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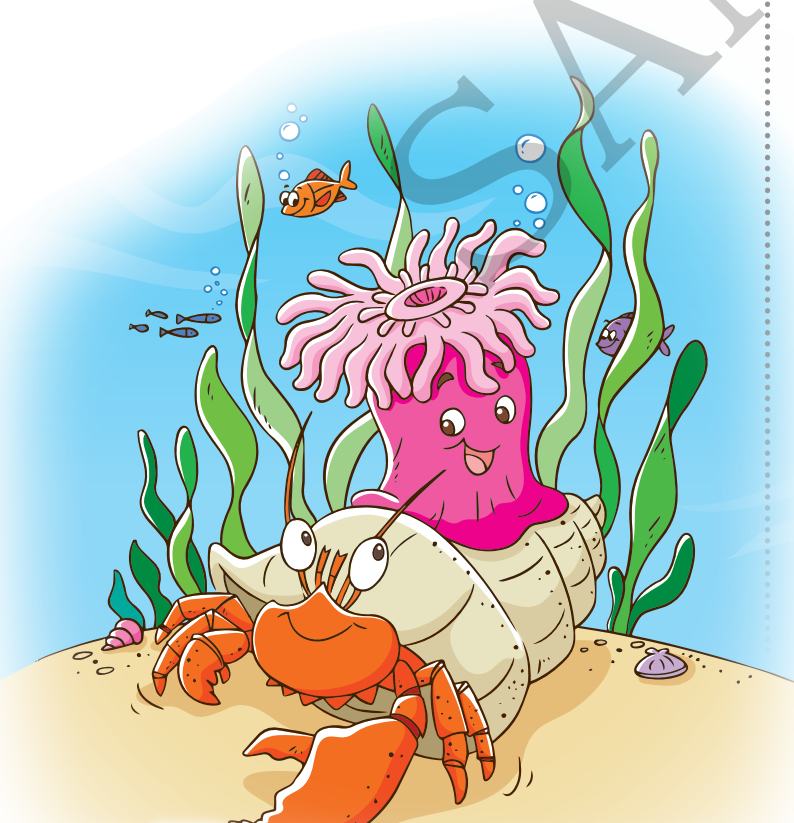
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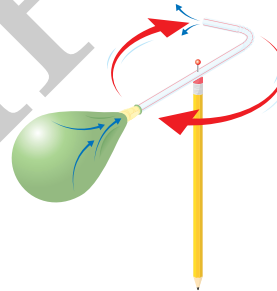
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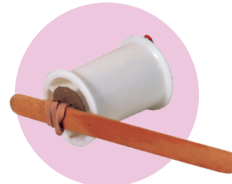
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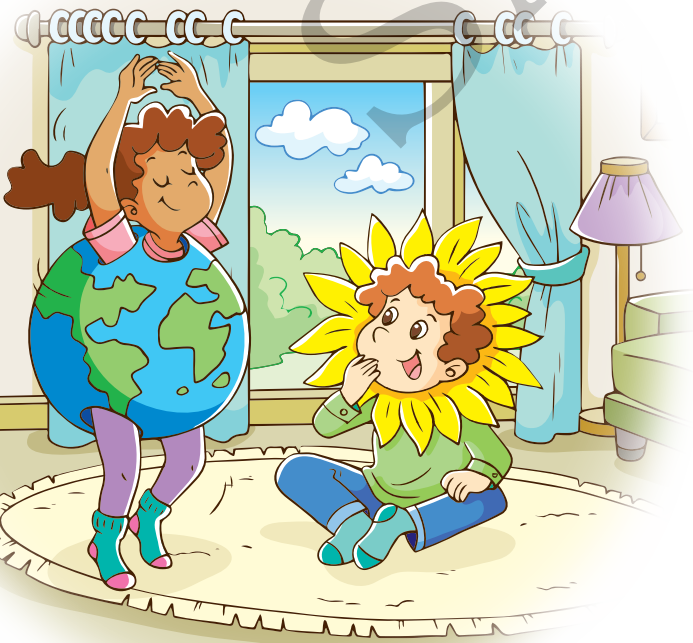
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2 Needs of Living Things

All living things need air, water, food, and warmth to survive. In this unit, you will learn that plants and animals are part of the environment and that living things depend on one another to live and grow.



After completing this unit, you will

- know that all living things have basic needs.
- understand that plants and animals are part of the environment and that they interact with one another.

