

Brandon Valley School District

District Learning Plan

April 20-24, 2020

Grade 5 Science



Brandon Valley School District Distance Learning Plan

LESSON/UNIT: Plantastic Review

SUBJECT/GRADE: 5th Science

DATES: April 20-24

What do students need to do? Link to BV instructional video for week of April 20-24, 2020	<p>This week we are going to review plants!</p> <p>Monday: Complete the What Are the Parts of a Plant handout. Read the article and complete the five questions over the reading.</p> <p>Tuesday: Complete the Basic Parts of a Flower handout. Read the article and complete the questions over the reading.</p> <p>Wednesday: Complete the A Tree is Like a Hungry Kid handout. Read the article and complete the questions over the reading.</p> <p>Thursday-Friday: Complete the Plants Activity Choices project! This is a review of parts of a plant, flowers, and photosynthesis. You will CHOOSE ONE of the three choices and complete that activity.</p>
What do students need to bring back to school?	1. Please return your Plants Activity Choices project.
What standards do the lessons cover?	5-LS1-1: Support an argument that plants get the materials they need for growth chiefly from air and water.
What materials do students need? What extra resources can students use?	You will need the following handouts: What Are the Parts of a Plant handout, Basic Parts of a Flower handout, A Tree is Like a Hungry Kid handout, and Plants Activity Choices project.
What can students do if they finish early?	<p>Plants Videos:</p> <p>*http://studyjams.scholastic.com/studyjams/jams/science/plants/photosynthesis.htm</p> <p>*https://www.youtube.com/watch?v=djPVgip_bdU</p> <p>*https://www.youtube.com/watch?v=p3St51F4kE8</p> <p>Mystery Science videos!</p>
Who can we contact if we have questions?	<p>Brandon Valley Intermediate School</p> <p>Principal- Mr. Skibsted- Nick.Skibsted@k12.sd.us</p> <p>Assistant Principal- Mr. Pearson- Rick.Pearson@k12.sd.us</p> <p>Science Teachers:</p> <p>Mrs. Sershen- gina.sershen@k12.sd.us (red team)</p> <p>Mr. Stroh- nick.stroh@k12.sd.us (white team)</p> <p>Mr. Metzger- tyson.metzger@k12.sd.us (blue team)</p> <p>Mr. Wiese- alex.wiese@k12.sd.us (silver team)</p>
Notes: Have a great day!	

Instructional materials are posted below (if applicable)

Brandon Valley School District

What are the parts of a plant?

Plants are extremely important to life on Earth. They grow on mountains, in valleys, in deserts, in fresh and salt water—almost everywhere on the planet. Plants come in all shapes and sizes from the smallest seedling to the towering Giant Sequoias. Not only are plants beautiful to look at, but they also play a vital role in keeping people, animals, and the Earth healthy.

Plants provide food, medicine, shelter, and the oxygen we need to breathe. In fact, everything we eat comes directly or indirectly from plants. Herbivores (plant eaters) and omnivores (animal and plant eaters) depend on plants for survival. Even carnivores (meat eaters) depend on plants because they often prey on animals that eat plants. Plants also provide shelter and habitats for many animals.

Our precious soil also needs plants. When plants die, they decompose and provide topsoil that is rich in nutrients and helps seeds to germinate and grow into seedlings. Plants also help to slow erosion because their roots hold soil in place. When plants carry out photosynthesis, they take in carbon dioxide from the atmosphere and release oxygen for us to breathe.

The basic parts of most land plants are roots, stems, leaves, and flowers. The function of each plant part is described below.

- ❖ **Roots** anchor the plants in the soil and absorb nutrients and water that are needed by the rest of the plant.
- ❖ **Stems** support the upper part of the plant and act as a transport system for nutrients, water, sugar, and starches. Photosynthesis can occur in the stem of some plants such as: cacti, celery, asparagus, and bananas.
- ❖ **Leaves** are the parts of the plant where photosynthesis usually occurs—where food for the plant is made. The green substance, chlorophyll, captures light energy and uses it to convert water and carbon dioxide into plant food and oxygen.
- ❖ **Flowers** are the reproductive part of plants. They often have showy petals and fragrances to attract pollinators such as birds, bees, and other insects. Most flowers have four main parts: petals, stamen (anther and filament), pistil (stigma, style and ovary), and sepals. After flowers are pollinated and fertilized, they produce seeds in the ovary of the flower.

