

Organism Classification

Purpose

Students will explain that one of the most general distinctions among organisms is between green plants and animals and will give examples of organisms that cannot be neatly classified as plants or animals.

Materials

For the teacher: chalk; chalkboard; pictures of different animals, green plants, fungi, and bacteria (magnified)

For each student: research materials on the five-kingdom classification system, copy of Black Line Master (BLM) *Organism Classification*

Activity

A. Pre-Activity Preparation

Post the pictures around the room in no particular order.

B. Pre-Activity Discussion

1. Write the headings “Plants” and “Animals” on the chalkboard.
2. Ask students: “What are some differences between plants and animals?”
3. Discuss with students how green plants obtain energy from the sun to make their food, while animals consume energy-rich foods.
4. Tell students that a scientist named Carolus Linnaeus found a way to classify organisms into two major groups: plants and animals.
5. Have students study the pictures posted around the room and work in small groups to classify each organism as a plant or an animal.
6. Have students share their ideas. Ask volunteers to move around the room and choose the pictures that belong under each heading. Have students place the pictures under the appropriate heading on the chalkboard.
7. Ask students: “Are all of the pictures in the room moved under *Plants* or *Animals*? Do you think there should be more than two groups to classify organisms?”
8. Tell students that the Linnaean system has been useful for classifying organisms, but the system was modified because modern scientists decided to classify organisms based on their cell structure and how they get their food.

(continued)

EXTENDING
THE



ACTIVITY

Discuss the protist kingdom with the class. Direct students to look for and show pictures of different kinds of protists.

connecting
across the
curriculum



Social Studies

Have students research the history of the classification of living things, beginning with Aristotle.

Standards Links
6.2.7, 6.4.3, 6.4.6

Activity (continued)

9. Explain that scientists have discovered that many organisms are very different from most animals and plants. Inform students that most scientists agree that there are five major groups of organisms, or kingdoms, but the class will only focus on four of the five kingdoms.
10. Write the headings “Fungi” and “Monera” on the chalkboard. Explain that Monera are single-celled organisms such as bacteria.
11. Have volunteers gather the remaining pictures around the room and place them under the appropriate heading.
12. Have students move any pictures that were improperly placed under the *Plants* or *Animals* headings. For example, some students may have placed mushrooms under the *Plants* heading; explain that plants have a type of chemical called chlorophyll, which allows them to make their own food; fungi do not contain chlorophyll, so they do not make their own food.


C. Research


1. Tell students that they will research to find out the basic cell structure and method of getting food for each of the four kingdoms.
2. Distribute copies of the BLM *Organism Classification* to each student, and have each student conduct research to complete the table on the BLM.
3. Monitor students’ research and clarify terms such as cell wall and nucleus.
4. Allow ample time for students to complete their BLMs.
5. When all students have completed the table, discuss students’ findings and have them explain the differences between plants, animals, fungi, and monera.


Classroom Assessment


Basic Concepts and Processes

Throughout the activity, ask questions such as the following:

 What are the main differences between plants and animals?

 How do you know?

 Why are bacteria and fungi not classified in the plant or animal kingdoms?

 Did you have any trouble classifying an organism as either a plant or animal?

Name: _____

Organism Classification

Directions: Use the research materials in the classroom to fill in the chart below.

Kingdom	Cell Structure	Method of Obtaining Food
Plant		
Animal		
Fungi		
Monera		

Organism Classification

Teacher Directions

Distribute copies of the BLM *Organism Classification* to each student. Have students use the research materials in the room to complete the table.

Answer Key

Kingdom	Cell Structure	Method of Obtaining Food
Plant	Multi-celled, cell walls, nucleus; most have chlorophyll in cells	Most use chlorophyll to make their own food
Animal	Multi-celled, no cell walls, nucleus	Eat food
Fungi	Mostly multi-celled, cell wall, nucleus	Take in food from other organisms; decomposers
Monera	Single-celled, cell wall, no nucleus	Take in food, can make their food