

Plant Life

Academic Content Standards

- Be familiar with the appearance and characteristics of a variety of plants.
- Classify plants into groups according to their similarities and differences.
- Understand that the appearances and life patterns of plants vary according to the plants' habitats.



Name: _____

Student Number: _____

Homeroom: _____



How can you tell different plants apart from each other?



Write and/or draw pictures to show what you already know about this question.



Go into the school's playground. Look at all the different plants that you can find. See what makes them similar and different. Choose three of the plants and make accurate sketches of them. Describe what the plants look like.



Plant	Sketch	Description
1		
2		
3		








Share Your Results.

Discuss your ideas and findings with your classmates. Were there any interesting observations?



Most of the plants you drew would have had roots, a stem, and leaves. Some may have had flowers. Some may not have. There are over 270 thousand different kinds of plants. They can be looked at in groups which are similar in some ways. Look at the chart below.

Flowering Plants	Conifers	Ferns	Algae	Mosses
				
Flowering plants have roots, leaves, and a stem. Their seeds develop from a flower.	Conifers have roots, needle-shaped leaves, and a stem. Their seeds are made in cones.	Ferns have stems, leaves, and roots, but no flowers.	Algae are simple plants with no stems, roots, or leaves.	Mosses have thin leaves but no proper roots. They grow near the ground in damp places.

Even in each group, you will still see lots of differences. Plants have different types of stems. Plants also have different types of leaves. If it was a flowering plant, the flowers might be different colors and shapes. The seeds and fruit of the plants would look different too.

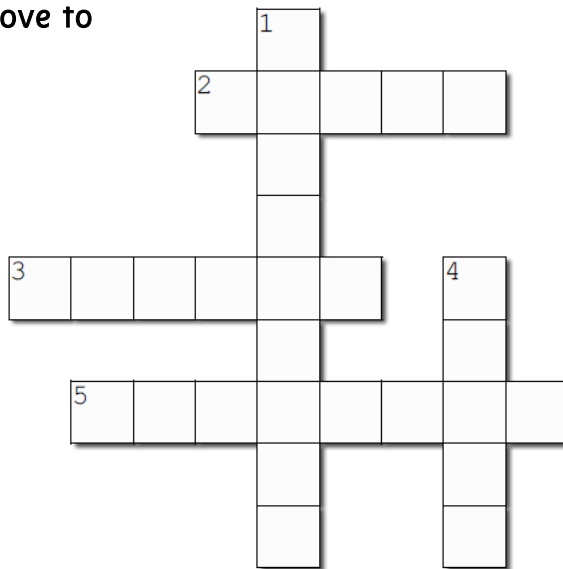
Use the information from above to complete the crossword.

Across

- 2. These plants are found in water. They have no roots, stems, or leaves.
- 3. These plants often grow on rocks and have thin leaves.
- 5. These plants make seeds in cones.

Down

- 1. These are the largest group of plants. They have roots, stems, and leaves, and they make seeds from flowers.
- 4. These plants have roots, stems, and leaves, but they don't have flowers.



How can you tell different plants apart from each other?



How can you group plants by their leaves?



Look at some leaf samples. Write and/or draw pictures to show how you could group different leaves.



Use the leaf classification chart to put your leaves in different groups. What groups will you make?

Then choose three of your leaves. Accurately draw their pictures. Use the information from the leaf classification chart to describe them.



Plant	Picture	Description
1		
2		
3		



Share Your Results.

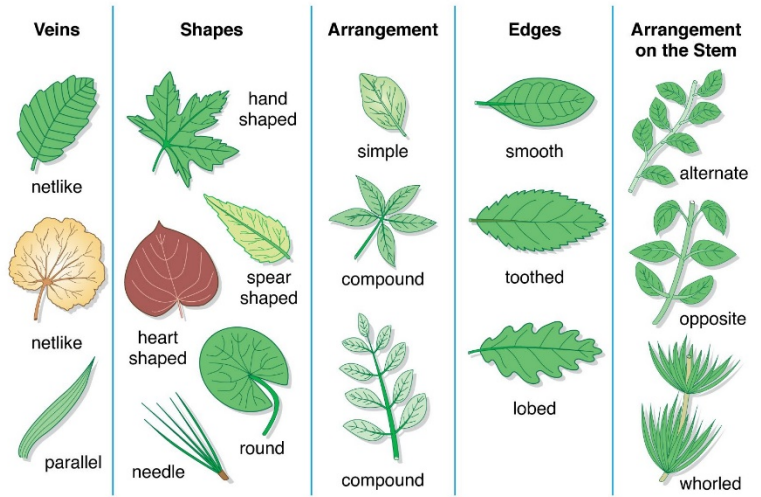
Discuss your ideas and findings with your classmates. Were there any interesting observations?



Most leaves have a wide, flat part called a blade. A leaf that only has one blade is called a simple leaf. A compound leaf has two or more blades.

Leaves have veins that take water and food around the leaves. Wide leaves usually have a netlike pattern of veins. Thin leaves usually have veins that are parallel to each other.

Leaves come in many different shapes. Some look like spears. Others are shaped like needles. The outside or edge of the leaves can also be different. Some might have smooth edges, but other leaves might have tiny points, called teeth. Some leaves might have rounded edges, called lobes.



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Read the clues. Write the plant name under the picture that the clues describe as you find that plant in the maze.

Atlas cedars have bunches of thin, sharp leaves.

