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Let's Learn About *Plants*

Grades PreK–4th



Name:_____

Learn About Plants

Plants are living things that cover most of the land on our planet Earth. We can see plants everywhere. Different types of plants include grass, trees, flowers, bushes, ferns, mosses, and more. Plants are members of the kingdom Plantae.

Here are some basic characteristics that make a living organism a plant:

- Most plants make their food through a process called photosynthesis
- Plants have a cuticle meaning they have a waxy layer on their surface that protects them and keeps them from drying out.
- They have eukaryotic cells with rigid cell walls.

1. What covers most of planet earth?

2. What are the different types of plants?

3. How do plants make their food?

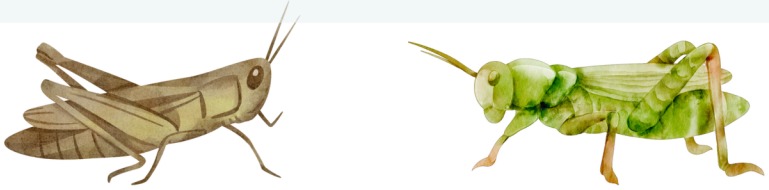
4. Plants are members of what kingdon?

5. What protects the surface of plants and keeps them from drying out?



Name:_____

Learn About Plant Destroyers



There are different kinds of plant diseases and plant pests that can destroy or stop the growth of plants. Insects carry fungi and bacterial diseases from plant to plant.

Some insects even eat plants. Certain grasshopper and biting insects strip the plant of its leaves that kills the plant. The potato beetle carries the potato rot. The most destructive kind of insects are the scale insects, mealy bugs, plant lice and leaf hoppers. They consume the sap of the plant tissues that causes the withering of the plant itself.

1. What can destroy or stop the growth of the plants ?

2. What organism carries disease from one plant to another?

3. How do grasshopper harm the plants?

4. What happens to the plant when harmed by the grasshoppers?

5. What kind of insects are considered as the most destructive?

Name:_____

PLANTS AS *homes*

Take a walk around your school. Using your eyes only, discover how plants are used by animals as homes. Record your observations:

Plant part:	Animal:

Draw a picture below of a forest, and label how animals use it as a home:



Besides for shelter, how else do animals use plants to survive?

_____

_____

_____

Name:_____

PLANTS AS *medicine*

Many plants are used across the globe for medicinal purposes. Consult reliable sources to research what the following plants were used for:



GARLIC:

_____

_____

_____



ECHINACEA:

_____

_____

_____



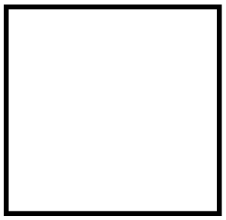
LAVENDER:

_____

_____

_____

Draw and describe an additional plant used for medicinal purposes:



_____

_____

_____

_____

Name:_____

PLANTS AS food

In two (2) minutes, brainstorm plants that are edible for humans:



Choose one of the plants above, and describe how and where it is grown:

_____

_____

_____

_____

Different parts of a plant may be edible. Write examples for each part:

Roots	**Stems**	**Leaves**
Eg. potato	*Eg. celery*	*Eg. spinach*
Flowers	**Fruits**	**Seeds**
Eg. pansy	*Eg. apple*	*Eg. sunflower seeds*

Name:_____

Learn About Soil



Soil is made up of four different things. They are rocks, humus, air, and water. Rocks are often broken up by wind, water, and changing temperatures causing them to become very small. These tiny pieces of rock form a part of soil.

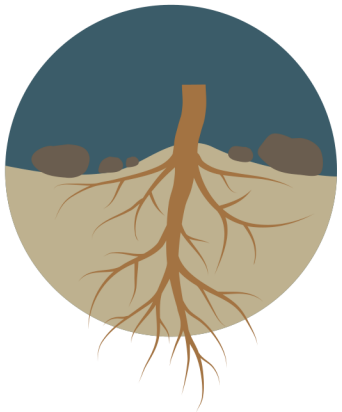
The best soil for growing plants is soil that has a lot of humus, water, and air. A good type of soil for growing plants would be soil found in forests and farms.

Humus is the part of soil made up of dead plants and animals. It is often found near the surface of the ground. Some soils are rich in humus and some are not. Air and water live in the spaces in soil. Worms squirm through soil creating holes and spaces for air and water to move. If soil has no spaces for air and water it won't be as good for growing.



There are rock pieces often found in soil. The three main kinds are sand, silt, and clay. Sand is loose and does not hold water well. Silt holds water, but it is very light and can be blown away easily. Clay holds water, but it is heavy and may not be the best for growing. A mixture of all three types of rock is called loam and provides the type of nutrients plants need. Loam would be the best rock mixture found in soil for growing.

Many animals live in soil. Insects lay their eggs in soil, and many small creatures live on the top of the soil eating the dead pieces of plants and animals. Larger creatures like groundhogs and badgers also make their homes in soil by burrowing deep tunnels.



Sometimes soil can lose its shape through a process called erosion. Problems are caused when soil breaks down due to time, water, and wind. Soil can often be saved from erosion when there are many tree roots in it. Roots from trees work to hold soil together.