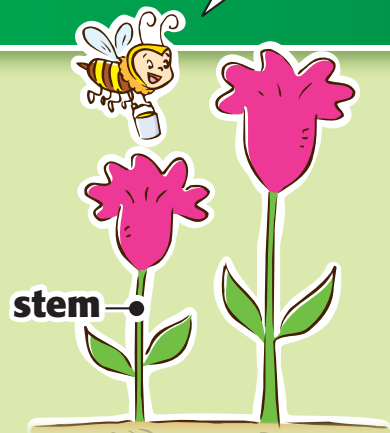
I am helping the flowers spread their pollen.

Vocabulary

stem: like the flagpole of a plant; holds the leaves and flowers above the soil

roots: the anchor of a plant; responsible for absorbing water and nutrients

pollen: the powdery grains of a plant



Extension

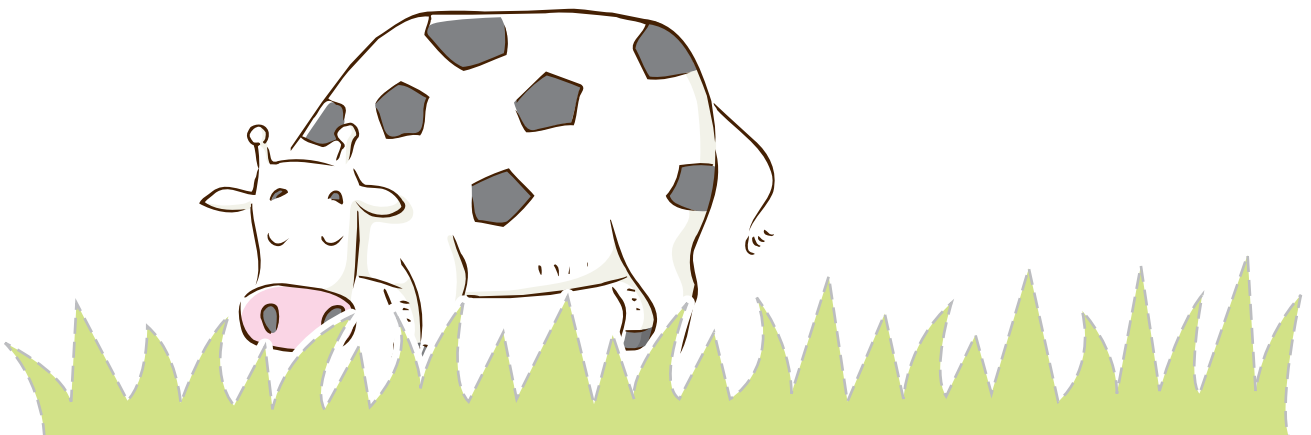
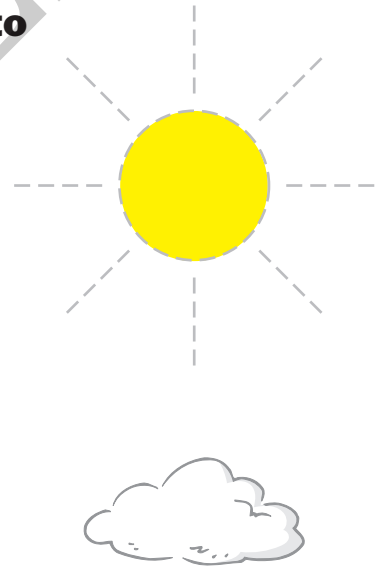
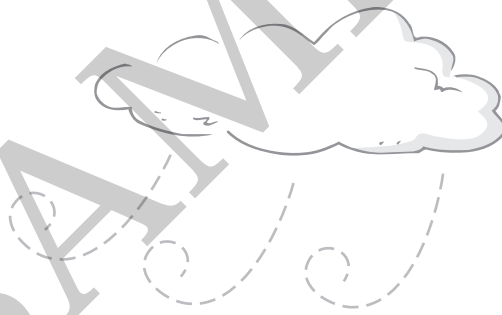
Plants need water to make their food. Water enters a plant through its roots and then travels through tiny tubes in the stem up to its leaves and petals.

Put a white carnation in a bottle filled with water. Add two drops of food coloring to the water. Leave the bottle for a couple of hours. What happens to the flower?



The color change of the petals shows that water travels up the stem.

