing point at the building's doorway.
- ☐ My composition is balanced around a central axis.
- ☐ My figures are proportioned and sized correctly for their distance.

### SKETCHBOOK PRACTICE

1. Draw a simple round temple (a cylinder with columns and a dome) in perspective.
2. Copy the central group of Mary, the priest and Joseph from Raphael's painting.
3. Compare thumbnails of Raphael's *Marriage of the Virgin* and Leonardo's *Last Supper*. Write three differences.

**From history.** Raphael moved to Rome in 1508, where Pope Julius II asked him to paint rooms in the Vatican palace. He also designed tapestries and buildings and became architect of Saint Peter's Basilica. When he died at thirty-seven, he was buried in the Pantheon in Rome.

### COMMON MISTAKES

- Placing the horizon at different heights for the building and the figures.
- Making the building lopsided; measure from the center line.
- Drawing foreground figures stiffly in a straight row.

**Make it a game • Symmetry Mirror Dance.** Face your parent. Whatever you do, your parent mirrors. Make a symmetrical pose with a center line, then stop. Describe how Raphael used symmetry, perspective and the center building in *The Marriage of the Virgin*. Say three words for his art: clarity, balance, harmony. Switch roles.

## 8.3 REMBRANDT: LIGHT AND THE HUMAN SOUL

### OBJECTIVES

- Describe Rembrandt's use of chiaroscuro, warm earth colors and thick paint.
- Explain what Baroque art is and how it differs from the High Renaissance.
- Paint a self-portrait in brown and white (brunaille) with Rembrandt-style lighting.

**Warm-up.** In a darkened room, hold a flashlight or lamp above and to one side of your face and look in a mirror. Notice the small triangle of light on the cheek on the shadow side. Sketch the pattern of light and shadow on your face in 3 minutes.

### WATCH

#### Rembrandt, Self-Portrait

Smarthistory · 3:55

<https://www.youtube.com/watch?v=rFMFH8Nf0Zw>

#### WHEN TO WATCH

After the core ideas, as part of the picture study. Two art historians look closely at another late self-portrait; listen for chiaroscuro, warm earth colors and thick paint.

### BACKUP VIDEO

#### Rembrandt van Rijn, Self Portrait with Two Circles, 1665–1669

Art Lectio · 7:14

<https://www.youtube.com/watch?v=6XrB5wa0Tx4>

Optional: a quiet, reflective look at *Self-Portrait with Two Circles*, our picture study.

### KEY TERMS

#### **Baroque**

The style of European art from about 1600 to 1700, marked by drama, movement, strong light and shadow, and deep emotion.

#### **brunaille**

A painting or underpainting done in shades of brown, like grisaille in browns.

**Rembrandt lighting**

Lighting from above and to one side that leaves a small triangle of light on the shadow-side cheek; it is still used by portrait photographers today.

**self-portrait**

A portrait an artist makes of himself or herself, usually using a mirror.

**CORE IDEAS**

Rembrandt van Rijn (1606–1669) was the greatest painter of the Dutch Golden Age. He painted portraits, Bible stories and landscapes, and made hundreds of drawings and etchings. He is especially loved for his insight into people: his faces seem to have an inner life.

Rembrandt's light is **chiaroscuro** at its deepest. Faces and hands glow out of warm, brown darkness. He used mainly earth colors (ochres, umbers, siennas), lead white and black, with touches of red, a limited palette like the one you used in Unit 3. In the lights he laid on thick paint (impasto), sometimes with a palette knife or even the handle of the brush; in the shadows he used thin, transparent glazes. So the lights come forward physically, and the shadows sink back.

This is **Baroque** art: more dramatic than the calm harmony of the High Renaissance, with stronger contrasts of light, deeper shadows and more intense emotion. Yet Rembrandt's late works are not loud; they are quiet and searching.

Rembrandt painted about forty self-portraits, plus many drawn and etched ones, from his twenties to the year of his death. Seen together, they form a kind of autobiography: the confident young man, the prosperous artist, and finally the old man, poorer and wiser, who looks at himself honestly. In *Self-Portrait with Two Circles* he stands with his palette and brushes, as if to say, "This is who I am: a painter."

A **brunaille** self-portrait is a way to learn from him. Painting only in brown and white, you concentrate on value and on the soft and hard edges of light and shadow, as he did in his underpaintings.