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Name:_____

Questions About Soil

1. The four parts of soil are:

- _____
- _____
- _____
- _____

2. Humus is:

_____

_____

_____

_____

3. Explain who lives in soil and what they do:

_____

_____

_____

4. Explain the type of rocks you find in soil?

_____

_____

5. What prevents erosion from happening?

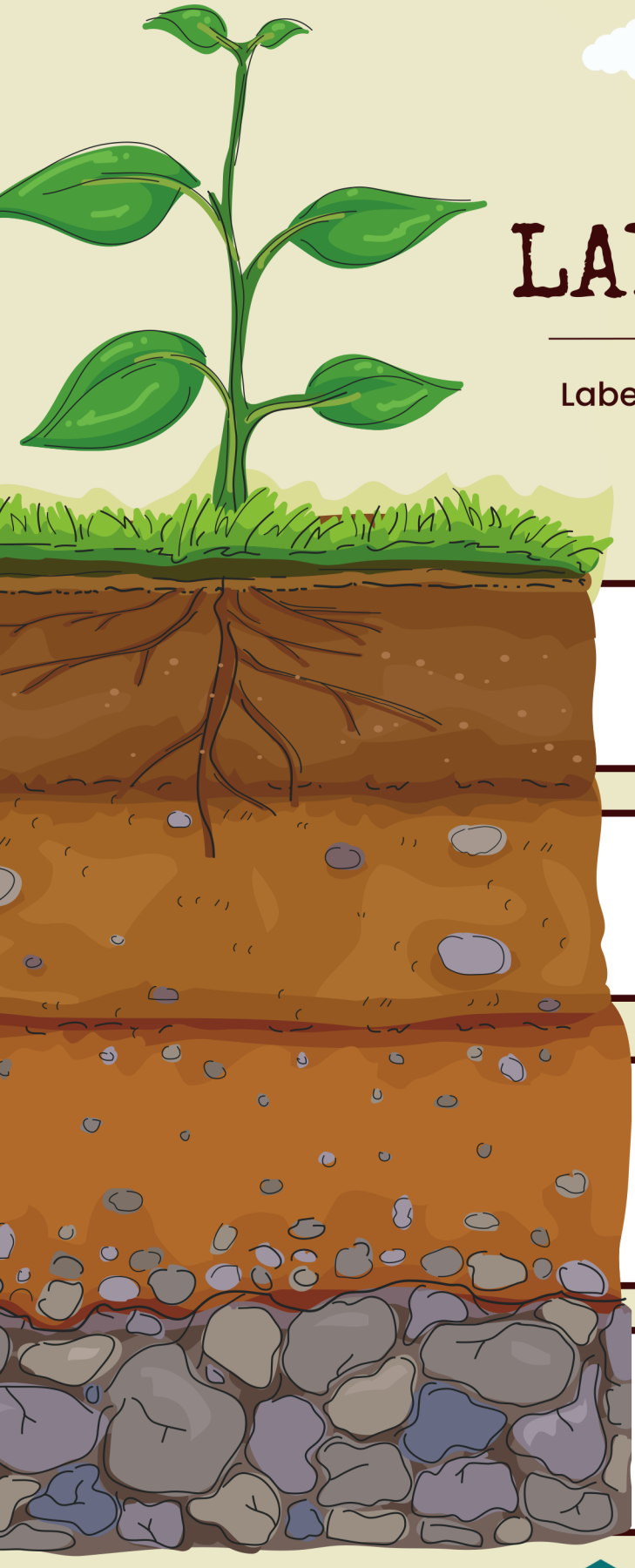
_____

_____

Name: _____

LAYERS OF SOIL

Label the layers of soil and describe them.



Name:_____

Learn About the Sun

The Sun is a giant, hot ball of glowing gas in the sky and it's really important for life on Earth. Let's learn some cool facts about it!

The Sun is our closest star. Even though it appears nearby, the sun is actually about 93 million miles (150 million kilometers) away from Earth.

The Sun is enormous, so big that more than a million Earths could fit inside it! And it's really hot, much hotter than anything on Earth. The Sun's surface is about 10,000 degrees Fahrenheit (5,500 degrees Celsius).

Besides being hot and big, the Sun gives us light and warmth. It makes day and night happen by coming up in the morning and going down in the evening. This helps plants grow and keeps life going.

Surprisingly, the Sun isn't solid like Earth. It's made of hot, swirling gases (mainly hydrogen and helium) and scientists call this "plasma." This makes the Sun different from the solid planets in our solar system.

Now, let's check what you've learned. Answer the following questions.

1. What is the Sun?

_____

2. How far is it from Earth?

_____

3. What's its size and temperature?

_____

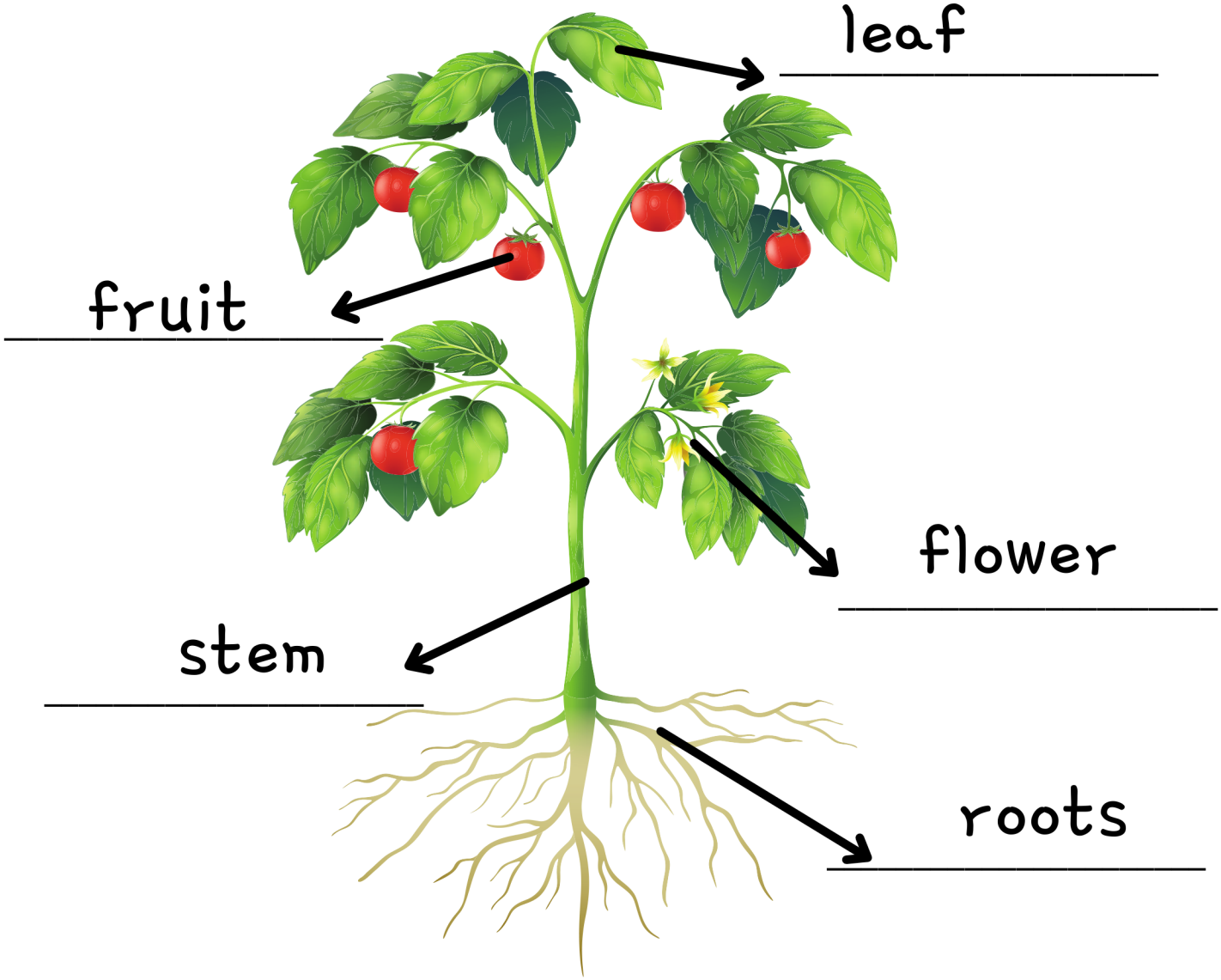
4. Why is the Sun important to us?