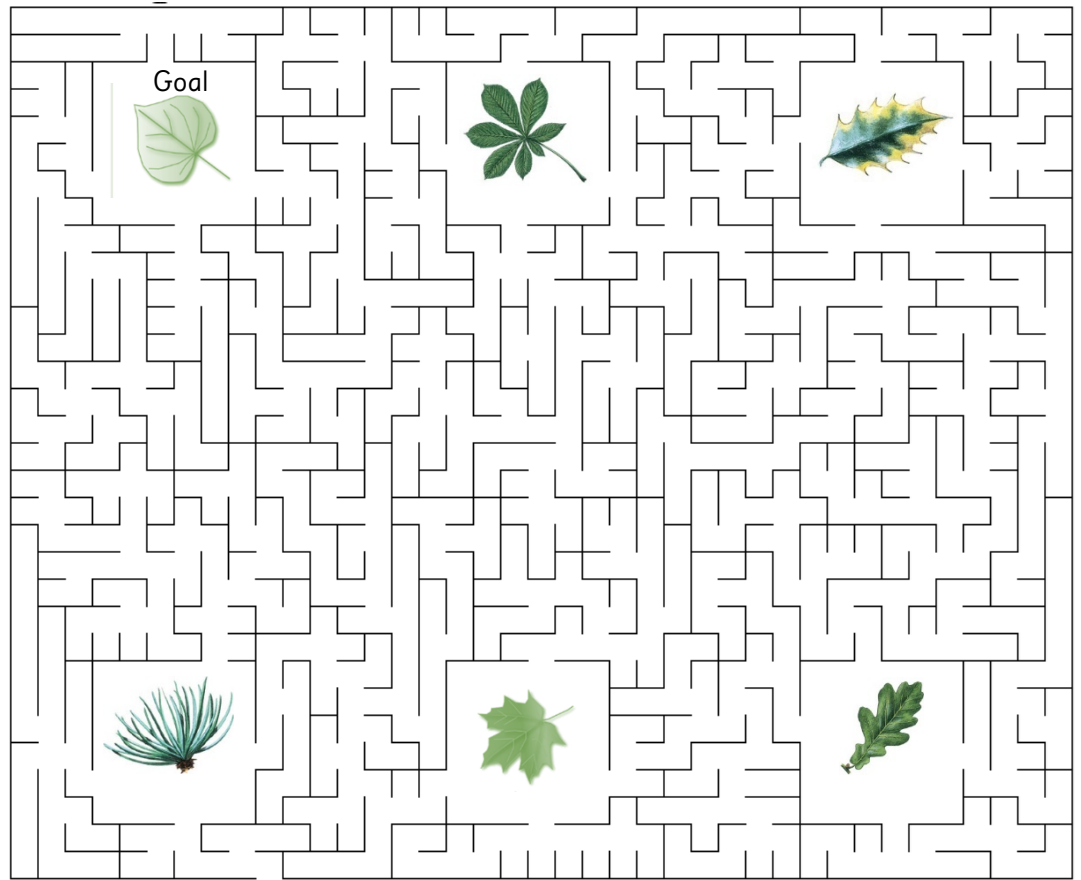
Maple trees have leaves that look like a hand with pointy edges, and the veins are netlike.

Linden trees have leaves that are heart shaped and have netlike veins.

Oak trees have soft leaves with wavy edges.

Horse chestnut trees have compound leaves with seven blades.

Holly has tough, spiky leaves.



How can you group plants by their leaves?





How can plants survive in the desert?



Write and/or draw pictures to show what you already know about this question.



Observe a cactus to try and understand why it can survive in the desert. You may want to try the following things to help with your observations.

1. Shine a flashlight at the cactus and observe what happens.
2. Use tweezers to remove a spine and look at it with a magnifying glass.
3. Gently feel a cactus that doesn't have spines and notice how it feels.



Take notes of what you saw. Draw pictures to help show your observations.



Share Your Results.

Discuss your ideas and findings with your classmates. Were there any interesting observations?



Every plant struggles to survive. Many plants have made some amazing changes that allow them to live in very difficult places. Cacti are a great example of this.

Cacti live in some of the driest places in the world. They live in the desert. Sometimes it doesn't rain for many years. Most deserts are very hot in the day, but cool at night.

The spikes on a cactus are its leaves. They are very thin and pointy. This helps the cactus keep its water more easily. The spines on a cactus also act like an umbrella and protect the stem of the plant from the strong sunshine. The spikes are also great at protecting it from animals that try to eat it.



Barrel cactus before rain.

The stem of the cactus is waxy. This also allows cacti to keep water inside the plant. The barrel cactus soaks up water after it rains so that it looks like a barrel.



Barrel cactus after rain.

The roots on many cacti also grow deep into the ground so that they can find water more easily.

Use the clues to find the words.

- This plant can survive in the desert.
- This is the plural for cactus.
- Cacti live here.
- These are the leaves of a cactus.
- This cactus soaks up lots of water.
- The spikes can ___ the cactus from being eaten.
- The spikes act like an ___ to protect the cactus from the sun.
- A desert doesn't get much of this.
- The stem of a cactus feels like this.
- These grow deep into the ground to find water.

R E R M K J B G Q O E L X U Y C E N T C
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 V S U T C A C G N L O C D A R A X V N S
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How can plants survive in the desert?

Main Ideas – Review Questions






After completing this unit, you should be able to answer these questions. Write your answers in complete sentences.

1) How can you tell different plants apart from each other?

2) How are flowering plants and conifers similar and different?

3) How can you group plants by their leaves?

4) Describe these leaves. You should write about their shape, veins, and edge.

	Leaf	Description (shape, veins, edge)
1		
2		
3		

5) How can plants survive in the desert?
