



Theme: Creativity and Ingenuity
The Brooklyn Bridge 1929
 Walker Evans 1903-1975

Picturing America

**Lesson Plan Seed:
 Visual Art and Science
 Earth/Space Science**

High School



I See, I Think, I Wonder- Making Connections

<p><u>Fine Arts Content Standard: Visual Art</u></p> <p>Outcome II Historical, Social, and Cultural Context The student will demonstrate an understanding of visual arts as a basic aspect of history and human experiences.</p>	<p><u>Content Standard: Earth/Space Science Science Expectation 1.7</u> The student will show that connections exist both within the various fields of science and among science and other disciplines including mathematics, social studies, language arts, fine arts and technology.</p>
<p><u>Visual Art (Indicator(s)):</u></p> <p>Visual Art II. A The student will propose ways that visual art reflects significant historical, cultural and social issues.</p> <p>Visual Art II.A.1 The student will determine how works of art provide social commentary, document historical events, and reflect the values and beliefs of the society in which they are created.</p>	<p><u>Science Indicator(s):</u></p> <p>Science Indicator 1.7.2 The student will identify and evaluate the impact of scientific ideas and/or advancements in technology on society.</p> <p>Science Indicator 1.7.3 The student will describe the role of science in the development of literature, art, and music.</p> <p>Science Indicator 1.7.6 The student will explain how development of scientific knowledge leads to the creation of new technology and how technological advances allow for additional scientific accomplishments.</p>
<p><u>Visual Art Objective(s):</u> The student will observe and analyze the</p>	<p><u>Science Objective(s):</u> The student will make observations and analyze</p>

Shelley S. Johnson
 Alice Levin

image <i>The Brooklyn Bridge</i> to examine historical context, technological and societal contributions.	information to determine the importance of technological developments to further scientific study.
<u>Objective(s) (Connecting the content areas)</u>	
The student will determine the importance of scientific and technological development in Earth/Space Science and make connections to other disciplines through the analysis of <i>The Brooklyn Bridge</i> .	

Description of Lesson/Activities

The teacher will use the Artful Thinking Routine: *I See, I Think, and I Wonder* to introduce students to the importance of scientific and technological development in the world around us.

Routine with Image

Step 1

I See

Students will write on post-it notes, in a journal or on a graphic organizer, items they see when they observe the image, *The Brooklyn Bridge*, by Walter Evans from the *Picturing America* resource kit. They will have a limited time to write their observations, but must identify at least five things they see in the picture.

I Think

Students will write on post it notes, in a journal or on a graphic organizer what they think the image represents. This is the time they will interpret the image. Again, provide a limited time for student responses.

I Wonder

Students will write on post-it notes, in a journal or on a graphic organizer what questions they have about the image. These questions may range from: *What type of materials did the builder used? Why do the lines or wires appear to cross each other? Where was the person standing who took the photograph?*

Step 2

Students will share out with peers so they can add or revise their graphic organizers to reflect new thinking. The sharing can be done in a variety of ways: pairs, teacher record information on overhead, chart paper, or through technology. All documentation will be saved for continued additions.

Routine with Scientific Concept

Step 3

Students will use the same process, *I See, I Think, I Wonder* with an Earth/Space science selected topic (Step 1 above). Students will use the information they record to begin exploring the selected Earth/Space science concept and use their questions or wonders to delve deeper into the subject. The students' observations, interpretations, and questions will be referenced during the selected Earth/Space scientific study. The students can also add observations and other information as they work on the lesson. In conjunction, the students will also do research into the technology and building of the Brooklyn Bridge.

Shelley S. Johnson
Alice Levin

Step 4

The teacher will have students reference the image, *The Brooklyn Bridge* from the *Picturing America* resource kit a second time. Students will make connections between *The Brooklyn Bridge*'s use of technology and innovations and the specific Earth/Space science topic.

Teachers may select Carousel Sharing as a method for making the connections. This process can be done in small groups rotating to different centers in the classroom. At each "center" will be a smaller image of the bridge as well as a specific fact or understanding about the Earth/Space science topic. Students will be assigned a different colored marker to identify their recorded contributions on the center's recording chart paper. The students will rotate to each center making at least one contribution to the recording chart. At the last center they will discuss what their peers have recorded. The small group will determine the top three main ideas for that center and will share out with the whole group making a connection between the technology of the Brooklyn Bridge and their specific Earth/Space science topic. Students will identify the importance of technology in both cases; the bridge building and the Earth/Space science topic.

Possible Assessment Strategies:

- **Informal Assessment**
 - Student graphic organizers will be checked for responses and completion
 - Charts will be checked for student responses and color coded writing
 - Exit Card: How did *I See, I Think, I Wonder* help me make connections and understand the Earth/Space science lesson?