_____

5. What is the composition of the Sun?

_____

Let's Learn Plant Parts



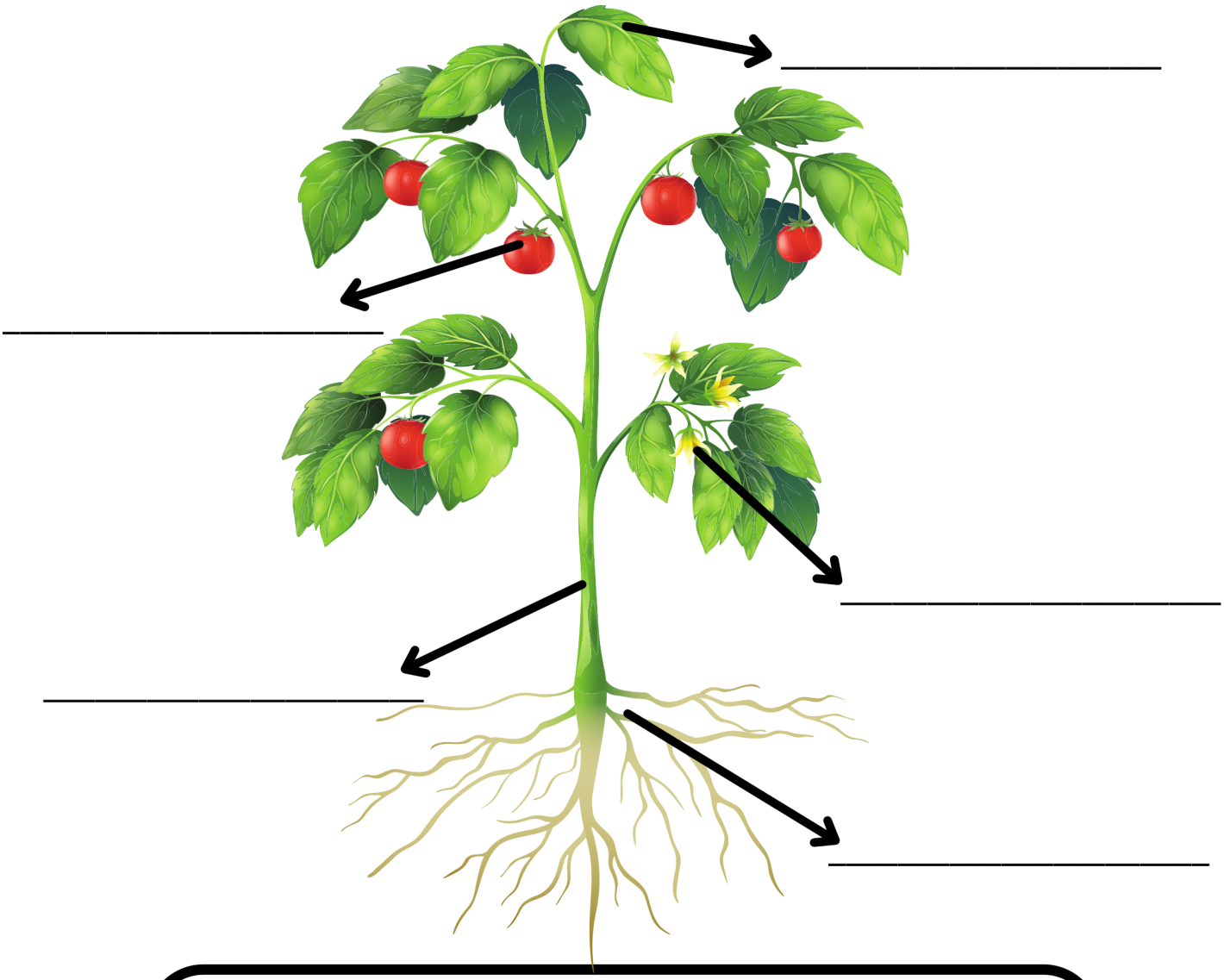
Each part of the plant has an important job.

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Name:_____

Label Me!

Direction: Label the parts of the plant.



_____

_____

_____

_____

_____

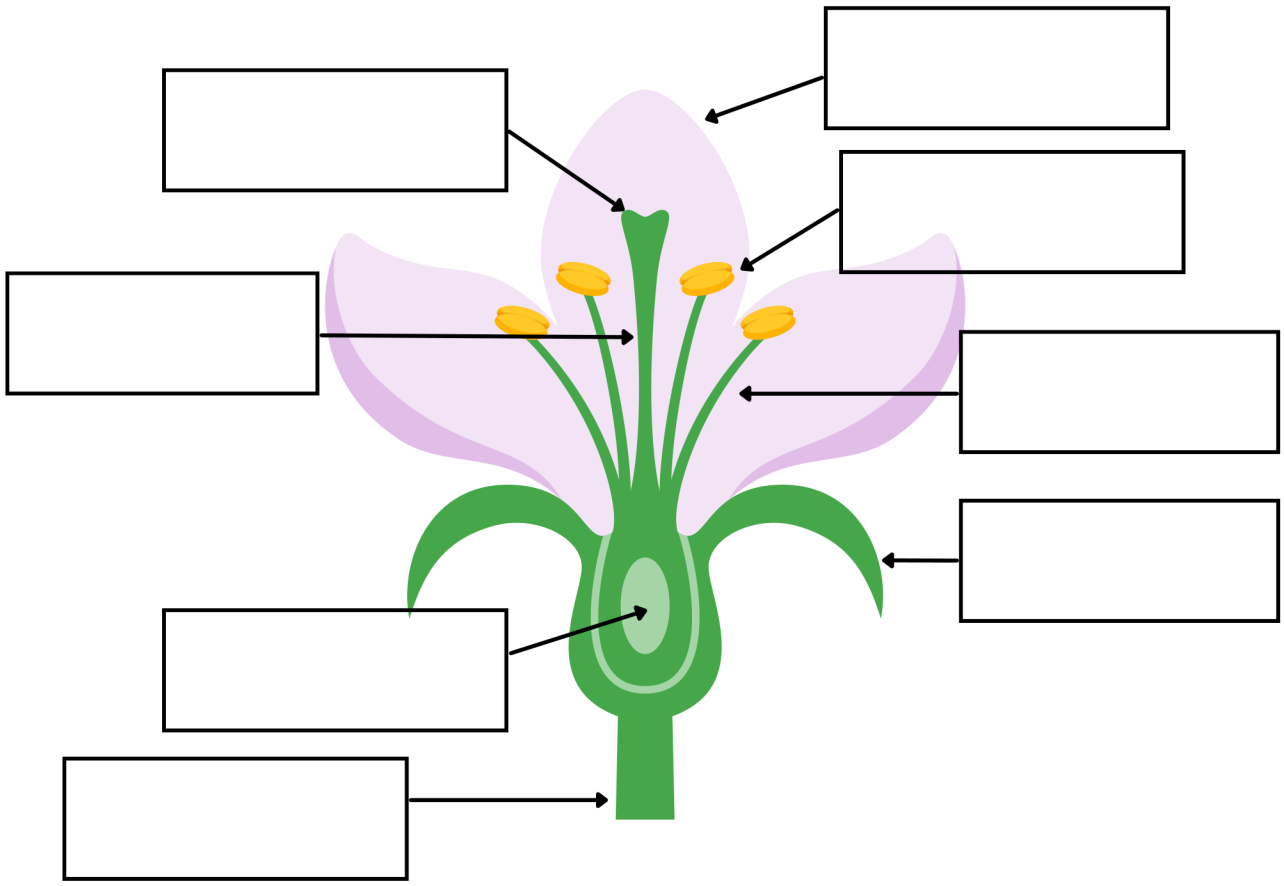
roots		flower
	fruit	
stem		leaf

Name:_____

FLOWER structure

Use the terms below to label the parts of the flower:

Petal	Sepal	Anther	Ovary
Stigma	Filament	Style	Stem



Research and describe the function of one part of the plant:

_____

_____

_____

_____

_____

_____

Name:_____

Parts of a Plant

Match the parts of a plant to their name.



•

• fruit



•

• leaf



•

• stem



•

• root



•

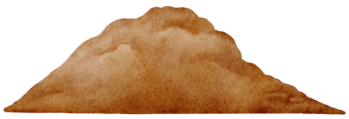
• flower

Name:_____

What do plants need to grow?

Cut and paste your answers in the box provided.



 pizza	 soil	 sun
 water	 toy	 air

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Seed Dispersal

The following illustrations below are examples of seed dispersal mechanisms. Cut and sort these illustrations on the next page by pasting them into their correct categories.


















Name:_____

Paste Your Work Here!

Seed Dispersal by Wind

Seed Dispersal by Animal

Seed Dispersal by Water

Seed Dispersal by Expulsion

Name: _____

PLANT OBSERVATION SHEET

Copy and fill this out every other day for 2 weeks.

Today is day _____ of observation.

