

Environments and Organisms

Teacher Facilitation Notes

In General . . .

- Project the slide deck in edit mode—do not show it as a slideshow.
- Hide the speaker notes before projecting. (View/Show Speaker Notes)
- Hide the toolbar. (Click on the up arrow at the right end of the tool bar.)
- Call on students to read the various content shown on slides.
- For each investigation, assemble the needed materials for each group and place in a central location for ease of distribution.
- Duplicate copies of the data sheets for each student.

Materials Needed Per Student:

Explore: Needs of Organisms

Organisms Have Needs Venn Diagram Pencil

Explore/Explain: Effects of Environments on Animals

Four-fold book template Scissors

Glue or tape Science notebook

Pencil

Explore/Explain: Effects of Environments on Plants

Crayons or colored pencils Pencil

Elaborate

Sheet of notebook paper or duplicating paper

Evaluate

Quiz

Environments and Organisms

Teacher Facilitation Notes, p. 2

Engage: What is an Environment?

- Show the slide introducing the term *environment*. Call on a volunteer to read the question and statement.
- As each environment slide is shown, encourage students to record at least three things they see in each background picture—living or nonliving things.
- After observing the three slides, discuss what the students observed. Ask the following questions, if desired.
 - What are some living things you see in the forest environment (#1)? What else might be in this environment that you cannot see?
 - What are some living things you see in the desert environment (#2)? What else might be in this environment that you cannot see?
 - What are some living things you in the ocean environment (#3)? What else might be in this environment that you cannot see?
 - What do all of these environments have in common?
- After looking at the three photographs, what do you think an environment is?
- Discuss as desired, but be sure that the students understand that environments are all the surroundings in which organisms live.

*The difference between an environment and an ecosystem is that environments are just the surroundings around the organism while ecosystem refers to the interactions between organisms and their environments. There are many ecosystems in any environment.

Explore/Explain: Needs of Organisms

- Ask students what they need in order to stay alive. Brainstorm their needs on the board or a sheet of chart paper. Accept all answers at this point, but then go over them and cross off the things that are really “wants” not “needs.”
- Read the first slide, *Organisms Have Needs*, and ask:
 - Where do you get the water and food that you need in order to live?
 - Where do you think organisms get the things they need to survive?
- Look at the slide about the needs of animals. Point out the definition of an animal. Ask: *What does each animal need to live? Where does the animal get what it needs? How does the animal get what it needs?*
- Read the slide about plants. Point out the definition of plants. Ask: *What does each plant need to live? Where does the plant get what it needs? How does the plant get what it needs?*
- Have students study each environment picture. Discuss how each animal pictured gets the things it needs to survive from its environment.
- Discuss any other environments as desired.
- Have students complete the Venn diagram for the needs of plants and animals.

Environments and Organisms

Teacher Facilitation Notes, p. 3

Explore/Explain: Effects of Environments on Animals

- Call attention to the weather outside by asking the following questions:
 - Is it warm, hot, or cold outside?
 - What is the weather like: sunny, dry, cloudy, rainy, snowy, etc.?
 - If you got up in the morning to come to school on a very hot day, what clothes might you wear?
 - If you got up in the morning to come to school on a very cold day, what clothes might you wear?
 - If it's very cold, we can wear a coat. If it's very hot, we can wear shorts. If it's raining, we can wear raincoat or carry an umbrella. We can change what we wear according to the weather. Can animals change their clothes when the temperature changes or it's raining?
 - What do you think animals do when temperatures change or there is more or less precipitation in their environment?
- Read through and discuss each of the slides about the effects of environments on animals. Ask the following questions, if desired:
 - How does the weather change during different seasons?
 - How do increasing temperatures in the environment affect animals?
 - How do decreasing temperatures in the environment affect animals?
 - What is migration? Why do animals migrate?
 - What is hibernation? Why do animals hibernate?
- Have students complete the four-fold book. Discuss.