## PICTURE STUDY



*Self-Portrait with Two Circles*, Rembrandt van Rijn, about 1665–1669 · Oil on canvas · Kenwood House, London

Image: [Wikimedia Commons](#), public domain

Rembrandt painted this near the end of his life. He shows himself as a working painter, holding his palette and brushes, before a wall with two mysterious circles. Some see them as a sign of perfect skill (an old story says an artist could prove his mastery by drawing a perfect circle freehand); others think they are part of a map.

### Look closely

- Where is the brightest light? Which parts of the face are in shadow?
- Look at the face up close. Is the paint thick or thin there? And in the robe?
- Find the hands and the palette. How much detail is there compared with the face?
- Look at the two circles. Are they finished or left loose?

### Talk about it

1. What does this self-portrait tell you about how Rembrandt saw himself at the end of his life?
2. Why might he leave the hands and palette so roughly painted?
3. How is this portrait different from Holbein's *Thomas More* (Lesson 2.3)?

## STUDIO PROJECT

### A Brunaille Self-Portrait

You will paint a self-portrait from a mirror, lit from one side and above, using only burnt umber and white (and a touch of black), with thin shadows and thicker lights like Rembrandt.

#### You will need

- Canvas panel (9×12 in or 11×14 in)
- Acrylic paints: burnt umber, titanium white, and a little black
- Brushes: flats #6 and #10, filbert #6, round #4
- Palette, water, paper towels
- A mirror propped at eye level and a lamp
- Your Unit 2 portrait notes

#### Steps

1. Set up the mirror so you can see your face without turning your head too far. Light your face from one side and slightly above, with the room otherwise dim. Look for the small triangle of light on your shadow-side cheek.
2. Tone the panel with a thin wash of burnt umber. Let it dry.
3. With thin umber, draw the head shape and the guidelines from Unit 2: center line, eye line halfway down, three divisions of the face. Place the features.
4. Mix five values of brown, from dark umber to a pale umber-and-white. Squint and paint the shadow shape of the face, neck and hair in a thin, dark value.
5. Paint the background, darker on the light side of the face and lighter on the shadow side (this makes the head stand out).
6. Paint the light side of the face with the middle and light values, blending the turning edges. Use slightly thicker paint here.
7. Add the darkest accents (eye sockets, nostrils, between the lips) and the thick, bright highlights on the forehead, nose and cheekbone last.
8. Paint your clothing simply, letting it fade into the background. Sign and date.

### Tips

- Keep the shadows thin and the lights thick; it is the secret of Rembrandt's glow.
- Do not try to paint every hair or eyelash. Paint the big shape of the hair in light and shadow.

### Check your work

- ☐ My portrait has one clear light source, with the shadow side in one connected shape.
- ☐ I used thin paint in the shadows and thicker paint in the lights.
- ☐ The proportions of my face are correct, and the portrait looks like me.

### SKETCHBOOK PRACTICE

1. Make a self-portrait drawing in charcoal, lit from above like Rembrandt, in 20 minutes.
2. Copy a small Rembrandt drawing or etching of a face, using only pen and ink hatching.
3. Write a paragraph comparing a portrait from the Renaissance (Holbein or Raphael) with one by Rembrandt.

**From history.** Rembrandt was wealthy and famous in his thirties, but debt led to bankruptcy in 1656, and he lost his house and his art collection. He kept painting until his death in 1669. His late works, such as this self-portrait and *The Return of the Prodigal Son*, are considered his greatest.

### COMMON MISTAKES

- Thick paint everywhere, so the shadows become heavy and muddy.
- Lighting from the front, which flattens the face.
- Placing the eyes too high (remember: halfway down the head).

**Make it a game • Rembrandt Triangle.** In a dim room, use one lamp to light your parent's face so a small triangle of light shows under the eye on the shadow side. Beat your own time. Then say how Rembrandt used chiaroscuro and thick paint, and how Baroque differs from High Renaissance. Swap places.

## 8.4 VELÁZQUEZ AND VERMEER: PAINTERS OF SPACE AND LIGHT

### OBJECTIVES

- Describe how Velázquez creates space, light and mystery in *Las Meninas*.
- Compare Velázquez's loose brushwork with Vermeer's calm, precise light.
- Make a careful master copy of a detail from a Baroque painting.