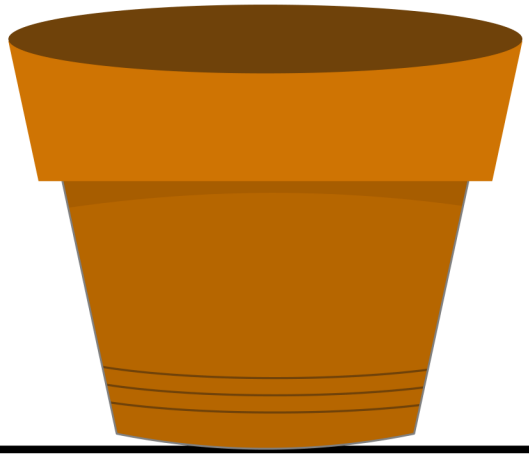
The type of seed that I planted is..

_____

_____

_____

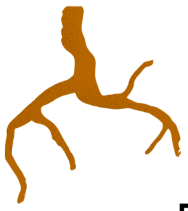
This is what my plant looks like on this day:



Name:_____

PLANT OBSERVATION SHEET

Based on today's observation, parts of the plant that I can see are...(check all boxes that apply)


roots ☐


leaves ☐


stem ☐

flower ☐


fruit ☐

To help my plant grow, I take care of it by...

_____

_____

_____

_____

_____

_____

_____

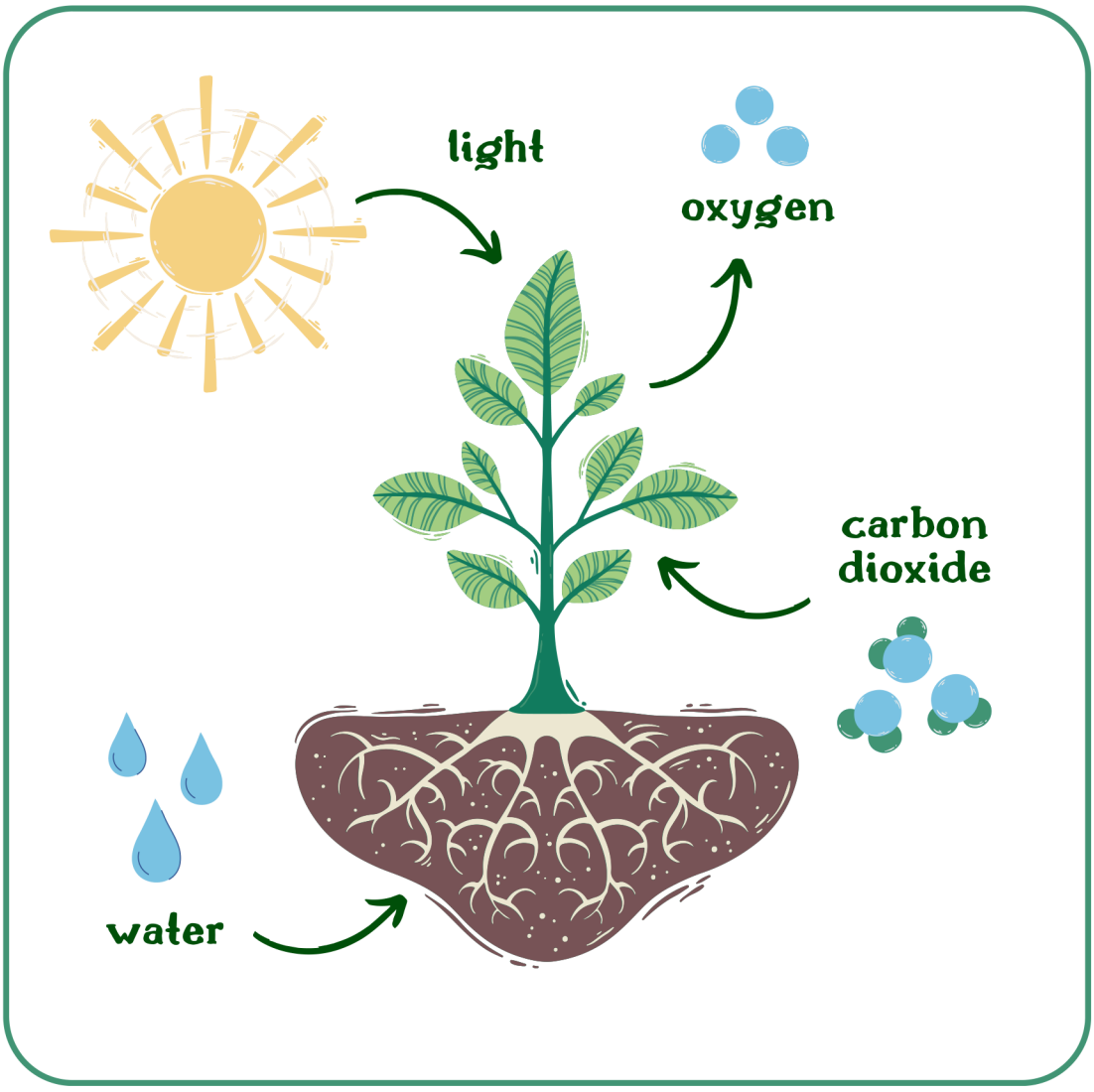
_____

_____

Name:_____

PHOTOSYNTHESIS

Task: Complete each of the questions using the diagrams provided and additional research (if necessary).



What type of organisms can photosynthesize?

_____

What is the main source of energy that drives the process of photosynthesis?

_____

Name:_____



(light energy)

carbon dioxide + water -> glucose + oxygen

What three 'ingredients' are required for photosynthesis to occur?

_____

Where is the water used in photosynthesis sourced from?

_____

In which cell organelle does photosynthesis take place?

_____

Where is the carbon dioxide used in photosynthesis sourced from?

_____



CHALLENGE QUESTIONS:

What molecule absorbs sunlight during photosynthesis?

_____

How does a plant use the sugars produced through photosynthesis?

_____

_____

Why is photosynthesis important for all living organisms?

_____

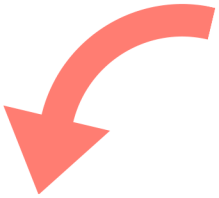
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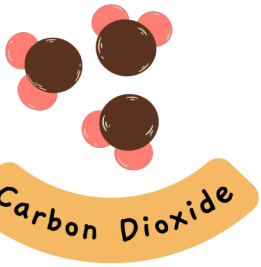
Plant Cut and Paste

Cut the images below. Assemble and paste them on a clean sheet of paper to illustrate the diagram of photosynthesis and cellular respiration.