NOTE:

This website has an interactive viewer of the migration of monarchs: [All About Monarch Butterfly Migration](#). You may use it, if desired, to show where the monarchs are during the different seasons.

Environments and Organisms

Teacher Facilitation Notes, p. 4

Explore/Explain: Effects of Environments on Plants

- Read through the information and watch the videos about the effects of environments on plants. Ask the following questions, if desired:
 - How do seasonal changes affect some trees?
 - What happens to our lawns in the winter? Why?
 - What is dormancy?
 - How is dormancy like hibernation?
- Have the students complete the data sheet about how an apple tree would look in the four seasons.
- Let volunteers share their pictures with the class. Post in the classroom or a nearby hallway.

Elaborate: Total Recall

- Give each student a sheet of notebook paper or duplicating paper.
- Have the students fold the paper in half and then in half again so that it is divided into four sections.
- Instruct students to follow these directions to show what they learned about environments and organisms.
 - Section 1: List and describe three important words or facts you learned.
 - Section 2: Sketch one or two visuals that illustrate the concepts you learned.
 - Section 3: Connect your new learning to something you learned in the past.
 - Section 4: Draw an emoji representing how you felt while learning about environments and organisms (happy/sad/confused face, thumbs up, etc.)
- Discuss as desired.

Evaluate

- Let students complete the quiz independently.
- Discuss evaluation activities as desired.

Environments and Organisms

Name: Key

Evaluation

1. Why do animals migrate?
 - A** They get tired of living in the same environment all the time.
 - B** Migrating helps the animals survive the winter.
 - C** Animals like to spend time in warmer places.
 - D** Migrating is a way to see new places and new animals.

2. As winter gets closer, temperatures get colder and there is less sunlight during the day. Because of these changes, trees-
 - F** lose their leaves and become dormant
 - G** produce more flowers and more fruit
 - H** get shorter and have more leaves
 - J** grow taller and get thicker branches

3. What is migration?
 - A** A state of deep rest that helps animals survive the winter
 - B** A period of time when a plant stops growing
 - C** The seasonal movement of animals from one place to another
 - D** A living thing that can move on its own and eats food

4. During the cold winter months, some animals go into a deep resting state in order to survive. This resting state is called-
 - F** migration
 - G** hibernation
 - H** camouflage
 - J** dormancy

