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The Nature of Wood is a three-lesson unit plan designed in conjunction with the Biennial: Wood exhibition at the Gallery at Tempe Center for the Arts.

[Biennial: Wood Exhibition Preview PowerPoint](#)

### Themes

- *Theme in Life:* Ultimately, everything we eat, wear and use in our daily lives was made from natural materials.
- *Theme in Art:* Artists who work with natural materials, like wood, can help us experience the rich variety and unique qualities of materials we might otherwise take for granted.

### Key Questions

Lessons approach the themes through three key questions.



1. What visual elements (color, form, texture, etc.) do artists consider when they select art materials from nature?
2. How can small parts be assembled to create a larger whole?



3. Where do art materials come from? (natural environment)

### Community Connections

In the natural forests of the low deserts of Arizona are hardy smallish trees, like mesquite, palo verde and desert willow. While in the forests in the high country other trees, such as piñon pine, oaks and majestic ponderosa pine, are more common. Often we can spot a river by the cottonwoods growing along its banks. In addition to indigenous trees there are non-native species such as olive trees and eucalyptus. Some plants, we commonly call trees, like palms and Joshua trees, are not trees at all. We plant trees in our neighborhoods to provide shade and to give our lives a touch of nature.

### Lessons

[One: Everything Comes from Nature \(pdf\)](#)

[Two: Exploring the Wonders of Wood at the Tempe Center for the Arts \(pdf\)](#)

[Three: Assembly in Wood \(pdf\)](#)

### Credits

Roger Asay and Rebecca Davis

Shirley Wagner

Martin Moreno

Roy Erickson for thoughtful editing

Lena Hubin and Linda Crain for photographs

**Supplies**

dried small sticks and twigs  
white glue  
newspaper to cover tables

OPTIONAL: corrugated cardboard (scissors or paper cutter)  
popsicle sticks, toothpicks, applicator sticks, mini popsicle sticks

OPTIONAL FOR ADVANCED CONSTRUCTION: Paper cups, small boxes or other forms over which constructions can be assembled

**Estimated Time**

Previsit Lesson = 20-50 minutes

TCA Visit Lesson = Field Trip

Postvisit Lesson = 40-80 minutes for 2D: 120-240 minutes for 3D

**Resources**

[Biennial: Wood Exhibition Preview PowerPoint](#)

[Everything Comes from Nature PowerPoint](#)

[Exploring the Wonders of Wood at the Tempe Center for the Arts \(pdf\)](#)

[Assembly in Wood PowerPoint](#)

[More Assembly in Wood PowerPoint \(Advanced options\)](#)

[Questor Questions about Assembled Wood Artworks \(pdf\)](#)

### Objectives

1. Students are able to list a variety of wooden objects in their school, homes and communities.
2. Students are able to describe the color, shape, texture and grain of wood objects.

### Arizona Visual Arts Standards

EVALUATE: Materials, Tools and Techniques: PO 101: Describe the visual effects created by an artist's use of tools, materials and techniques in an artwork.

EVALUATE: Materials, Tools and Techniques: PO 201 & 201: Explain [analyze] how an artist's use of tools, materials and techniques affect an artwork's meaning, purpose and value.

### Preparation

Preview *Everything Comes from Nature* PowerPoint and look through the *Biennial: Wood* Exhibition Preview. Collect enough interesting objects made of wood so you can distribute at least two objects to however many small groups are convenient for dividing your class. For example, you might collect scraps of lumber, twigs fallen from trees, toys (blocks, Lincoln logs, Tinker toys, etc.), kitchen utensils or tools and/or containers, such as bowls or boxes.

### Resources

[Everything Comes from Nature PowerPoint](#)

Sample (12-24) wooden objects

[Biennial: Wood Exhibition Preview PowerPoint](#)

### Activities

Unit Preview: Introduce the theme in life - "Ultimately, everything we eat, wear and use in our daily lives was made from natural materials" - by asking students to identify something they use, wear or eat that ultimately came from nature, such as a wooden pencil, leather shoes or cornflakes.

Introduce the theme in art - "Artists who work with natural materials, like wood, can help us experience the rich variety and unique qualities of materials we might otherwise take for granted" - by asking students to think of several ways that wood can be different, such as color, shape, texture and grain.