**Warm-up.** Look at *Las Meninas* for one full minute. Then close your eyes and list everyone you remember. Open your eyes and count the people (and the dog). How many did you miss?

### WATCH

#### Why is this painting so captivating? - James Earle and Christina Bozsik

TED-Ed • 3:52

<https://www.youtube.com/watch?v=loMy3sbW64g>

### WHEN TO WATCH

After the warm-up and the core ideas, as part of the picture study. Look for the painter, the mirror and the open door at the back.

### BACKUP VIDEO

#### Johannes Vermeer: SECRETS behind 'The Milkmaid' & 'The Love Letter'

Rijksmuseum • 9:58

[https://www.youtube.com/watch?v=X\\_IPJH-TgJc](https://www.youtube.com/watch?v=X_IPJH-TgJc)

Optional: Rijksmuseum scientists show what they learned about how Vermeer planned and painted *The Milkmaid*.

### KEY TERMS

#### **Spanish Golden Age**

The great period of Spanish art and literature, roughly 1500–1680, the time of Velázquez, Zurbarán and Murillo.

#### **court painter**

An artist employed by a king or noble household to paint portraits and decorate palaces.

**master copy**

A careful copy of a great artwork made to learn the master's methods; a traditional part of every artist's training.

**loose brushwork**

Painting with visible, quick strokes that suggest detail rather than describing it exactly; up close it looks rough, from a distance it looks real.

**CORE IDEAS**

Diego Velázquez (1599–1660) was court painter to King Philip IV of Spain. In *Las Meninas* (“The Ladies-in-Waiting”) he shows the young princess Margarita with her maids, attendants, a dog, and Velázquez himself standing at a huge canvas. In a mirror on the back wall we see the faint reflections of the king and queen, who seem to be standing where we stand. The painting draws the viewer into the room.

Velázquez creates deep **space** with almost no lines. The tall room recedes through layers of light and shadow: a lit group in front, a shadowy middle, an open doorway with a figure in bright light at the back. The air itself seems to fill the room, the atmospheric perspective of an interior.

Up close, his brushwork is astonishingly **loose**: the princess's glittering dress and the reflection in the mirror are just a few dabs and strokes. From across the room they turn into silk, hair and glass. Later painters, such as Manet and Sargent, studied this way of suggesting rather than describing.

Johannes Vermeer (1632–1675), working at the same time in Delft, reached a similar goal by a different road. Where Velázquez is quick and bold, Vermeer is slow and precise. His rooms are small and quiet, usually lit by a window on the left, and his paint is smooth, with tiny dots of light on bread, metal and pearls. You studied his *Milkmaid* in Lesson 4.2. Both painters understood that light falling through space, observed with complete honesty, can make an ordinary moment unforgettable.

Making a **master copy** is how painters have always learned from these works. You cannot copy a painting without looking more closely than you ever have before, and every brushstroke you match teaches you a decision the master made.

## PICTURE STUDY



*Las Meninas*, Diego Velázquez, 1656 · Oil on canvas · Museo del Prado, Madrid

Image: [Wikimedia Commons](#), public domain

This large painting shows a moment in the royal palace in Madrid. Velázquez painted himself at work, and the mirror at the back suggests that the king and queen are standing where we are. It has puzzled and delighted viewers for over 350 years.

### Look closely

- Find the brightest figure. Where does the light come from?
- Find the mirror on the back wall. Who is reflected in it?
- Find the painter. What is he looking at?
- Count the layers of space from the dog to the doorway at the back.

### Talk about it

1. Where are you, the viewer, supposed to be standing? How do you know?
2. Why might Velázquez include himself in the painting?
3. Compare the light in this room with the light in Vermeer's *Milkmaid*. How are they alike and different?

## STUDIO PROJECT

### A Master Copy

You will make a careful painted copy of a detail from *Las Meninas* or from a Vermeer painting (for example, the face and bodice of the Milkmaid, or the princess and her maid), using a grid, a limited palette and the methods you learned this year.