Environments and Organisms

Name: Key

Evaluation

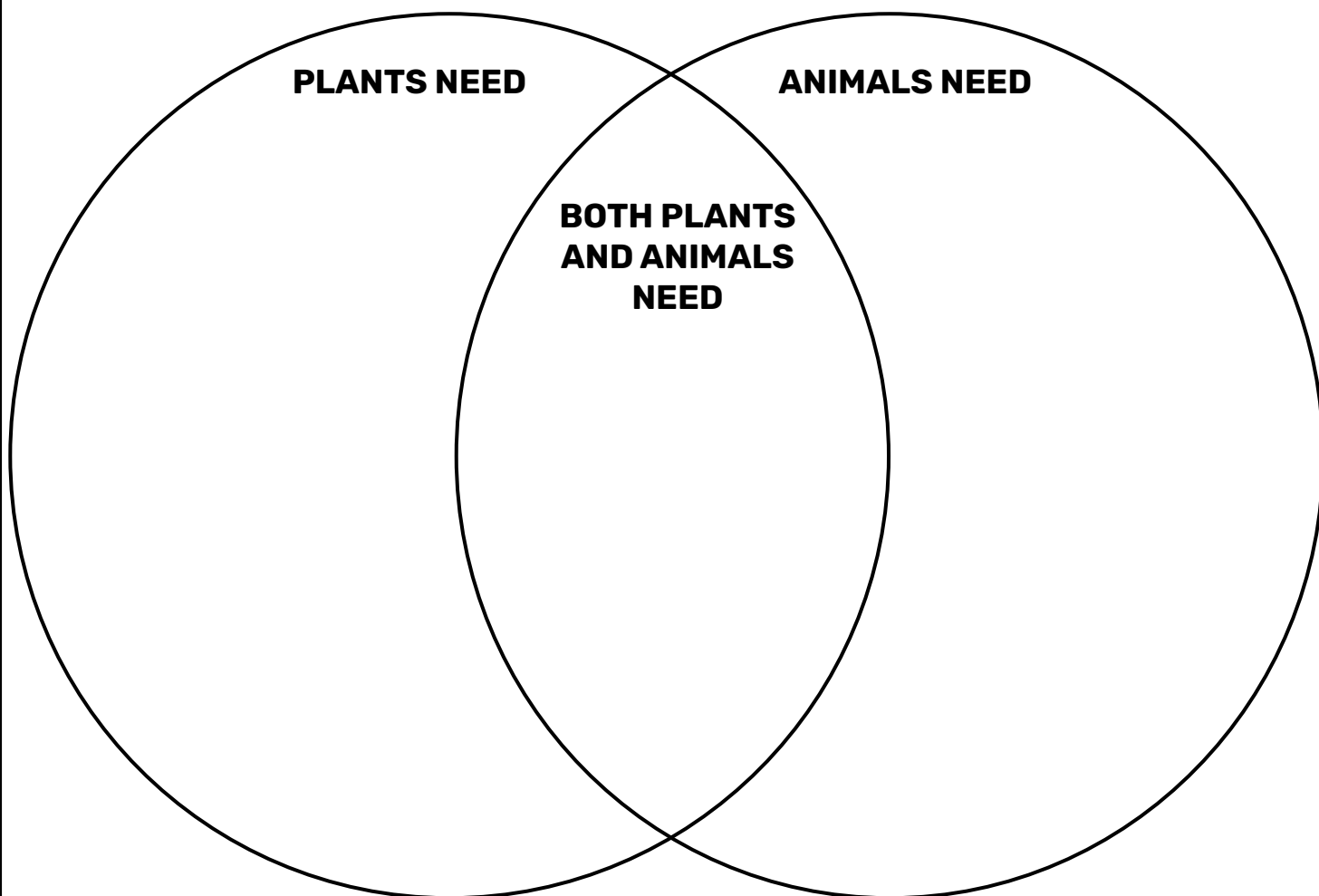
5. When the weather gets colder and there is less precipitation, the grass in your yard may turn brown and look dead. The grass is not really dead, it is just—
- A** survive
 - B** growing
 - C** incubating
 - D** dormant
6. What are three ways plants and animals respond to changes in temperature and precipitation in the environment?
- F** Hibernation, dormancy, and migration
 - G** Growth, survival, and response
 - H** Evaporation, condensation, and precipitation
 - J** Drop leaves, shed fur, and have babies
7. Which of the following is an example of hibernation?
- A** A horse going in a barn when it snows
 - B** A dog going under the bed during a storm
 - C** Monarch butterflies flying south before winter
 - D** A bear sleeping in a cave during the winter
8. Which of the following is an example of migration?
- F** Geese flying south because the weather is getting colder
 - G** A tree losing its leaves because there is less sunlight
 - H** A prairie dog digging a deeper tunnel to keep warm
 - J** A snake shedding its skin when the weather gets hot

Environments and Organisms

Name: _____

Organisms Have Needs Venn Diagram

Directions: Use the terms from the Word Bank to sort the plant and animal needs in the Venn Diagram. You may use a word more than one time.



WORD BANK

Food

Sunlight

Air

Nutrients

Water

Space

Shelter

Environments and Organisms

Name: _____

Explore/Explain: Effects of Environments on Animals

Directions: Follow the directions on the slide to complete this four-fold book about the effects of environments on animals.

