Living Things Need Food

Connections to Africa

Grade Levels

Grades 1-3

Engage

This activity is designed to start your students in recognizing themselves as scientists and thinking critically about problem-solving. The goal is to teach concepts through discovery and to encourage using scientific thought processes. As with all lessons provided, please feel free to adapt them according to your students' abilities. Some of your students may be early readers, in which case you may find it more successful to lead activities and discussions as a whole group rather than using individual Research Plan sheets. Certain scientific vocabulary may or may not be appropriate for your students' level of understanding. Take these ideas, make them your own and your students will have a greater chance at success.

Can I identify a situation where elephants and people might have to compete with each other for food?

1. Begin this lesson by telling students that they will be investigating one of the basic needs of all animals, food.
2. If your students are familiar with brainstorming and recording their ideas, break them into small groups. If your students need more guidance, work with them as a large group. Engage your students in a discussion of what they predict the answer to this question to be. More importantly, <u>why</u> do they think this?

Explore

3. Continue with the above discussion and encourage the group to come up with ways that they could investigate the question and test their predictions scientifically (all suggestions are welcomed). What tools might they need to carry out their suggested explorations? Are there materials that would help them find the answer? Should they be making observations? What kinds of records will they need to keep? What will they do with the information once they have it? And how will they know that they've successfully answered the question? Allow a wide variety of ideas and encourage conversation amongst the students to refine the details of their ideas.
4. Ideas should be recorded on the Research Plan sheets. Small groups can record their own answers or you can record ideas as a group.

Explain

5. Explain to the group that you have an activity that might help to give them some insight into the situation.
6. Set up "food tokens" (single color of poker chips included in teacher kit) in two areas of the classroom. These will serve as natural areas where elephants are eating. Choose several of the students to represent elephants eating in this area.
7. In a third area of the classroom, set up an African village farm with "farm food tokens" (differing color of poker chips) representing the farmers crops. Choose a few of the students to be farmers and villagers in this area.
8. With the elephants standing in the first natural area, ask the students to predict what will happen if the elephants start eating here. Have the students representing the elephants act out this behavior.
9. When no food remains in this area, have the students discuss what the elephants should do next. Take all suggestions into account and let the group decide on the best choice. If at any point, they need assistance in this activity, feel free to help, but try to leave the decision making ultimately up to the students.
10. Have the "elephants" move to other areas to find more food. After they eat all the food in the other areas, ask them to discuss what the elephants should do next to find food.
11. When the elephants have reached the African village, ask the students to discuss what they think might happen here. Be sure to get input from all parties: the villager/farmers, the seated members of the class AND the elephants as to what they each think should happen next.

Expand

12. As the students think about the situations that they have just seen through the activity, have them reflect on what happened.
13. Discuss this situation further with the students. Why might this type of elephant vs. human situation be bad for the elephants? How might it be bad for the people?
14. Brainstorm ideas for possible solutions that they may have for this food issue.
15. Feel free to repeat the activity in any number of ways with any number of situations that your students can come up with.

Assess

16. Was the outcome the same as what they had predicted? Was the situation they found in which elephants and people compete for the same food a situation that they had thought of before the activity?
17. If the students are working in small groups, observe their work and review what they are writing on the Research Plan. If working as a whole group, fill in the Research Plan together.

Standards

Ohio Academic Content Standards
Grade 1 Life Science Topic: Basic Needs of Living Things Living things have basic needs, which are met by obtaining materials from the physical environment Living things survive only in environments that meet their needs
Grade 2 Life Science Topic: Interactions within Habitats Living things cause changes on Earth
Grade 3 Earth and Space Science Topic: Earth's Resources Some of Earth's resources are limited

Next Generation Science Standards
Engineering Design K-2-ETS1-1 Ask questions, make observation, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool
Interdependent Relationships in Ecosystems 3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change

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Supplemental Materials

My Research Plan

1. What is my research question?
Is it a good question?

Can I identify a situation where elephants and people might have to compete with each other for food?

2. How can I get my information?

3. What will I do with this information?

4. How will I know I did my job well?