#### You will need

- Canvas panel (8×10 in or 9×12 in)
- A good printed copy of the detail, at least 5×7 in
- Ruler and pencil
- Acrylic paints (full palette)
- Brushes: flats, filbert and small rounds
- Palette, water, paper towels

#### Steps

1. Choose a detail that includes a face or figure, some cloth and some background. Print it in color.
2. Draw a grid of 1-inch squares lightly on the print. Draw a grid with the same number of squares, scaled up, on your panel.
3. Copy the big shapes square by square in thin paint or pencil. Check proportions by sighting.
4. Tone the panel to match the master's middle background tone (for Velázquez, a warm gray-brown; for Vermeer, a cool gray).
5. Block in the shadows and the dark background thinly, matching values carefully.
6. Paint the middle values, then the lights, matching colors by mixing a sample and holding it next to the print.
7. Study the master's edges and brushwork. Copy Velázquez's quick strokes with a loaded brush, or Vermeer's smooth gradations and small dots of light.
8. Finish with highlights. On the back, write: "After Velázquez" (or "After Vermeer"), the title, and the date. Sign the back, not the front, as is the

custom with master copies.

#### Tips

- Turn the print and the painting upside down to check shapes; it helps you see shapes instead of things.
- Do not rush. A master copy is a conversation with the painter; listen carefully.

#### Check your work

- ☐ My copy matches the proportions of the original detail.
- ☐ My values and colors match the original closely.
- ☐ I imitated the master's brushwork and edges, and labeled the back "After ...".

#### SKETCHBOOK PRACTICE

1. Make a value study of the whole of *Las Meninas* in four values.
2. Copy the dog from *Las Meninas* in pencil.
3. Make a small color copy of the light falling through Vermeer's window in *The Milkmaid*.

**From history.** *Las Meninas* hung in the king's private rooms and was seen by very few people until the Prado Museum opened in 1819. The painter Luca Giordano called it "the theology of painting," and Édouard Manet, visiting the Prado in 1865, called Velázquez "the painter of painters."

#### COMMON MISTAKES

- Copying from a small or poor-quality reproduction.
- Adding details that are not in the original.
- Painting a master copy too smoothly and losing the master's brushwork.

**Make it a game • Two Painters, One Cup.** Set a cup near a window. Draw it in thirty seconds with loose, quick strokes like Velázquez, then in three minutes with calm precision like Vermeer. Your parent guesses which is which. Then say what a court painter did and what makes *Las Meninas* mysterious. Best contrast wins.

**Scripture.** “whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things.” (Philippians 4:8, KJV)

This year we have spent many hours thinking on true, honest and lovely things through the work of the masters. That habit of attention is a gift to keep for life.

## UNIT 8

# RENAISSANCE AND BAROQUE MASTERS

This unit gathers the whole year together in the company of the greatest painters of the Renaissance (about 1400–1600) and the Baroque (about 1600–1700). You already know their methods from the inside: you have measured like Dürer, drawn drapery like Leonardo’s workshop, studied light like Vermeer and painted in grays like van Eyck. Now you will study four masters more closely and learn from them by the oldest method of all: copying.

Leonardo da Vinci, the restless inventor who filled notebooks with drawings; Raphael, the master of grace and harmony; Rembrandt, the painter of light, shadow and the human soul; and Diego Velázquez, whose *Las Meninas* is perhaps the most studied painting in the world, set beside his Dutch contemporary Johannes Vermeer. Each lesson ends with a master study, and the year ends with a capstone piece made in the manner of one of these masters.

### PREREQUISITES

- The skills of Units 1–7: observation, proportion, color, value and light, materials, perspective and composition
- A sketchbook full of the year’s practice to refer back to

### MASTERY CHECKLIST

- ☐ I can describe the main achievements of Leonardo, Raphael, Rembrandt, Velázquez and Vermeer and recognize a work by each.
- ☐ I can explain the difference between Renaissance harmony and Baroque drama.
- ☐ I can make a careful master copy, using a grid or sighting, and explain what I learned from it.
- ☐ I can make a finished work that uses a method learned from a master.

### LESSONS IN THIS UNIT

#### 8.1 Leonardo: The Last Supper and the Notebooks

2 sessions of 50–60 minutes

#### 8.2 Raphael: Harmony and Grace

2 sessions of 50–60 minutes

## UNIT 8 REVIEW

This final review covers Unit 8 and the year. Answer each question in your own words. You may look at your own sketchbook but not at the lessons. Questions 11 and 12 ask for a few sentences. Total: 100 points.