Question Time: Read the above article and answer the questions below.

1. What are several locations that plants grow in the world?
2. What are several ways that humans use and need plants?
3. Explain how carnivores are dependent on plants, even though they eat meat.
4. How does soil need plants?
5. Draw a plant and label the roots, stem, leaves, and flower.

The Basic Parts of a Flower

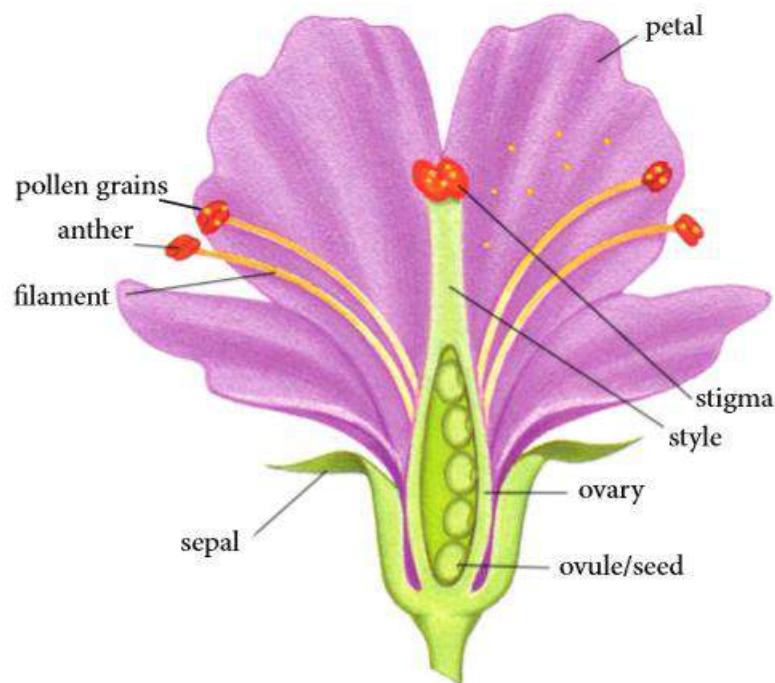
A flower is made up of many different parts. The petals are colorful, often bright part of a flower. These colorful petals attract pollinators, like bees and hummingbirds, and are usually the reason we buy and enjoy flowers. The sepals look like little green leaves at the base of the petals. The sepals protect and enclose the bud before it opens into a developed flower.

Flowers are some of the most important parts of a flower because they are how a plant reproduces. There are male and female parts of a flower. The male part of the flower is the stamen. The stamen is where the pollen is produced. There are two parts of the stamen: the anther and filament. The filament is the part that holds up the anther. The anther holds the pollen, which is moved during pollination by wind, animals, or insects.

The female part of the flower is the pistil. It is made up of the sticky stigma, style, ovary, and ovules (eggs). The stigma is at the top of the pistil, it is often sticky to collect the pollen during pollination. The style is the stalk that the stigma sits on top of, and the ovary is usually at the bottom of the style.

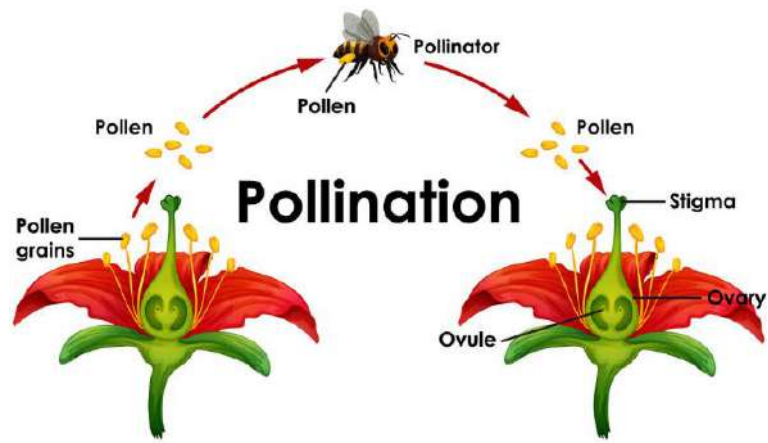
When a plant is pollinated, the pollen lands on the sticky stigma and grows a tube down the style to the ovary. When the pollen reaches the ovary, it fertilizes the ovules. Those ovules then grow into seeds. These seeds then grow into new plants.