Introduce the key questions students will be working with in the unit:

1. What visual elements (color, shape, texture, etc.) do artists consider when they select art materials from nature? (Lesson Two and Three)
2. How can small parts be assembled to create a larger whole? (Lesson Three)
3. Where do art materials come from? (Lesson One)

Definition and Examples: Present *Everything Comes from Nature* PowerPoint asking students to respond to questions embedded in the presentation as you proceed.

Guided Practice: Divide the class into small groups. Distribute two different wooden objects to each group. Ask each group to:

1. List as many objects made of wood as they can think of in your school, home, neighborhood and/or community.
2. Classify sample wood objects as either more natural or machine-cut in appearance.

3. Compare the color, shape and texture of their objects.
4. As a group, think of some of the most interesting wood objects in your school, home, neighborhood and/or community. Pick one example and share with the class a unique observation about it.

Transfer to TCA: Invite students to visit the Tempe Center for the Arts to see extraordinary artworks made of wood in the Biennial: Wood exhibition. You may wish to present the Biennial: Wood Exhibition Preview PowerPoint to introduce some of the artworks in the exhibition.

### **Vocabulary**

ultimately  
petroleum

### **Extension Activities**

**SCIENCE:** Consider cooperating with another teacher to help students investigate why certain types of trees are natural to specific climate regions (rain forest, temperate forest, high and low desert trees, wet-land trees, tree line on high mountains, etc.)

### **Assessment Checklist**

- \_\_\_\_\_ 1. Students are able to list a variety of wood objects in their school, homes and communities.  
(Group sharing after guided practice.)
  
- \_\_\_\_\_ 2. Students are able to describe the color, shape, texture and grain of wood objects.  
(Group sharing after guided practice.)

## Lesson Two

### Objective

Students are able to compare and contrast distinctive visual elements (shape, color, texture, grain, etc.) of objects made from wood.

### Arizona Visual Arts Standards

EVALUATE: Materials, Tools and Techniques: PO 101: Describe the visual effects created by an artist's use of tools, materials and techniques in an artwork.

EVALUATE: Materials, Tools and Techniques: PO 201 & 201: Explain [Analyze] how an artist's use of tools, materials and techniques affect an artwork's meaning, purpose, and value.

### Preparation

Read and make copies of *Exploring the Wonders of Wood at the Tempe Center for the Arts* worksheet.

Make arrangements for field trip to the TCA.

Before your visit, talk with assigned TCA docent, if possible.

Provide the docent with a copy of *Exploring the Wonders of Wood* worksheet in advance of your trip and discuss the extent to which students might complete any or all of the worksheet at the center or whether any or all of the questions or ideas might be addressed during their tour.

Read optional *Questor Questions about Assembled Wood Artworks* (pdf) and decide whether you might want to use it to follow up after a visit to the *Biennial: Wood* exhibition.

### Resources

[Exploring the Wonders of Wood at the Tempe Center for the Arts](#) (pdf)

[Questor Questions about Assembled Wood Artworks](#) (pdf)

### Activities

Guided Practice: Distribute *Exploring the Wonders of Wood* worksheets to all students and ask them to answer as many questions as they can during the tour. If writing responses on the worksheet is not practical or possible during the tour, use the worksheet to guide students in focused observation as circumstances permit. For example, you might use questions on the worksheet when students assemble or travel to the TCA or when they assemble for or travel back to school.

Take notes on any new information presented by the docent as well as interesting questions, observations or responses made by your students during their tour. If the circumstances of the visit do not allow students to complete their worksheets, explain that later, in class, you will lead a discussion of discoveries they made about special qualities of wood in the exhibition using online *Biennial: Wood Exhibition Preview* PowerPoint. Also take a moment to bring students' attention to the color and grain of the maple wood floor in the Gallery and compare it with the cherry stained wood doors of the Studio and the light oak wood wall outside of the Theater.

### Assessment Checklist

\_\_\_\_\_ Students are able to compare and contrast distinctive visual elements (shape, color, texture, grain, etc.) of objects made from wood.

(Completion of *Exploring the Wonders of Wood* worksheet.)

### Objectives

1. Students are able to explain advantages and disadvantages of natural wood materials vs. machine-cut materials.
2. Students are able to assemble two-dimensional panels that showcase distinctive natural visual qualities of wood. (Beginner level objective.)
3. Students are able to assemble three-dimensional constructions that showcase distinctive natural visual qualities of wood. (Advanced level objective.)