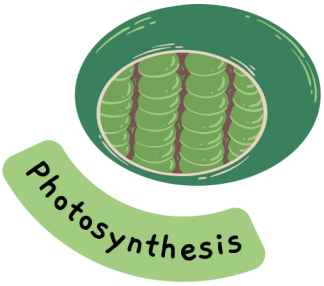




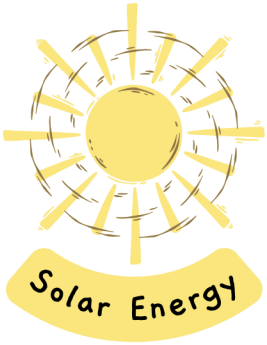


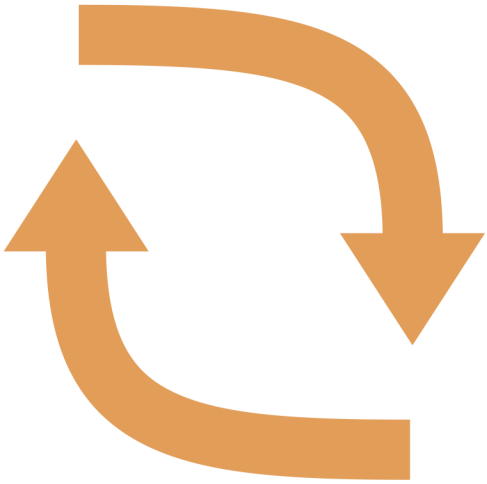




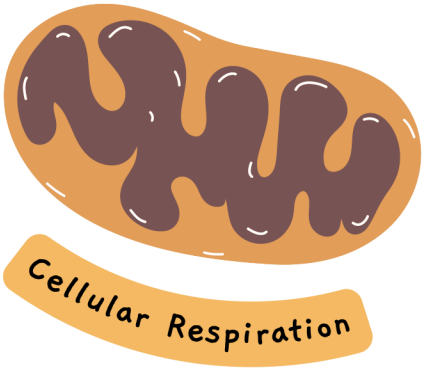


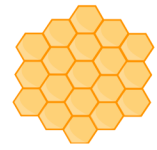






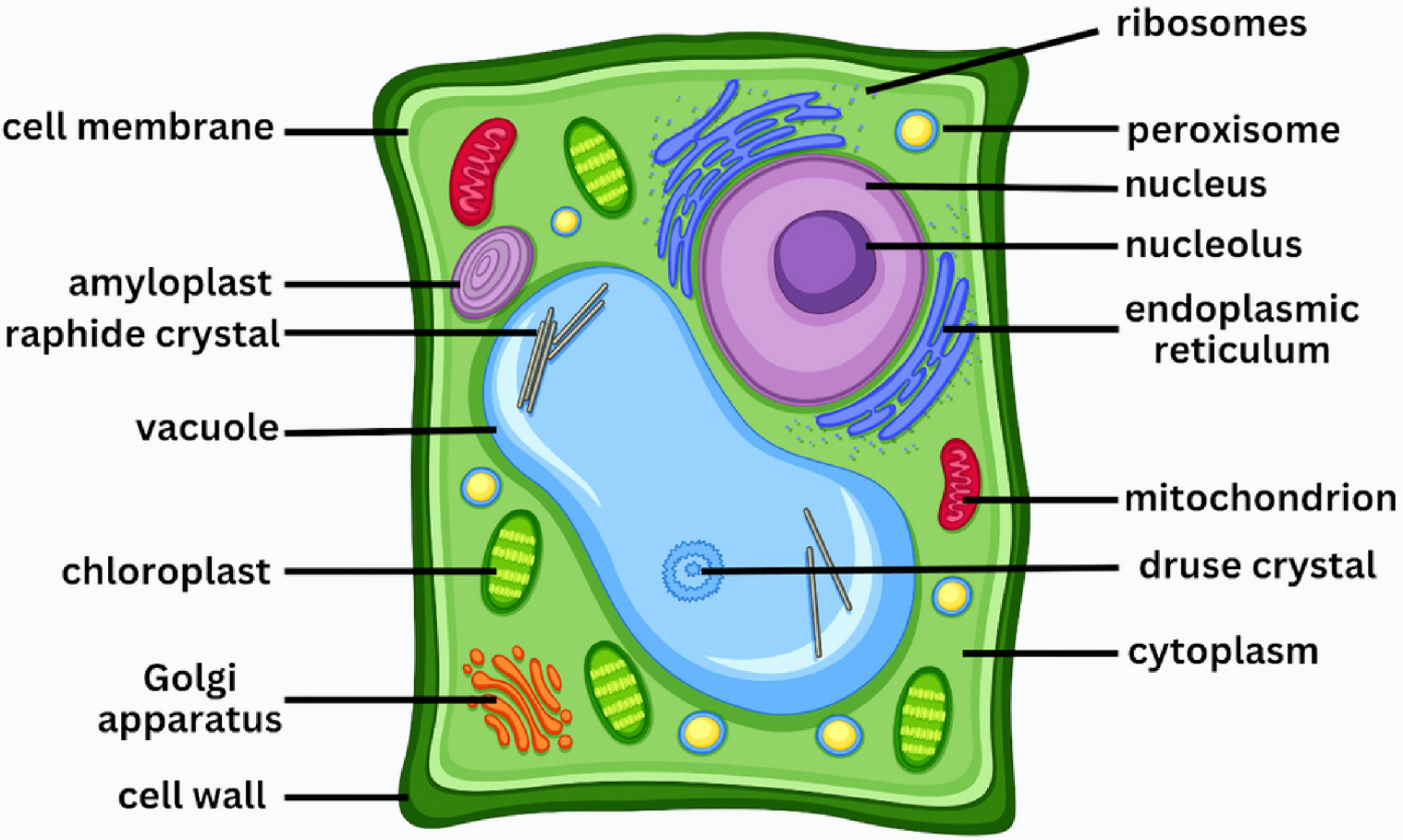






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Let's Learn:
Parts of a Plant Cell



sciencenotes.org

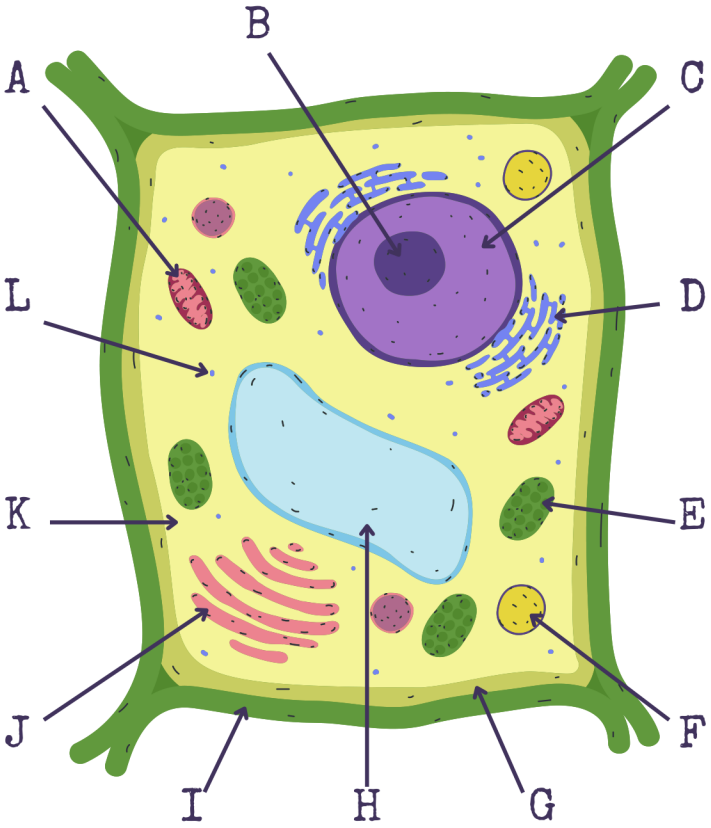
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Name:_____

Plant Cells

Use the words listed in the word bank to label each part of the plant cell.

cytoplasm	cell wall	nucleus	mitochondria
chlorophyll	vacuole	golgi body	cell membrane
nucleolus	peroxisome	ribosome	endoplasmic reticulum