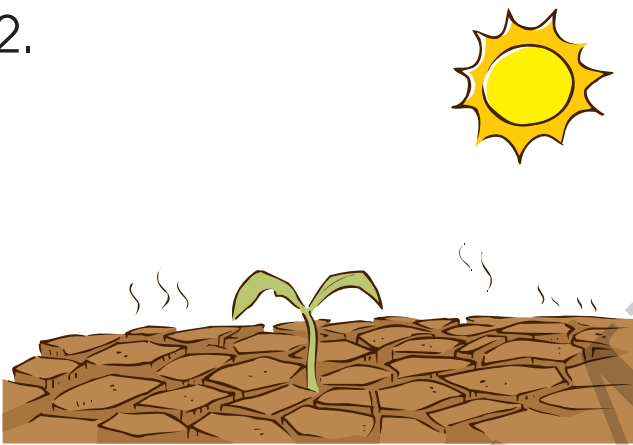
A. Trace the dotted lines and draw raindrops to show the basic needs of the cow.



B. Unscramble the letters to fill in the blanks. Then use the words to describe what the living things in the scenes need.

1. Living things need _____ , _____ ,
_____ ofod _____ , and _____ mrwath .

2.



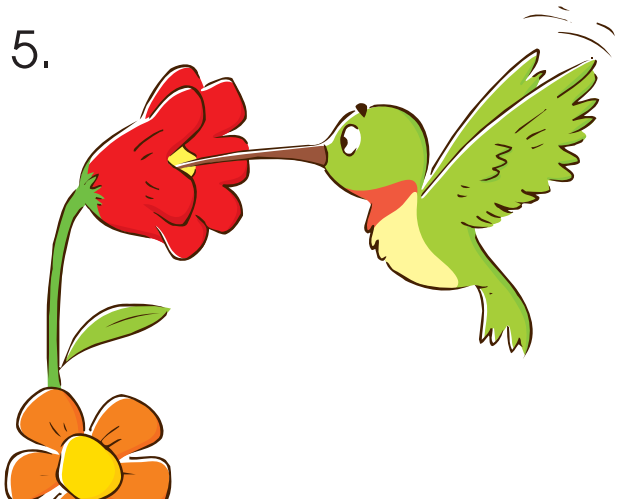
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4.

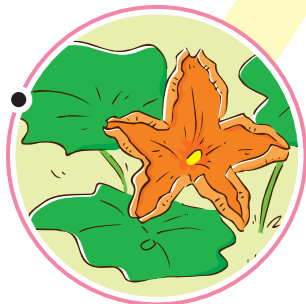
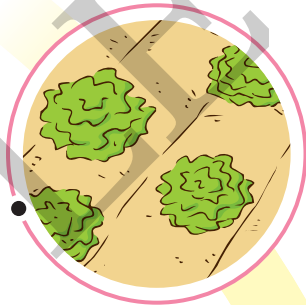
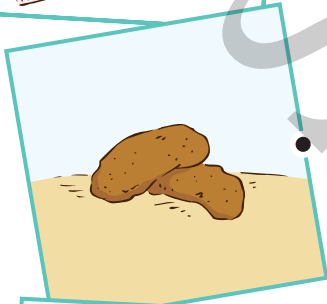
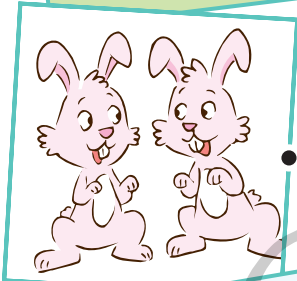
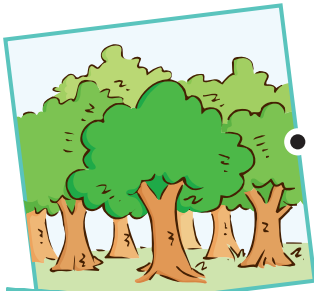


5.



C. Read about how some living things get what they need from other living things. Draw a line to match each living thing with another that gives it what it needs.

- Trees clean the air for animals to breathe.
- Rabbits eat lettuce from the garden.
- Animal dung in the soil helps strawberries grow.
- Bees help flowers spread their pollen to make new plants grow.



MAKE IT RAIN!

understanding how rain is formed

Clouds look like puffs of cotton floating high in the sky, but they are not made of cotton. So what are clouds made of?

Believe it or not, clouds are made of many tiny droplets of water or ice crystals. But where are these tiny droplets from?



