

THINKING TOOLS FOR INNOVATORS: PART 1— OBSERVING

Recent research has shown that we can build innovative thinkers by reinforcing a set of thinking tools, including such skills as observing, abstracting, pattern recognition, modeling, and transforming (among others). As these skills can be taught, it makes sense that we can help students become the creative thinkers that we will need in the twenty-first century. This lesson plan is the first in a series that is focused on using art to enrich instruction in these critical skills. The research on which this information is based can be found in many sources, perhaps best summarized in the book *Sparks of Genius: The Thirteen Thinking Tools of the World's Most Creative People* by Robert and Michele Root-Bernstein.



Brillo Boxes, 1964
 Andy Warhol, American
 Screenprint and ink on wood
 Each: 17 x 17 x 14 inches (43.2 x 43.2 x 35.6 cm)
 Acquired with funds contributed by the Committee on Twentieth-Century Art and as a partial gift of the Andy Warhol Foundation for the Visual Arts, Inc., 1994 1994-79-1-3
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- [Three Brillo Boxes](#), 1964, by Andy Warhol
 ARTstor search: Warhol Brillo Boxes
- [At the Moulin Rouge: The Dance](#), 1890, by Henri de Toulouse-Lautrec
 ARTstor search: 1986-26-32
- [Bird in Space](#), 1924, by Constantin Brancusi
 ARTstor search: Bird in Space, Brancusi, Philadelphia
- [Fountain](#), 1950 (replica of 1917 original), by Marcel Duchamp
 ARTstor search: 1998-74-1
- [Red Hills and Bones](#), 1941, by Georgia O'Keeffe
 ARTstor search: 1949-18-109

For more information, please contact Division of Education and Public Programs: School and Teacher Programs by phone at 215-684-7580, by fax at 215-236-4063, or by e-mail at educate@philamuseum.org.

Grade Level

For grades 7–9, adaptable for elementary or high school

Common Core Academic Standards

- [CCSS.ELA-Literacy.W.7.3](#)
- [CCSS.ELA-Literacy.RI.7.1](#)

PA Academic Standards for Art

- 9.3.A: Arts & Humanities– Critical Processes

Art Images Required

Click on the titles below to view high-resolution photographs on the Philadelphia Museum of Art website. Images that are available in the ARTstor Digital Library are indicated by an ID number or search phrase. Entering that number or phrase into the ARTstor search bar will direct you to the corresponding image in that database.

Background

Before we can be creative or innovative, we have to understand—and before we understand, we have to observe. “Observing” in this context is more than looking at something. It involves looking at something until new perspectives reveal themselves. Novelists listen to everyday conversations so that they can create dialog in their fiction that carry the ring of truth. The first step in building a set of innovative thinking tools, therefore, involves a heightened sense of observation. Artist Georgia O’Keeffe recalls when her high school art teacher held up a flower in front of the class and forced them to look at it: “This was the first time I remember examining a flower . . . looking very carefully at details. It was certainly the first time my attention was called to the outline and color of any growing thing.” Artist Jasper Johns also noted the difference between looking and observing: “At a certain point I realized that certain things around me were things that I did not look at, but recognized. And recognized without looking at.” The lesson process below is designed to encourage students to do more than just look or recognize—but instead to learn how to observe.

Lesson Process

1. Display *Brillo Boxes* by Andy Warhol. Ask the class what they see and write their immediate responses. After a few responses, ask the students to silently look some more and make a list of ten things they see. After a period of silent working, ask students for some of the things they wrote and continue the class list begun with their first responses. Discuss the differences between their first responses and their later ones (i.e., did anyone mention design or color choice after a second look?). From this, generate a working definition showing the difference between “seeing” and “observing.”
2. Why would an artist create something like this? Is there a message here? Note that responding to these questions would not be possible without observing.
3. Display *At the Moulin Rouge: The Dance* by Henri de Toulouse-Lautrec. Follow the initial seeing and later observing time as before—however, after spending some time observing, ask the class to tell how the people in this painting are reacting to each other. Try to have your discussion include as many figures in the painting as you can. Ask who in the class knows about the study of body language.
4. NOTE: Karl von Frisch, who received the Nobel Prize in Physiology or Medicine in 1973, learned to recognize and decode the dance language of bees. He notes that his discovery came from time and patience, and adds that he could lie “for hours between the cliffs, motionless, watching living things I could see on and between the slimy green stones just below the surface of the water. I discovered that miraculous worlds may reveal themselves to a patient observer where the casual passer-by sees nothing at all.”
5. Observing also allows us to understand things at a more basic level. Artist Jasper Johns has noted that “Everyday things are easy to see—which makes them harder to observe.” Display *Bird in Space* by Constantin Brancusi. Once again, record the class’ immediate responses to the sculpture. After a period of sustained observing, have the class explain the title Brancusi gave this work. How does observing allow us to see things at a more essential level? What is it that makes a bird a bird?
6. Observing can also apply to other senses. A chef, for example, might “observe” with his taste and smell in much the same way the class has been observing with their sight. Have the class discuss other ways people can use their other senses to observe and understand things more intensely. Observing is, in this regard, a form of thinking—and thinking is a form of observing. Heightened sensory experience is directly related to heightened mental awareness.

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Assessment

1. The composer Igor Stravinsky once wrote that “the true creator may be recognized by his ability to find about him, in the commonest and humblest thing, items worthy of note.” Display *Fountain* by Marcel Duchamp. After a period of observation, write a short paper connecting this work to Stravinsky’s quote. (Since Duchamp’s selection of *Fountain* is controversial, this writing assignment could be arranged as an opinion paper showing how Stravinsky’s quote either applies in this case or does not.)
2. Display *Red Hills and Bones* by Georgia O’Keeffe. Working in pairs, have students explain to each other how this work of art could not have been created just from “seeing,” but must have involved intense “observing.” Refer to details of the painting which would not have been obvious to one who simply “sees.”