A _____

B _____

C _____

D _____

E _____

F _____

G _____

H _____

I _____

J _____

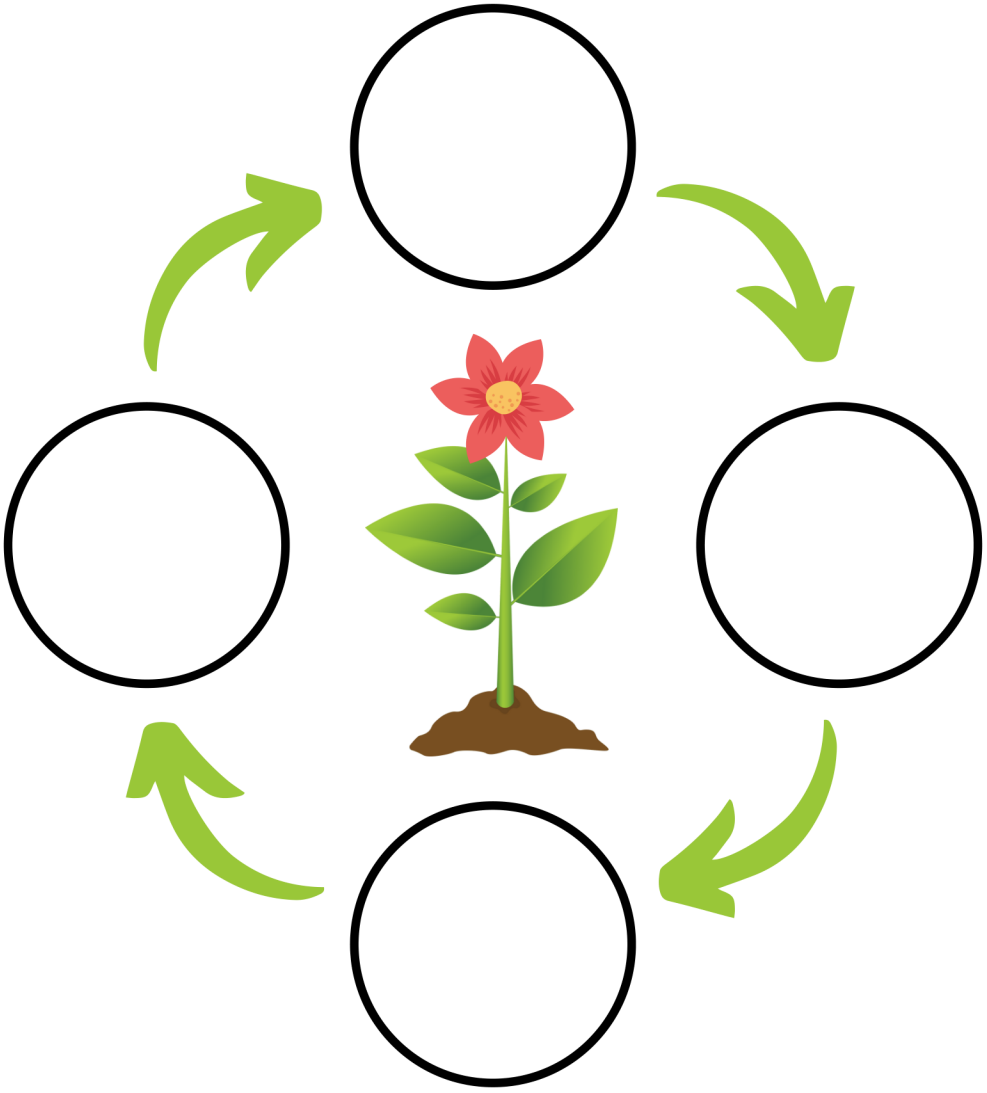
K _____

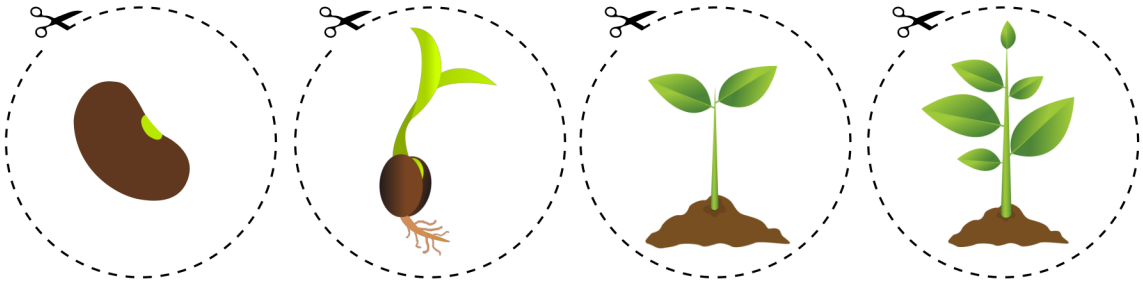
L _____

Name:_____

PLANT LIFE CYCLE

Cut and paste the stages of the life cycle of a plant!





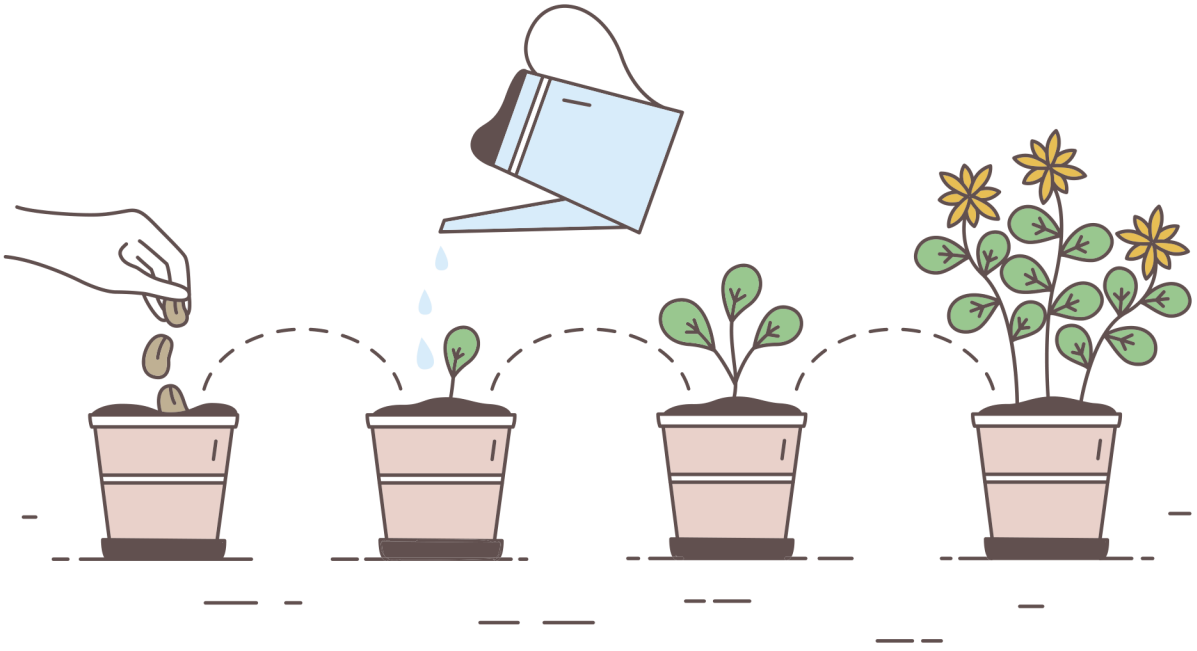
SEED SPROUT SEEDLING PLANT

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Name:_____

LIFE CYCLE OF A PLANT

Write about each phase of the life cycle of a plant:



1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

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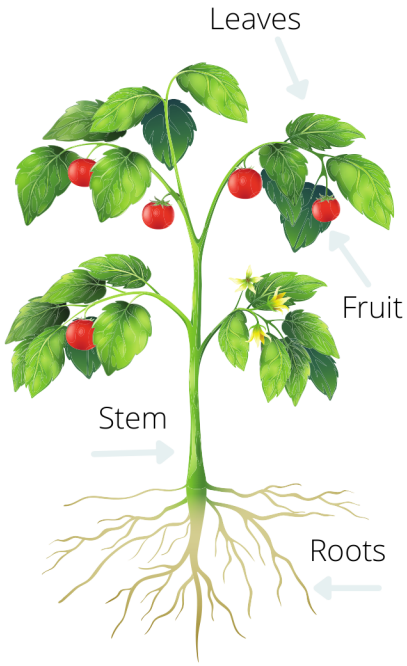
Name:_____

STEM: Living Things | Plant Food

Inquiry question: How do humans use plants and animals?

