

Scientific Observations & Photojournalism



Objective: Students will closely observe their environment using digital photography and art. Students will detail their observations, identify, research their subject and incorporate their findings into writing scientific captions and art.

Essential question: How do detailed observations and creative thinking aid scientific research?

Before: Preparation for Project

- Understand that photojournalism is the art of photographic storytelling that documents a particular subject.
- Students should be familiar with the “Big 6 ” (information problem solving process).
- Understand the role observation plays in science research

Observing and Taking Pictures

- **Materials:**
 - Journal
 - Digital Camera
 - Disk reader/ camera cord to download images to laptop
 - Field guide to trees and shrubs indigenous to your area
 - What Tree is That: Arbor Day
 - <http://www.arborday.org/trees/whattree/mobile/index.cfm>
- Show Students examples of how a photojournalist takes picture. Use National Geographic or other such magazines or websites that combine journalism and photography with science-themed articles.
 - National Geographic shows photo slides with captions
 - <http://science.nationalgeographic.com/science>
 - Nature News
 - <http://www.nature.com/news/index.html>
- Students will go outside on campus and chose an arboricultural organism.
- They will take three digital images of their organism (three different perspectives) and record detailed observations about the tree they selected in their journals.
 - The three photographs will include the following three different perspectives:
 - Wide Shot – “The Bigger Picture”.
 - Close up to the point of abstraction.
 - Partial shot of one characteristic taken from a creative perspective or unique angle.

- All images should be downloaded to their laptops.
- Students will research their tree (field guides/books/websites) using the first four steps of the “Big 6”. This information will be important when they begin writing.
 - Task Definition
 - Define the information problem
 - Identify information needed
 - Information Seeking Strategies
 - Determine all possible sources
 - Select the best sources
 - Location and Access
 - Locate sources (intellectually and physically)
 - Find information within sources
 - Use of Information
 - Engage (e.g., read, hear, view, touch)
 - Extract relevant information

Art Activity

- **Materials:**
 - Construction paper
 - Oil pastels
 - Journal
 - Photos
- By adding a visual art element to this unit it allows the students to examine their photos from a creative perspective. It also provides the opportunity for students to visually dissect their photos, record and detail their initial observations.
- Have the students use construction paper and oil pastels to draw their subject from any of the three perspectives.

Writing Activity

- **Materials:**
 - Journal & Research Notes
 - Photos
- Pick a few well-written captions in the magazine you used. Find captions that have a “hook” that draws the reader in. A well-written caption is often written with an artistic hook and followed by scientific fact. Show these pictures to the class, read the captions out aloud and have students discuss the elements of the caption. What kind of vocabulary is used? What did you learn about the picture? What drew you into the caption? Discuss how metaphors are used in these captions.
 - National Geographic shows photo slides with captions
 - <http://science.nationalgeographic.com/science>

- Examples from the Pacific Resources for Education and Learning; Picturing Science Project.
 - www.prel.org/picturingssc#4FFAC2
- Students should have their three photos, along with their journals and notes. On a blank piece of paper the students will brainstorm possible titles for their photo series (~ 5 minutes). Have them use the free form word association technique and encourage them to be creative. After the five minutes they should chose a theme title they like the best.
- Now have students pick one of their three pictures (if each student in the group would like to do a different picture, that will also work well). Use the “Pulling Words from images: Nouns and Verbs and Descriptive Words” worksheets.
- On the “Pulling Words from images: Descriptive Words: Adverbs, Similes, Metaphors and Prepositional Phrases” worksheet, have students write metaphors about their chosen picture. What is their picture like? Encourage them to use to begin their caption. In the middle, they should write in or two sentences stating a scientific fact about their picture. On the bottom third, they should write a closing statement. They can add a few closing sentences if they would like.
- Use the “Pulling Words from Images; Creating you Caption” worksheet to write one or two sentences stating a scientific fact about their picture. On the bottom third, they should write a closing statement. They can add a few closing sentences if they would like.
- By stringing together these sentences, the student will have written his/her ‘caption’. If the students are doing this activity on a computer, have them insert their picture in a blank document and write their caption under it. If the students do not have access to a computer, they can write their caption on paper and paste their picture above.
- Share student’s digital picture and related art with class and place on display with the classroom or on a website.
- Once assignment is completed the last two steps of the “**Big 6**” will be completed.
 - Synthesis
 - Organize from multiple sources
 - Present the information
 - Evaluation
 - Judge the product (effectiveness)
 - Judge the process (efficiency)