### Arizona Visual Arts Standard

CREATE: Materials, Tools and Techniques: PO 201, 202 & 301: Identify and experiment with materials, tools, and techniques (appropriately and expressively) in his or her own artwork.

### Preparation

Preview *Assembly in Wood* and *More Assembly in Wood* PowerPoints. Based on your assessment of the skills of your students and available class time, decide whether you will ask students to make two-dimensional or three-dimensional constructions or whether you will give students the choice.

Students can complete 2D projects using free twigs, which you or they collect in advance. Practice breaking sticks to discover that dried twigs are more easily broken and can be broken with more precision. You may wish to add machine-cut wood materials, such as popsicle sticks, toothpicks, applicator sticks and/or mini popsicle sticks. (These are not easily broke with precision.)

The *More Assembly in Wood* PowerPoint introduces three ways to construct 3D wood structures. If you choose to give your students the option to build their constructions over forms you will need to collect paper cups, small boxes or other forms over which constructions can be assembled.

Consider preparing students to collaborate in pairs or trios to literally “lend a hand” to assist in holding materials in place for a short time as they dry or as a student places a prop to hold a piece in place until the glue dries. NOTE: Roger Asay and Rebecca Davis collaborate as partners to make their artworks.

### Resources and Supplies

[Assembly in Wood PowerPoint](#)

[More Assembly in Wood PowerPoint](#) (advanced options)

dried small sticks and twigs

white glue

newspaper to cover tables

OPTIONAL: popsicle sticks, toothpicks, applicator sticks, mini popsicle sticks

2D CONSTRUCTION: corrugated cardboard (scissors or paper cutter)

OPTIONAL FOR 3D CONSTRUCTION: Paper cups, small boxes or other forms over which constructions can be assembled

### Activities

Review: Review the theme in life – “Ultimately, everything we eat, wear and use in our daily lives was made from natural materials” – and the theme in art – “Artists who work with natural materials, like wood, can help us experience the rich variety and unique qualities of materials we might otherwise take for granted.” Also

review the unit's three key questions: 1) What visual elements (shape, color, texture, etc.) do artists consider when they select art materials from nature? 2) How can small parts be assembled to create a larger whole? and 3) Where do art materials come from? (natural environment).

Introduction: Display slides 1-14 of *Assembly in Wood* PowerPoint to introduce the distinction between wood materials that come directly from nature and those that are machine cut shapes and textures. Slide 15 shows a sample picture frame that combines natural and machine-cut materials.

Beginner Assignment: Explain to students that they are to demonstrate what they have learned by assembling a wood panel using natural twigs (and also machine-cut wood materials, if they choose), which shows off the color, texture and shape of natural pieces of wood. Slide 15 shows an exemplary wood panel from the *Biennial: Wood* exhibition.

OR

Advanced Assignment: Explain to students that they are to demonstrate what they have learned by assembling a free-standing wood construction using natural twigs (and also machine-cut wood materials, if they choose), which shows off the color, texture and shape of natural pieces of wood.

Step-By-Step-Instructions for 2D Panel: Show remaining *Assembly in Wood* PowerPoint slides to show steps:

Slide 16: materials needed

Slide 17: protection of working surface with primary student sample

Slide 18: sample panels on wood and cardboard backgrounds (one with initials)

Slide 19: breaking sticks to size and trying different arrangements paying attention to natural qualities of individual wood materials

Slide 20: Simple and complex samples of picture frames

OPTIONAL Slide 21: samples of 3D constructions.

Step-By-Step-Instructions for 3D Construction: Show remaining *Assembly in Wood* PowerPoint, see instructions for 2D. Also show *More Assembly in Wood* PowerPoint.

Slides 1-5 distinguish subtractive and additive sculptural processes, culminating with a subtractive work from the *Biennial: Wood* exhibition.

Slide 6 shows sample additive work from the *Biennial: Wood* exhibition.

Slide 7 identifies three 3D construction processes (over a form, cross stack and panels)

Slide 8 shows the use of a form by artists in the exhibition.

Slide 9 shows an everyday example of the use of a form.

Slide 10 shows an elementary student's 3D construction over a paper cup.