Instructions: What part of a plant do you eat? Brainstorm, draw and label edible examples for each of the following parts of a plant.

Edible roots of plants:



Edible stems of plants:

Edible leaves of plants:

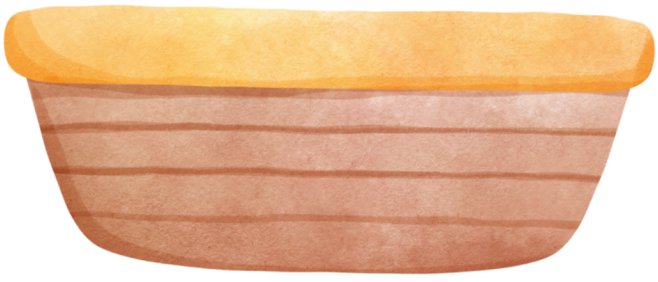
Edible seeds of plants:

Edible fruits of plants:

Name:_____

My Plant

Please draw a plant in the pot below. Make sure it has a stem, leaves, and a flower.

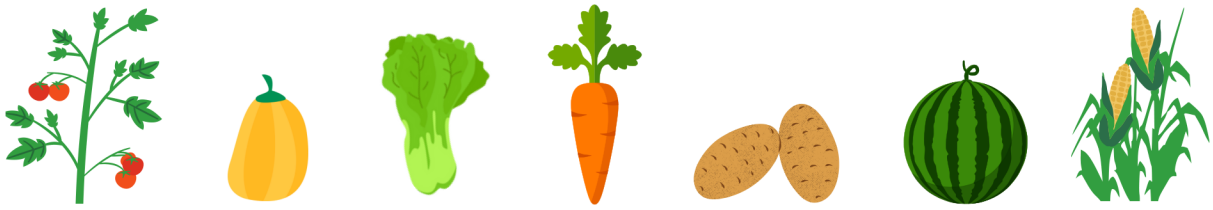


Name:_____

Plant A Garden

Complete the question and then use the pictures to plant your own garden.

What do plants need to grow?



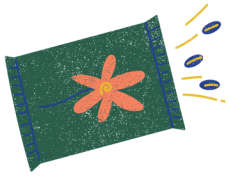


Name:_____

Gardening

Look at the pictures and write the words in the correct place

Rain	Sunlight	Seeds	Basket
Soil	Plant pot	Plant	Weeds
Boots	Gloves	Water	Apron

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Gardening Journal

PLANT'S NAME: _____

SCIENTIFIC CLASS	
☐ Vegetable	☐ Herbs
☐ Flower	☐ Tree

START DATE

BLOOM DATE

LIGHT LEVEL	☐ Sun	☐ Paratial Sun	☐ Shade

PLANT INSTRUCTIONS

WATER NEEDED

1 - 2 - 3 - 4

Less Much

CARE INSTRUCTIONS

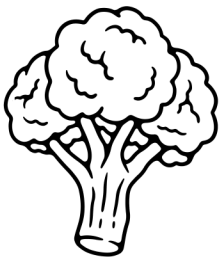
IMPORTANT NOTES

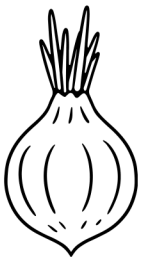
Name:_____

VEGETABLE IDENTIFICATION

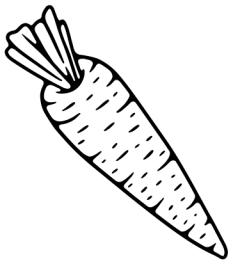
Identify the vegetables in the spaces provided using the words from the word bank below. When finished color each vegetable using appropriate colors.

- broccoli
- carrot
- corn
- cucumber
- lettuce
- mushroom
- onion
- pepper
- pumpkin

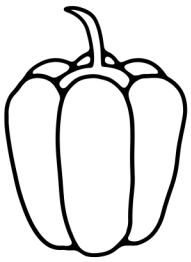




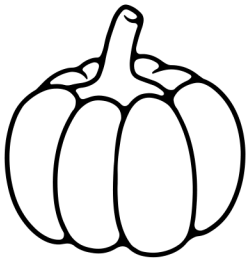














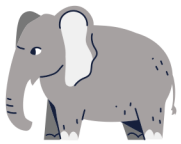
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Name:_____

SORTING PLANTS AND ANIMALS

Cut out the pictures below and glue them into the correct box.