Picturing Science

Pulling Words from Images

Maine Objects: Noun, Verbs, and Adjectives



Find a NOUN (one object in your picture) and write it in the box below.	Find 2 or 3 VERBS that describe the noun. Add ING to each verb (verb-ing)
Include 2 ADJECTIVES to describe your NOUN	

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Picturing Science

Pulling Words from Images

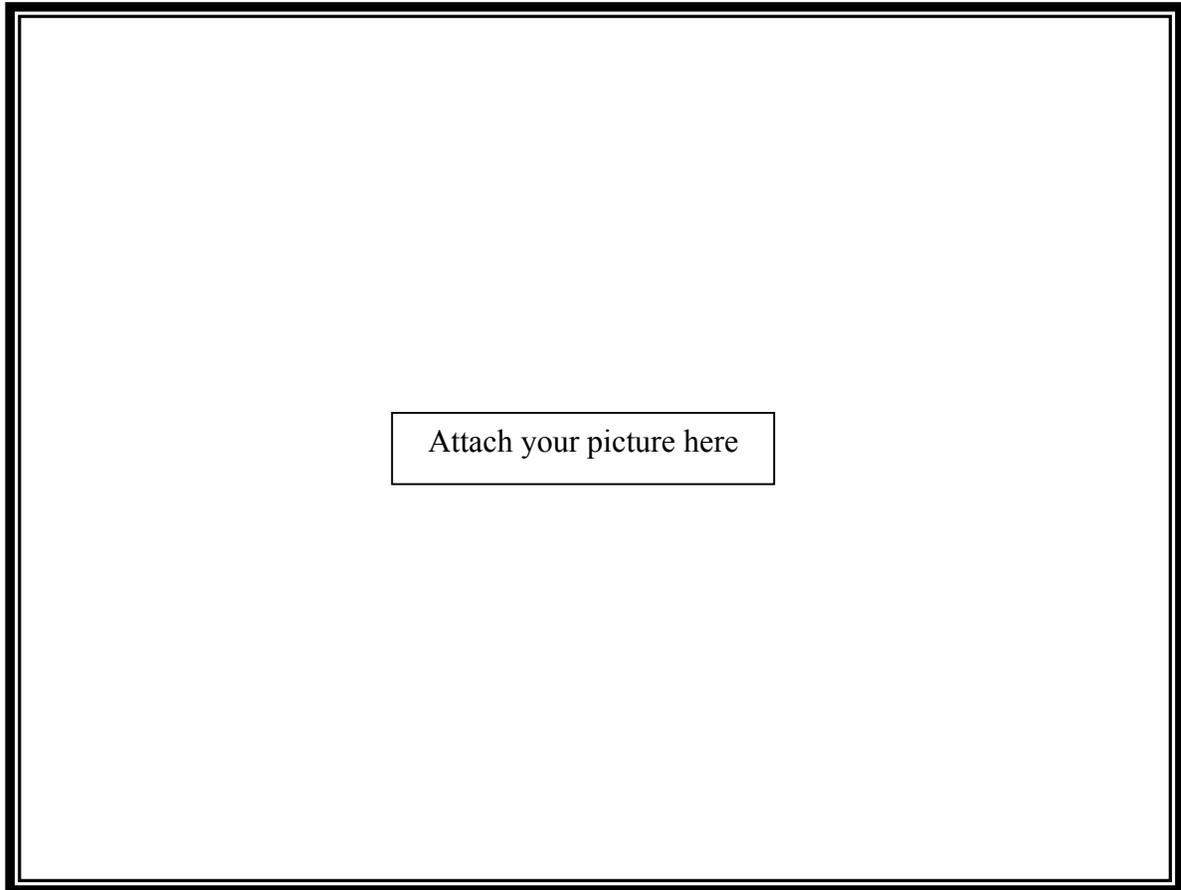
Descriptive Words: adverbs, similes, metaphors and prepositional phrase

Choose one noun and verb combination from the table on the Main Object: Nouns, Verbs Adjectives page and add descriptions by filling in the table below.

Descriptive Question	Example	Pick one NOUN-VERB combination from your table and answer the following questions
How?	Peeking shyly (adverb)	
Where?	From behind her mother (preposition phrase)	
(To/At) Who?	Peeking at the shy boy	
Like What?	Peeking like a blind old woman (simile)	
Why?	Because she was scared to see her	
What?	A scared cat peeking out from behind a closet door (metaphor)	

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Picturing Science



Write about your picture:

Example

Brainstorm for Theme Title





Example

Brainstorm for Theme Title

