

Artful Thinking: Parts/Purposes/Complexities

The **Artful Thinking** approach encourages active looking and learning through the practice of short, simple thinking routines. These routines help students focus on specific aspects of an artwork and organize their observations and ideas. The repetition of thinking routines across subjects and disciplines supports students in developing not only the skills for inquiry, but also the habits of an inquiring mind.

This lesson helps students build understanding of multidimensional topics, like cultural practices, through a routine called Parts/Purposes/Complexities. Students first identify the parts of an artwork or artifact, and then analyze how each part works and relates to other parts. They also consider ways in which the object, its parts, and its presentation or use are complex, complicated, or puzzling. Recognizing complexity can encourage students to grapple with challenging ideas and guide them toward deeper understanding and insight.

Grade Level

Adaptable for all grades

Common Core Academic State Standards

1. [CCSS.ELA-LITERACY.CCRA.R.1](#)
2. [CCSS.ELA-LITERACY.CCRA.R.5](#)
3. [CCSS.MATH.PRACTICE.MP7](#)

National Visual Arts Standards

- Responding: understanding and evaluating how the arts convey meaning
- Connecting: relating artistic ideas and work with personal meaning and external context

Suggested Art Images

Click on the titles below to view high-resolution photographs on the Museum's website:

- [Armor for Use on Horseback in the Field](#), c. 1505, made by the armorer Matthes Deutsch, and [Horse Armor of Duke Ulrich of Württemberg, for use in the field](#), 1507, made by the armorer Wilhelm von Worms the Elder
- [Chest over Drawers](#), 1803, United States
- [Reception Hall from the Palace of Duke Zhao \(Zhaogongfu\)](#), first half of 17th century, China
- [Reeds and Geese](#), c. 1925, by Kim Jin-Woo



Chest over Drawers, 1803
United States, Pennsylvania German
Poplar, white pine, painted decoration; brass, iron
30 3/4 x 54 1/4 x 22 3/8 in. (78.1 x 137.8 x 56.8 cm)
Gift of Arthur Sussel,
1945-12-1

Lesson Objectives

Students will be able to:

1. Identify and describe the parts of a complex object.
2. Build understanding of a complex object by analyzing how its parts work and relate to one another.
3. Apply their thinking to examples of complexity in their own lives.

Materials Needed

- Screen for projecting images
- White board or chart paper for recording
- Parts/Purposes/Complexities worksheets
- Selected articles from readworks.org: *Chest over Drawers*; *Horse and Man Armors*; *Reception Hall from the Palace of Duke Zhao (Zhaogongfu)*; *Reeds and Geese*

Lesson Process

1. You may use any of the suggested artworks for this lesson. Preview the ReadWorks articles as you prepare to teach. You can create a free educator account [here](#). If you plan to have students read independently, select the artwork or works whose paired text best matches their reading level. Read the Teacher Resource for your selected artwork to learn more (see [Supplementary Materials](#) below).
2. Project an image of your selected artwork for students to see. Explain that they will be looking closely together and making observations. They will learn about an artwork or artifact from a different time and culture and think about all the parts that make up that object. They will also analyze the purpose of the object and its different parts. Finally, they will consider what makes the object complex, complicated, or puzzling.
3. Pass out the Parts/Purposes/Complexities worksheet, and review the directions with students. They will use this to record their thinking. Alternatively, for younger students, draw your own Parts/Purposes/Complexities chart on a board for shared writing. At any grade level, it will be useful to keep a list of questions that come up during your discussion. The things that students wonder about are a good indicator of complexity.
4. Take a few minutes to begin looking and making initial observations. Ask students to describe what they see. Show multiple views of the object whenever possible. What are the different parts of the object? What is it made up of? Begin a list in the Parts column. Record student questions separately as you go.
5. Once the students have named some of the more obvious parts of the artifact, introduce additional information. Have them read the selected ReadWorks article individually or in pairs, or project the article and read it together.
6. After reading, ask students if they can identify any parts of the artifact that they did not notice before. Encourage them to think creatively about different kinds of parts. For example, the knight and the horse are parts of the armor that students might not initially consider.
7. When you have thoroughly described the parts of the artifact together, ask students to begin analyzing purpose. "Purpose" can apply to the object as a whole or to any of its component parts.

Remind students that artifacts can have many different purposes. What is it for? What does it do? How does it work? Encourage students to think of purposes outside the practical or functional, such as communicating values, or looking impressive. Continue to record student questions and wonderings.

8. Now that the class has considered the purpose of the object, both as a whole and in its different dimensions, ask them to identify complexities. Students may brainstorm in pairs or small groups for this part of the lesson. Refer to the list of their questions. Which ones still haven't been answered? What do they still wonder? What is still surprising or confusing? They might also find complexity in the design or construction of an object. Provide some time for pairs or small groups to identify several ways in which the object is complex.
9. Allow time for students to share and reflect on their ideas about complexity. What new insights or questions do they have? What do they see now that they did not see before?
10. Ask students how they might apply this kind of thinking to objects or artifacts in their own lives. How are the things we do and the objects and spaces we use every day equally complex?

Assessment

Ask students to complete a similar analysis of the parts, purposes, and complexities of an object or concept from contemporary culture. A piece of familiar technology (like cell phone or tablet) would be a good bet for students of any age. Older students might even analyze a more abstract concept, like social media.

Suggested Differentiation

- The Parts/Purposes/Complexities routine is infinitely adaptable to any subject or discipline. For younger students, you might use the routine to introduce a new center or area of the classroom. Students in math class can use the routine to analyze fractions or algebraic expressions, while students in a government class might use it to better understand a concept like democracy.
- Students analyzing the *Reception Hall* can supplement their investigation by researching specific objects in the room, such as the *Dog Cage (Goulong)* or the *Moon Crystal*. How do these objects work in the room? What new complexities do they introduce?

Supplementary Materials

Teacher Resources for [Suggested Art Images](#):

- [Chest over Drawers](#)
- [Horse and Man Armors](#)
- [Reception Hall from the Palace of Duke Zhao \(Zhaogongfu\)](#)
- [Reeds and Geese](#)

Parts/Purposes/Complexities Worksheet

Take a few minutes to look closely at a work of art.

<p>What are its <i>parts</i>? Describe the pieces, components, or dimensions of the object.</p>	<p>What are its <i>purposes</i>? Describe how it works, what it does, or what it is for.</p>	<p>What are its <i>complexities</i>? How is it complicated in its parts and purposes, the relationship between the two, or other ways?</p>