

How Does the World Look to Some Animals?

Developed by Linda Roberts
Grades 4-8

OBJECTIVES

Students will...

- Gain an understanding of the various types of eyes and how they function
- Discuss how different types of eyes help or hinder the way an animal adapts to its environment

MATERIALS

For Each Student:

- Hand magnifier (**SB18031**)
- Blue plastic wrap (**9722761**)
- Toilet paper tubes or rolled paper
- “Bug Eye” faceted lens kaleidoscope
- Pencil and paper (**9711108 and TB26495**)

For Teacher:

- Chart paper with pictures of the animals in the activity



ACTIVITY

Worm — Tell students to close their eyes. Turn off the room lights. Questions: Can you see any detail? Can you see any colors? Can you detect any movement? While students still have their eyes closed, turn on the room lights. They should notice the change from dark to light. Tell them this is what a worm might see. Allow students to express their observations, followed by a written description on paper.

Fish — Give each student a sheet of blue plastic wrap and a hand lens. Tell the students to close their eyes and hold the hand lens and blue plastic wrap over their eyes. When they open their eyes, they should tell what they see, then write down their observations. Questions: How does this activity differ from the worm activity? Can you see detail or colors? Can you detect movement? Can you see very far away?

Insect — Give each student a “bug eye” faceted lens kaleidoscope. Tell them to look around the room at different objects. Ask them questions about what they see. Is it easy to focus on one object? Can you detect movement while looking through the lens? Can you see colors? Does an insect see the world differently than a fish or worm? Ask them for their observations before they write what they see.

Chameleon — Give each student two paper tubes. Tell them to put one over each eye pointing off to the side. Ask them how many images they see. Tell them to move each tube in different directions. Is it easy to focus on one object? Can you detect movement? Ask the students for their observations before they write what they see.

Falcon — Tell the student to put their two paper tubes next to each other and look through them like a pair of binoculars. What do you see? Is it easy to focus on one object? Can you detect movement? Ask students to describe how this activity is different from the worm, fish, and insect. Ask for observations before they write what they see.

Chart — When the students are finished writing their observations on paper, have them take turns to describe what they observed for each animal. Write simplified descriptions next to each animal.



SEL POWER-UP REFLECTION

Suggested questions for an SEL-focused discussion after you finish your experiments.

GROUP REFLECTION:

1. How do we see differently than the animals in the activity?
2. Do you see differently than other people in the class? Why?
3. What can we do to improve our vision (glasses, magnifiers, microscopes, telescopes, etc.)?
4. Do we always like to use tools to improve our vision? Why?
5. Why is vision important for some animals?
6. How does a person's ability to see affect their life?
7. Does who we are as a person and our experiences influence our understanding of what we see? Why or why not?

SELF-REFLECTION:

1. Was I honest with myself as I worked through these prompts?
2. How did I feel as I worked on this project?
3. What role does science play in my life?



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