Slide 11 shows construction over a yogurt container.

Slide 12 shows everyday examples of cross-stack construction.

Slide 13 shows four steps in building a cross stack.

Slide 14 shows a variety of 2D panels that can be combined with other panels to build a 3D construction.

Slide 15 shows four combinations of the same three panels to make four different constructions.

Slide 16 invites students to choose a process for their own 3D construction.

Collaboration: Ask students to collaborate with one or two classmates at appropriate times as they assemble their 2D or 3D constructions to:

1. Trade twigs to find qualities each student needs and prefers.
2. Lend a hand to hold pieces in place for a short time as glue begins to dry.
3. Try out various arrangements to get feedback from classmates.

Explain that artists Roger Asay and Rebecca Davis collaborate as partners to make their artworks.

Presentation: Display completed wood panels or 3D constructions. Lead a discussion with the following questions:

1. What did you learn about working with wood as you prepared materials and assembled your panel or construction?
2. What qualities of natural wood does your finished work show?
3. (Question for 3D Construction Only) What did you learn about the challenges of making a three-dimensional construction with wood materials?

### **Vocabulary**

machine-cut wood  
assemble, assembly  
construction  
diversity  
uniformity  
arrangement  
vertical  
horizontal

### *For Advanced Project*

additive  
subtractive  
carve  
stump  
form  
cross stack  
joint  
panel

### **Secondary Assessment Guides**

**OBJECTIVE 1:** Students are able to explain advantages and disadvantages of natural wood materials versus machine-cut materials.

**Exceeds Expectations:** During a discussion of *Assembly in Wood PowerPoint* slides 3-11, the student explains the advantages of machine-cut wood in some situations and the advantages of wood taken from nature in others.

**Meets Expectations:** During a discussion of *Assembly in Wood PowerPoint* slides 3-11, the student explains why a machine-cut piece of wood is sometimes better than a piece of wood taken directly from nature OR why a piece of wood taken directly from nature is sometimes better than a machine-cut piece of wood.

**Approaches Expectations:** During a discussion of *Assembly in Wood PowerPoint* slides 3-11, the student points to machine-cut wood pieces as distinct from wood pieces taken more directly from nature.

**Fails to Meet Expectations:** During a discussion of *Assembly in Wood PowerPoint* slides 3-11, the student is unable to distinguish machine-cut wood pieces from wood pieces taken more directly from nature.

**OBJECTIVE 2:** Students are able to assemble two-dimensional panels that showcase distinctive natural visual qualities of wood. (Beginner level objective)

**Exceeds Expectations:** The panel or picture frame is assembled on an all-wood or cardboard background and is enhanced with a visually effective arrangement of a variety of shapes, colors, sizes and/or textures among the natural wood pieces. (The panel or picture frame may incorporate machine-cut wood pieces.)

**Meets Expectations:** The panel or picture frame is assembled on an all-wood or cardboard background and is enhanced with a variety of shapes, colors, sizes and/or textures among the natural wood pieces **or** with interestingly arranged natural wood pieces. (The panel or picture frame may incorporate machine-cut wood pieces.)

**Approaches Expectations:** The panel or picture frame is assembled on an all-wood or cardboard background and some natural wood pieces are attached.

**Fails to Meet Expectations:** Pieces of wood are glued together but do not make a panel **OR** a cardboard panel or picture frame is made without wood attachments.

**OBJECTIVE 3:** Students are able to assemble three-dimensional constructions that showcase distinctive natural visual qualities of wood. (Advanced level objective).

**Exceeds Expectations:** The 3D wood construction made of natural wood pieces stands on its own or over a form and is enhanced with a visually effective arrangement of a variety of shapes, colors, sizes and/or textures of natural wood pieces. (The construction may incorporate machine-cut wood pieces.)

**Meets Expectations:** The 3D wood construction made of natural wood pieces stands on its own or over a form and is enhanced by the addition of a variety of shapes, colors, sizes and/or textures natural wood pieces **or** by interestingly arranged natural wood pieces. (The construction may also incorporate machine-cut wood pieces.)

**Approaches Expectations:** The 3D wood construction is made all or in part with natural wood pieces and stands on its own or over a form.

**Fails to Meet Expectations:** Pieces of wood are glued together but do not create a 3D construction that stands on its own or over a form.