Migration

Hibernation

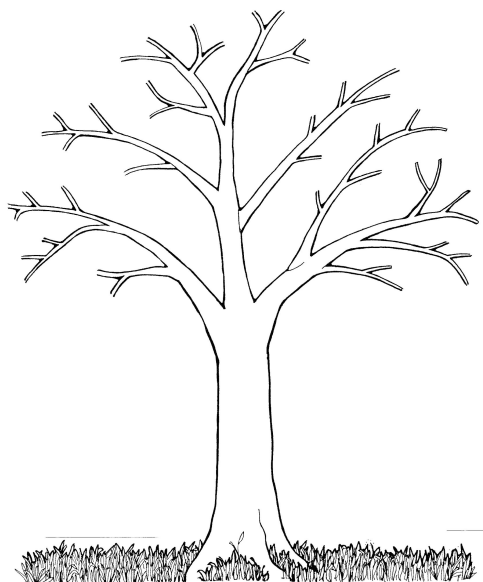
Nocturnal

**Shedding/Changing
Color**

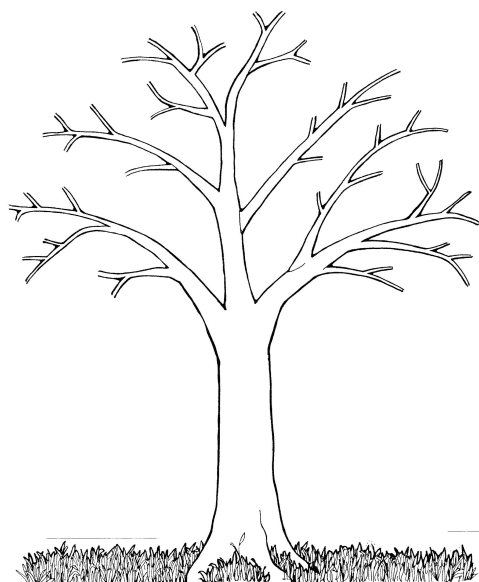
Environments and Organisms

Name: _____

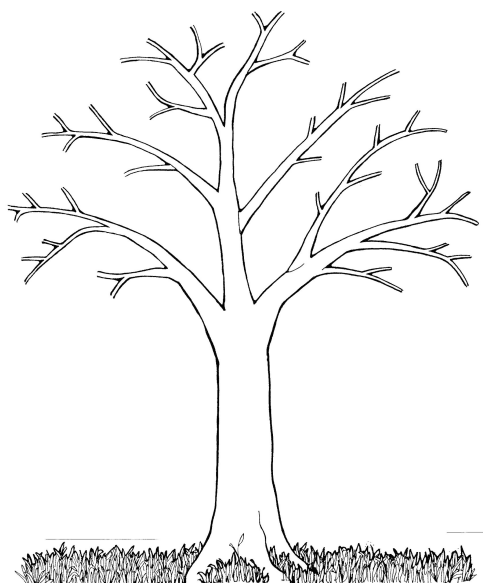
Explore/Explain: Effects of Environments on Plants



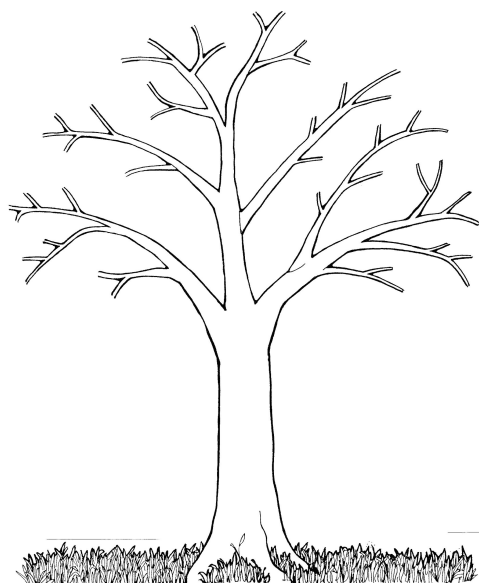
Summer



Fall



Winter



Spring

Environments and Organisms

Name: _____

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Environments and Organisms

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