Flower Diagram

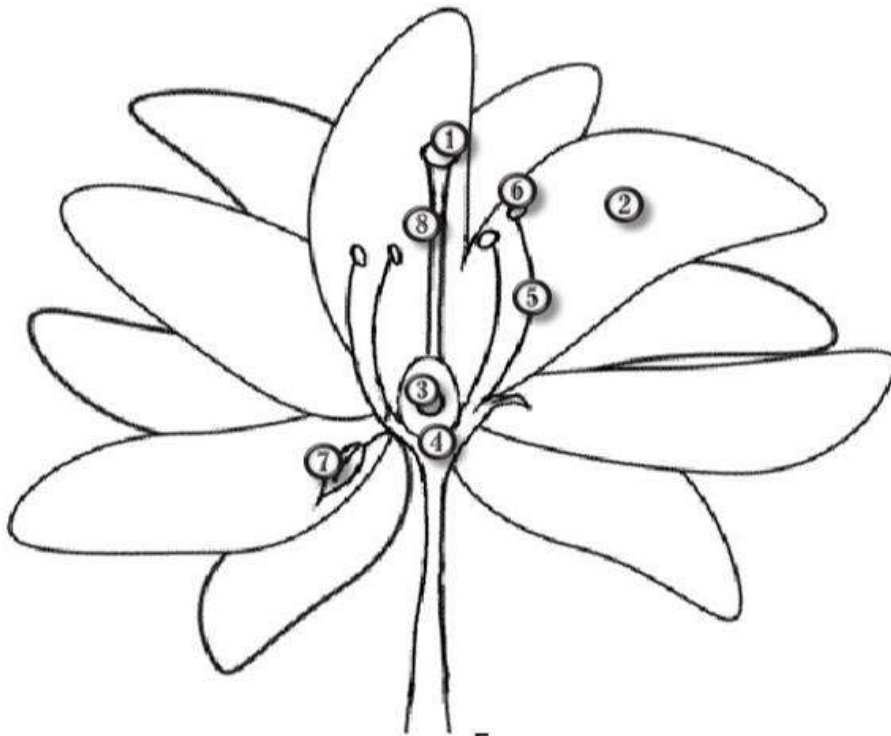


Questions

1. Look at the diagram below and explain how pollination occurs.



2. Reading the information above and study the example flower diagram. Label the parts of the flower below.



- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

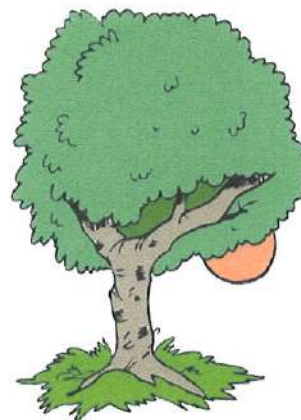
Word Bank: Ovary, Ovules, Sepal, Petal, Stigma, Filament, Style, Anther

Name: _____

A Tree is Like a Hungry Kid

By Mikki Sadil

What do you do when you are hungry? If you're like many people, you probably like something sweet for a snack. A tree is like a hungry kid because it needs food to grow, and it prefers sugar. It's not exactly the same sugar we find in candy and cookies, but it is a special kind called glucose that makes trees grow.



You might be thinking, *How does a tree eat the food (sugar)?* It doesn't even have a mouth! True, trees don't have mouths. They do have roots to take in water and minerals, but they don't really get food through their roots either. Trees make their sugar in their leaves. The sugar is sent from the leaves into the branches, trunk, and even the roots. When a tree "eats," it is moving sugar from the leaves to all its other parts.

When your mom makes cookies, she uses a recipe with certain ingredients. When a tree grows, it uses its own version of a recipe, which is a process called photosynthesis. This process also has to have certain ingredients to work. Do you know what a recipe for photosynthesis would look like?

Recipe Card for Photosynthesis

Makes 1 Batch of Sweet, Delicious Glucose for Trees

Ingredients:

Light energy: comes from the sun.

Water: comes from the soil, gathered by the tree's roots.

Carbon dioxide: comes from the air.

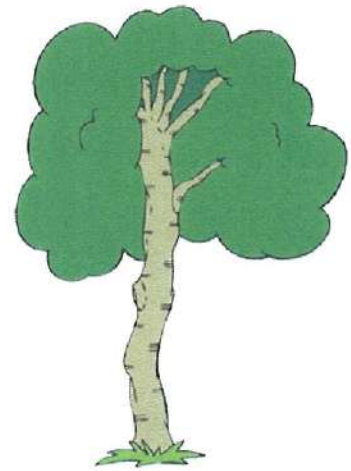
Chlorophyll: comes from the cells of green plants.

