

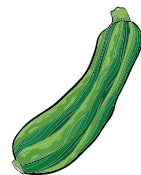


How Does Your Garden Grow?

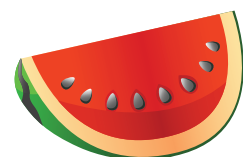
Good gardeners plan their gardens to make sure every plant has all the space it needs. They use math skills to plan their gardens. Use your math skills to help them!

1. Katie and her mom are creating a large garden to sell fruits and vegetables at the local farmers market. They are going to plant 87 watermelon seeds, 122 tomato seeds, 45 zucchini seeds, 216 bell pepper seeds, and 138 green bean seeds. If all of the seeds sprout, how many sprouts will there be?
2. Bobby and his dad are going to plant 1,500 seeds in their garden. On Monday, his dad planted 233 carrot seeds and 136 cabbage seeds. On Tuesday, Bobby planted 142 strawberry seeds and 217 green beans. Who planted the most seeds so far? How many seeds do they have left to plant?

Fence the Garden



1. Draw two possible plans for a vegetable garden for Mr. Smith. He wants the perimeter of the garden to equal 28 meters. Include the measurements for each of your plans.
2. Circle the design you think is best for Mr. Smith's garden. Explain why it is the best.
3. To fence around the perimeter of the garden, Mr. Smith will have to pay \$6 per meter. He only has \$170 to spend on the fence. Will he have enough money to fence around the garden? Show how you solved this problem.



Grow Garden Grow



Home gardens are common in Oklahoma. Many people plant flowers and raise fruits or vegetables. Some families live in the country and plant large gardens. They can grow enough fruits and vegetables to feed their family for several months. Other Oklahoma gardeners live in cities or towns. They only have small yards to plant flower beds or small garden plots.

Some common plants grown in Oklahoma gardens are corn, squash, beans, strawberries, and watermelons. Oklahoma has a long growing season. This allows a wide variety of plants to be grown here. Some plants are planted in the spring and harvested in the summer. Others are harvested in the fall.

Plants that are crowded do not grow well. They rob each other of the space, fertilizer, water, and sun needed for healthy growth. Some plants need more space to grow than others. Pumpkins, cucumbers, and melons need room to sprawl along the ground. Carrots only need a small amount of space and are very easy to grow. Cabbage plants need space left around them

to grow into large heads of cabbage. Some gardeners build trellises and train vining plants, such as beans, to climb in order to save space.

It is important to make sure plants have plenty of water, especially during the hot Oklahoma summers. In the winter, gardeners usually allow the land to rest. This means nothing is planted on it. This allows the soil to prepare for springtime, when the cycle starts again.

A seed holds a plant inside. Most seeds have a built-in food supply. Seeds are rich in carbohydrates, fats, and proteins. This makes seeds a good source of food for people and animals. Farmers must protect the seeds they plant. The seeds can be stolen by raccoons, deer, wild hogs, and birds. These animals will also steal the crops as they grow by eating the fruits and vegetables while they are growing.

Some farmers use a scarecrow to scare these thieves away. Seeds are also important to Oklahoma agriculture. They can be harvested to plant the next year.



Soil, Water, Sunlight, Air

Plants start as seeds. Most often seeds are planted in soil to grow. To germinate, the seed needs soil, water, sunlight, and air. Germinate means the roots and stems begin to come out of the seed. A seed has all of the food that it needs inside its shell. But, as the seed grows into a plant, it gets minerals and moisture from the soil. The sunlight warms the seed. Rain waters the seed. In the hot Oklahoma summers, sometimes a seed must be watered with a garden hose. The plant breathes in the air that people and animals exhale, which is carbon dioxide. Then, the plant turns this air into oxygen.

Draw the four things plants need to live in the boxes.

