

Exploration 1: Looking Closely

GRADE LEVEL 4 - 6th

DURATION Prep time: 20 minutes; Activity time: 60 minutes

SETTING Classroom

In this activity, students experience how artists and scientists use the skill of looking closely to accomplish their work. Students use their observational skills to study natural specimens and create scientific drawings. They then use their imaginations to create hypotheses, based on observed characteristics, of fitting environments for their specimens.

MATERIALS

- Where We Meet journals
- Bugs or snails in jar
- Natural specimens, ideally insects in resin
- Magnifying glasses
- Sharp graphite pencils (drawing quality optional)
- Miscellaneous drawing supplies such as colored pencils, markers, and crayons

PROCESS

1. Introduce the lesson by sharing with students that they will explore how artists and scientists use observation in their work.
2. Distribute the activity sheets for day 1. Through guided instruction, familiarize the students with the format of the journal sheets. Ask students to complete the top section: Date, Location, Weather, Something I Noticed on the Way Here, and My Favorite Word Today.
3. Next, introduce the theme of the lesson.
 - » **Theme: Looking Closely.** The process of examining an object to understand its individual components
4. Provide students with the following information and an opportunity to record their own definitions by using drawings and their own words.
 - » **Vocabulary: Environment.** The conditions—such as climate, elevation, and resources—that surround

someone or something and which affect growth, health, and progress

» **Skill: Observation.** The act of careful watching: the activity of paying close attention to someone or something in order to get information

5. As the students record this information, ask them to predict if the skill of observation is used by artists, scientists, or both. Instruct students to note their prediction.
6. Share with students that many of the skills they are using today are the same skills naturalists use when working in nature.
 - » **Career: Naturalist.** A person who is extremely knowledgeable about the natural world, especially regarding plants and animals. Naturalists often share their knowledge by communicating with the public through lectures and tours.
7. Provide students with time to explain through words, pictures, or examples what they think this job might be like.
8. Model the process of close looking by observing a specimen as a class. What do the students notice about the creature? What details would they include if they were drawing the creature?
9. Distribute specimens for drawing. Ideally each student will have their own specimen, but students may share in groups of two. Inform students that they will have 20 minutes to create detailed drawings of their specimens. You may wish to distribute magnifying glasses to enhance the process of close looking. In creating their drawings, students should spend this time roughly as follows:
 - » 2-3 minutes just studying the specimen, noticing its color, size, and adaptations
 - » 8-10 minutes drawing the specimen in pencil
 - » 5-7 minutes adding color
 - » 2-5 minutes completing the *I notice, I wonder* section of the drawing page
10. After the students have created their drawings, they



Looking Closely

should share what they noticed and wondered about their specimen.

11. Inform students that now that they have closely observed their specimen as naturalists, it is now their job to think about what type of environments their creatures might live in. As a class, brainstorm answers to this question and encourage students to provide evidence based on their specimen observations. For their next drawing, students have a choice: they may draw an environment that they might expect to find in the natural world; or they may draw a fully imagined environment based on the closely observed adaptations of their specimen. Drawing time should be allocated roughly as follows:
 - » 3-5 minutes observing the specimen again and reflecting on what environment it might live in
 - » 10-12 minutes for drawing
 - » 3-5 minutes to complete the *I notice, I wonder* section
12. Before completing the day's lesson, ask students to respond to the reflection prompt: What skills do naturalists use? If you were a naturalist where would you like to spend time outside?
13. Alert students that they will complete the last section of the page during the next lesson and to leave this space blank for the time being.

Drawing Tips:

Specimen Drawing

- Ask students to consider how many different shapes they notice and to look carefully at all the different parts: head, body, and legs.
- Instruct students to observe how each shape connects to the next.
- Ask students to use variations of light and dark lines to capture their observations. Light lines can depict body elements and dark lines can show mass and dimension
- Remind students to closely study the legs of their specimens. How many joints do they have? What kind of lines would they use to show these details?

Environment Drawing

- Tell students to think about the perspective each one is looking at his or her specimen from. Is it zoomed in or zoomed out?
- Remind students to include information in the foreground, middle ground, and background of their environment.
- Challenge students to describe the environment by using multiple textures to represent such elements as the ground and plants.