1. 6 pts

What moment does Leonardo show in *The Last Supper*?

2. 8 pts

Why has *The Last Supper* deteriorated so badly? Use the words fresco and secco.

3. 6 pts

Where is the vanishing point in *The Last Supper*, and why is that important?

4. 8 pts

Name three qualities of Raphael's art.

5. 6 pts

From whom did Raphael learn, and what did he do with the composition of *The Marriage of the Virgin*?

6. 8 pts

How is Baroque art different from High Renaissance art?

7. 8 pts

Describe Rembrandt's way of handling paint in lights and shadows.

8. 6 pts

Who is reflected in the mirror in *Las Meninas*?

9. 6 pts

Why do artists make master copies?

10. **8 pts**

Match each artist to a work you studied this year: Leonardo, Raphael, Rembrandt, Velázquez, Vermeer.

11. **15 pts**

In four or five sentences, compare how Velázquez and Vermeer paint light and space.

12. **16 pts**

Looking back on the year, choose one master you studied and write five or six sentences about what you learned from him and how you used it in your own work.

## ANSWER KEY

1. The moment just after Christ says, “One of you shall betray me,” and the apostles react.
2. Instead of true fresco on wet plaster, Leonardo painted secco, with tempera and oil on dry plaster, so the paint did not bond well and began to flake.
3. At Christ’s head; all the lines lead the eye to Him, making Him the focal point.
4. Any three: harmony, balance, symmetry, clarity, grace, calm, soft modeling.
5. His teacher Perugino; he based it on Perugino’s painting but improved it with a larger temple, deeper space and more natural figures.
6. Baroque art is more dramatic, with stronger light and shadow, more movement and deeper emotion; High Renaissance art is calmer, balanced and harmonious.
7. Thick paint (impasto) in the lights and thin, transparent glazes in the shadows, so the lights come forward and the shadows sink back.
8. The king and queen of Spain, King Philip IV and Queen Mariana.
9. To learn a master’s methods by looking extremely closely and repeating the decisions the master made.
10. For example: Leonardo, *The Last Supper* or *Lady with an Ermine*; Raphael, *The Marriage of the Virgin*; Rembrandt, *Self-Portrait with Two Circles* or *The Return of the Prodigal Son*; Velázquez, *Las Meninas*; Vermeer, *The Milkmaid*.
11. Model: Both painters observe light honestly and use it to create space. Velázquez paints a tall, deep room in layers of light and shadow, with a bright doorway at the back and loose, quick brushstrokes that look real from a distance. Vermeer paints small, quiet rooms lit by a side window, with smooth, precise paint and tiny points of light. Velázquez’s painting is a complex scene with many people; Vermeer usually shows one person in a calm moment. Both make ordinary moments feel important.
12. Answers will vary. A strong answer names a specific master and work, a specific technique or idea (for example, Vermeer’s reflected light, Leonardo’s sfumato, Rembrandt’s thin shadows and thick lights, Constable’s cloud studies, Raphael’s perspective and balance), and a specific project where the student used it, with honest reflection.

## PORTFOLIO PIECE: CAPSTONE: A WORK IN THE MANNER OF A MASTER

Make a finished painting or drawing (11×14 in or larger) of your own subject, a still life, portrait, landscape or story scene, using a method you learned from one of the masters this year: for example, a grisaille underpainting like van Eyck's, Rembrandt's chiaroscuro and thick lights, Vermeer's window light and reflected light, Raphael's perspective and symmetry, or Constable's observed sky. Attach your thumbnails and value study, and write a paragraph on the back naming the master, the method and what you learned. Hang it with your best piece from each unit in a family art show.

| LOOK FOR                       | WHAT IT MEANS                                                                           |
|--------------------------------|-----------------------------------------------------------------------------------------|
| <b>Learning from a master</b>  | The work clearly uses a named method from a master, explained in the written paragraph. |
| <b>Planning</b>                | Thumbnails and a value study are attached and the work follows the plan.                |
| <b>Drawing and composition</b> | Accurate proportion and perspective; a clear focal point and strong design.             |
| <b>Light, value and color</b>  | Consistent light, a full value range and harmonious color (or a controlled monochrome). |
| <b>Craftsmanship</b>           | Careful finish and presentation, signed and dated, ready to hang.                       |