What you need:



a zipper bag



a marker



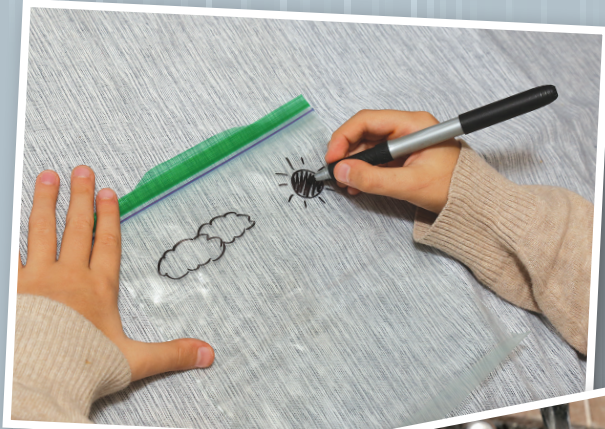
blue food coloring



tape

What to do:

- 1 Draw clouds and the sun near the opening of the zipper bag with the marker.



- 2 Add some water and one drop of the blue food coloring into the bag. Then seal it.

Difficulty:



Time needed:

6 hours – 1 day

In this experiment, you will see how water turns into clouds and then into rain.

- 3 Tape the bag to a window on a sunny day. Leave it for a few hours and observe.

STEM Note

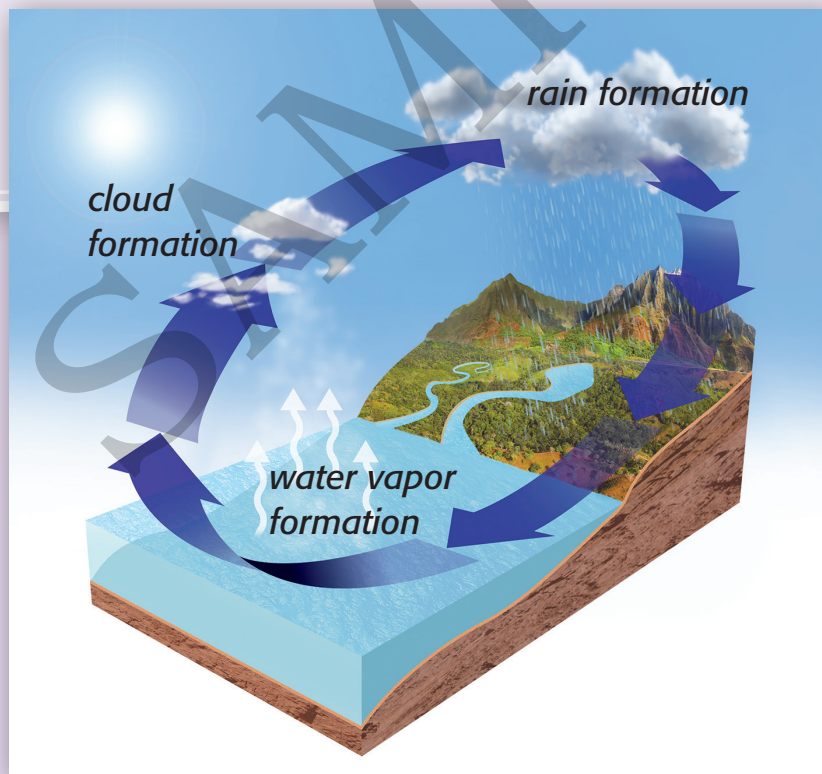
Clouds are classified based on their unique characteristics. There are fluffy clouds called cumulus clouds; smooth and layered clouds called stratus clouds; and wispy, high-altitude clouds called cirrus clouds.



WHAT *just* happened?

After the water in the bag was heated by the sun, it turned into water vapor, which is water in the form of a gas. As more and more water vapor rose, they gathered together to form water droplets on the sides of the bag. When the water droplets got too heavy, they fell down the sides of the bag and back to the pool of water.

In nature, bodies of water get heated by the sun and become water vapor. Cooled water vapor forms clouds. When clouds get too heavy, they fall back to earth as rain. Then the cycle starts all over again.





- In the experiment, you drew clouds and a sun at the top of the bag. What can you label the water collected at the bottom of the bag? (Think: where is water collected on Earth?)
- Why do you think you had to place the bag on a window on a sunny day? What does this tell you about the water cycle?



- For the experiment, can water be replaced with other liquids such as oil and vinegar that you can find in the pantry? Explain.
- In this experiment, you created a model of the water cycle. What other materials can you use to create the model?



- Did the amount of water in the bag change? Explain your answer.
- Draw a simple diagram to show the water cycle. Start by drawing a circle by tracing the bottom of a round object such as a soda can. Use this circle to show the movement of the water in different forms including cloud, rain, and water vapor. Then draw pictures and add labels to complete the diagram.



Sharing Water

The water droplets in clouds can be from anywhere on Earth as water vapor travels. So the rain that falls on you can be water from very far away. Another interesting fact is that water has been on Earth for over four billion years. This means you are drinking the same water that dinosaurs once drank!

