

Activity 4 Observing Digital Images and Scientific Inquiry



Integrate the Language Arts curriculum with other disciplines as students use the first steps in scientific inquiry to analyze and make observations. Reinforce good reading strategies while reinforcing scientific concepts – increase achievement in both areas!

Learning Objectives

- Analyze images for research purposes.
- Make observations to build an understanding of the topic.
- Drawing on prior knowledge, make inferences to build an understanding of the topic.
- Create questions drawn from an observation or inference that can be investigated through research.
- Use and evaluate information from a variety of sources to investigate a topic.

Getting Ready

- Determine a topic to explore, e.g. rotation of the sun, water pollution, the water cycle, bird migration, animal growth and adaptation, etc.
- Find pictures and images in several eBooks related to the topic and create a note for each. These will allow you to jump quickly to the images when you display each in the activity.
- Connect your computer or laptop to the whiteboard.
- Reproduce the “Observing Digital Images” worksheet for each student.

eBook Learning Activity

1. Distribute a copy of the “Observing Digital Images” worksheet to each student.
2. Identify the topic for students and tell them you are going to share with them a number of pictures and images related to the topic. Tell them that as you present the series of images, they should independently list in Section A things they observe in the pictures and images. Tell students that what they observe should be factual and only those things they know from what they see.
3. Tell students to record in Section B of the worksheet conclusions they infer from what they have observed. Tell them to be prepared to discuss how they made the inference or conclusion, drawing from prior knowledge and experience.
4. Using the whiteboard, launch one of the eBooks that has the pictures and images related to the topic that you selected ahead of time. Go to the Notes list and click on the note for the picture or image you wish to display first. Continue this process for all of the pictures and images in the selected book, and then proceed the same way with the other eBooks.
5. Have students work in small groups to compare and discuss their lists of what they observed and inferred.
6. Have students indicate in Section C what they want to know.
7. Have each group report their findings and their questions to the whole class. As groups report, list their responses on the whiteboard and note common findings and themes – this is acquired knowledge. Also note questions.
8. Have students group in teams to research a variety of print and online resources to find the answers to their questions. Have them list the resource for each answer.
9. Conduct a whole class discussion, asking students to share information they found in response to their questions, as well as anything else new they learned.

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Additional Ideas and Alternate Grouping Suggestions

- Have students work individually or in small groups. Tell them to check out an eBook from a provided list and analyze the images to record their observations. Have them record a note regarding each observation. Share student responses with the whole class. As a variation on this activity idea, if groups of students are assigned the same book, e.g. two groups are assigned one eBook, two other groups assigned a second eBook, etc., you can compare and contrast observations for each book as groups report. [Reminder – allow time, depending upon how many copies of the eBook title are available. Reminder – one student can read one copy of a title at a given time; other students would need to wait until the copy is checked in before checking it out to read. If your school has purchased multiple copies of the title, more students can read the same book concurrently.]
- Have students observe and record events or processes related to the topic for a set period of time and produce a report on their findings.
- Use a document camera to capture and display additional pictures of the topic being studied; use with a whiteboard to display and label or annotate.
- Have students complete a writing assignment that has them use the information and knowledge acquired in the activity.
- Expand student experiences with scientific inquiry for another topic, broadening their practice with skills of observance, inference, prediction, classification and communication.

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Observing Digital Images

Name: _____

SECTION A

List 5 or more observations you made from viewing the pictures and images.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

SECTION B

From your observations, make 3 or more inferences about what you observed.

- 1.
- 2.
- 3.
- 4.
- 5.

SECTION C

Considering your observations and what you have inferred, list 5 or more questions regarding what you still want to know.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.