PLANTS	ANIMALS


Elephant


Cactus


Fish

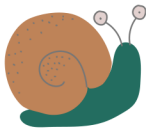

Squirrel


Shrub


Whale


Racoon


Pine Tree


Snail


Ivy


Dandelion


Ladybug


Daisy


Grass

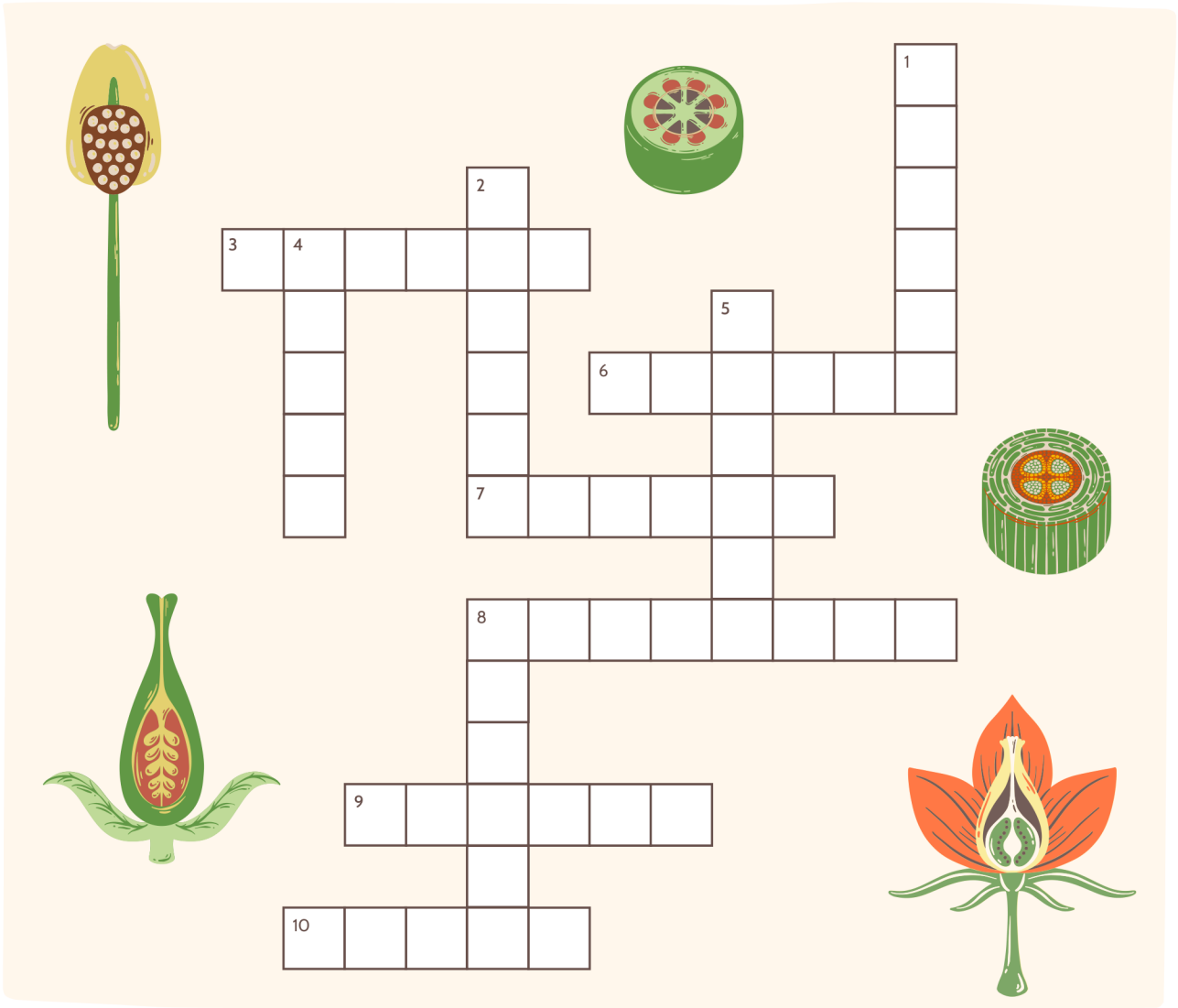

Camel

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Name:_____

The Parts of a Flower

The flower is the part of the plant that blossoms and produces the seeds that are needed for new plants to grow. Test your knowledge of the terms by answering the crossword below!



Down:

1. Egg cells of the flower
2. These protect the bud of the flower.
4. Where ovules are produced
5. The male reproductive structure of a flower
8. The female reproductive structure of a flower

Across:

3. Powdery substance that leads to the fertilization of the flower
6. These brightly colored parts of the flower attract pollinators.
7. The sticky part of the flower that catches its pollen
8. The stalk of the flower
9. Holds the grains of pollen
10. Supports the stigma, connecting it to the ovary of the plant

Name:_____

Procedure for Planting a Sunflower

Goal:

Materials:

Instructions:

Conclusion:



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Name:_____

GARDEN VIEW

Cut the colored part of the image, then paste the cut image appropriately and correctly.





Name:_____

In The Garden

Write the correct answer!



1.



2



3



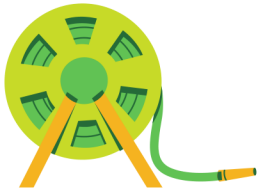
4



5



6



7



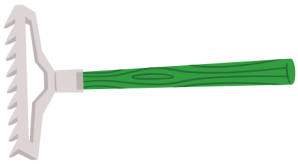
8



9



10



11



12

Bucket	Shovel	Boots	Watering Can
Scissors	Rake	Fence	Sprayer
Hose	Gloves	Spade	Wheel barrow

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Name: _____



PLANT LIFE!

WORD SEARCH -LEVEL 1

Find the words listed below and circle them.

L	S	P	O	L	L	E	N	Z	C	S	X
E	T	E	I	K	I	F	L	O	W	E	R
A	E	T	G	I	N	G	Y	A	M	I	L
V	M	A	I	S	F	R	O	N	P	L	S
E	M	L	G	K	R	O	Q	C	L	D	E
S	O	I	L	I	N	O	N	I	A	I	E
D	N	S	H	O	O	T	S	N	N	N	D
E	G	L	O	N	L	S	O	G	T	G	N
W	A	T	E	R	C	Y	C	L	I	F	E

- SEED
- WATER
- ROOTS
- POLLEN
- LEAVES
- PETAL
- STEM
- SHOOTS
- FLOWER
- PLANT
- LIFE
- SOIL

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Name: _____



PLANT LIFE!

WORD SEARCH - LEVEL 2

Find the words listed below and circle them.

L	S	P	O	L	L	E	N	Z	C	S	X	P	S
E	T	E	I	V	I	F	L	O	W	E	R	O	E
A	E	T	G	I	N	G	Y	V	M	I	L	L	E
V	M	A	M	S	F	R	O	U	P	L	S	L	D
E	M	L	G	P	R	O	Q	L	L	D	E	I	O
S	O	I	L	I	N	O	V	E	A	I	E	N	D
D	N	S	H	O	O	T	S	T	A	M	E	N	U
E	G	E	R	M	I	N	A	T	I	O	N	T	C
W	A	T	E	R	C	Y	C	L	I	F	E	E	E
P	H	O	T	O	S	Y	N	T	H	E	S	I	S

- SEED
- WATER
- ROOT
- POLLEN
- GERMINATION
- LEAVES
- PETAL
- STEM
- SHOOTS
- STAMEN
- FLOWER
- PHOTOSYNTHESIS
- LIFE
- SOIL
- OVULE

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Name: _____



PLANT LIFE!

WORD SEARCH - LEVEL 3

Find the words listed below and circle them.

L	S	P	O	L	L	E	N	Z	C	S	X	P	R
E	T	E	L	V	I	F	L	O	W	E	R	O	E
A	E	T	G	A	N	G	Y	V	M	I	S	L	P
V	M	A	M	S	N	R	O	U	P	L	E	L	R
E	M	L	G	P	R	T	Q	L	L	D	E	I	O
S	O	I	L	I	N	O	V	E	A	I	D	N	D
D	N	S	H	O	O	T	S	T	A	M	E	N	U
E	G	E	R	M	I	N	A	T	I	O	N	T	C
W	A	T	E	R	C	Y	C	L	I	F	E	E	E
P	H	O	T	O	S	Y	N	T	H	E	S	I	S

- SEED
- WATER
- ROOT
- POLLEN
- POLLINATE
- GERMINATION
- LEAVES
- PETAL
- STEM
- SHOOTS
- STAMEN
- PHOTOSYNTHESIS
- FLOWER
- PLANT
- LIFE
- SOIL
- REPRODUCE
- OVULE

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Science Experiment:

How does salt affect PLANTS

OUR EXPERIMENT

To test out the impact of salt on plants, we will create an experiment showing the impact with differing amounts of salt solution.

To make a fair test we will have two of each salt option, plus a control plant:
2 X control plants
2 X 1/2 teaspoon plants
2 X 1 teaspoon plants
2 X 1 tablespoon plants

You will need:
8 plants
4 water bottle sprayers (dollar store)
A market to label the sprayers and the plants

Experiment steps

1. Measure the plants. Take a picture if possible.
2. Fill all of the bottles with 800ml of water each using the measuring jug
3. With a funnel, put 1/2 tsp, 1 tsp and 1 tbs of salt into each bottle separately - except for the control bottle
4. Shake the bottles with salt added until dissolved
5. Spray the bottle at least 10cm away from the plant 4 times. Do this for each type of salt solution. Careful not to mix plants/bottles.
6. Repeat every day for one week.
7. Write down your observations and record your data.

Name:_____

Scientific Method

Fill in the steps of the Scientific Method in regard to your plant/salt experiment.

PURPOSE

HYPOTHESIS/PREDICTION

STEPS/MATERIALS

VARIABLES

ANALYSIS/CONCLUSION