Plant Life Cycle

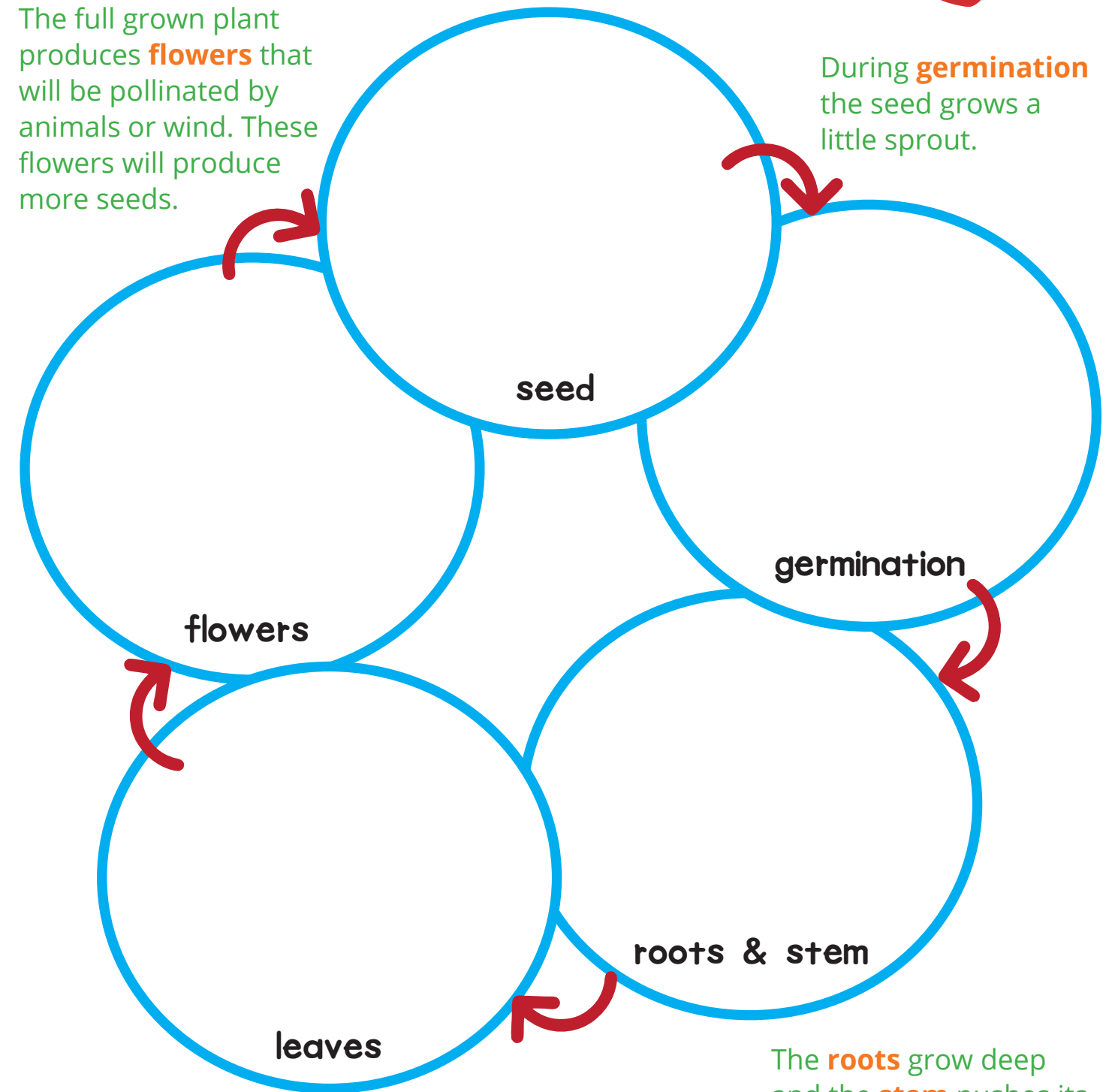
All living things have a **life cycle**. A life cycle is the stages of growth living things go through. Draw a plant life cycle below.



The **seed** gets planted in the soil. It needs sun and water.

The full grown plant produces **flowers** that will be pollinated by animals or wind. These flowers will produce more seeds.

During **germination** the seed grows a little sprout.



The plant grows **leaves** and grows toward the sun. The sun helps it produce food.

The **roots** grow deep and the **stem** pushes its way through the soil.