Directions:

Mix the chlorophyll, carbon dioxide, and water together. Bring in energy from the sun. Soon, glucose sugar and oxygen will form through a process called PHOTOSYNTHESIS.



Photosynthesis occurs when a tree uses the sunlight and chlorophyll to convert carbon dioxide and water into glucose. The tree needs to eat this glucose to grow, and we know it is eating because the leaves are turning green. It isn't the glucose which turns the leaves green, however, it is the chlorophyll.



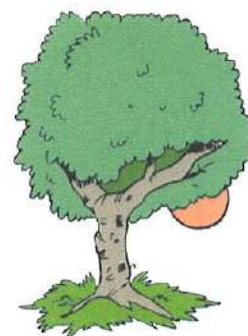
Trees grow the most in the spring and summer, where there is a lot of sunshine every day. When fall begins, the days grow shorter and there is less sun. This alerts the tree to begin getting ready for winter. The leaves begin to turn red, orange, gold, and brown, because with less sunlight and water for photosynthesis, the green chlorophyll begins to disappear.

The leaf colors we see in the autumn have been in the leaves all along, but with so much green chlorophyll, we can't see them until the chlorophyll is gone. As winter begins to approach, the tree uses the food it has stored during the spring and summer, and goes into a rest period. Actually, the tree hibernates...just like bears do! The only difference is that bears lie down in a cave to sleep, and trees lose all their leaves and stand up to sleep.

Name: _____

A Tree is Like a Hungry Kid

By Mikki Sadil



1. What substance does a tree use for food?
 - a. photosynthesis
 - b. chlorophyll
 - c. glucose
 - d. leaves

2. What four things does a tree need for photosynthesis?

3. What causes a tree's leaves to appear green?

4. What signals a tree to prepare for winter?
 - a. The days become colder.
 - b. The weather becomes dry.
 - c. There are more rainy days.
 - d. There are fewer hours of sunlight.

5. How does a tree get water?
 - a. It makes water in its leaves.
 - b. It turns glucose into water.
 - c. It absorbs water through its roots.
 - d. It uses photosynthesis.

6. Why do a tree's leaves change color in the fall?
 - a. The tree has less chlorophyll.
 - b. The tree has less water.
 - c. The tree has no leaves.
 - d. The tree is growing quickly before the winter sets in.

PLANTS ACTIVITY CHOICES

★This week we have reviewed and learned about the parts of a plant, photosynthesis, and flowers. Now it's time for a sweet activity! There are three choices below. **You need to choose one of the activities below to complete.**

Plant Parts Activity	Photosynthesis Drawing/Diagram	Pollination and Flower Fun
<p>★This activity is all about plant parts. Start by reviewing the article “What are the Parts of a Plant?”</p> <ol style="list-style-type: none"> 1. You are going to imagine you were on a hunt through the jungle and have just discovered the most amazing plant. It is new and totally different than any other plant you have ever seen. 2. Draw this amazing discovery and label the parts of the plant: roots, stem, leaves, and flower. 3. Next to each part of the plant, give a one job or function of that part. 4. Color and beautify the plant so we can see it! 	<p>★Let's practice with photosynthesis! ~In the article “A Tree is Like a Hungry Kid” you read about photosynthesis. Refer back to that article and diagram to help you. 😊</p> <p>~In this activity, you will be drawing your own diagram or drawing that shows the process of photosynthesis. 1. In your drawing you need to label the vocabulary words: Water, carbon dioxide, sun, chlorophyll, glucose/sugar, and oxygen.</p> <p>2. You must also tell how photosynthesis is important to animals and humans.</p>	<p>★In this activity you will be showing how pollination occurs in a flower! ~Review the <u>Basic Parts of a Flower</u> handout before completing this activity.</p> <ol style="list-style-type: none"> 1. Draw a picture of flower, and label the all of the parts: petal, sepal, anther, filament, stigma, style, ovary, and ovules. It can be similar to examples in the Basic Parts of the Flower handouts. 2. Draw a pollinator (bee/hummingbird), it should show the pollen being transferred from the anther to the stigma. 3. Explain what happens during pollination.