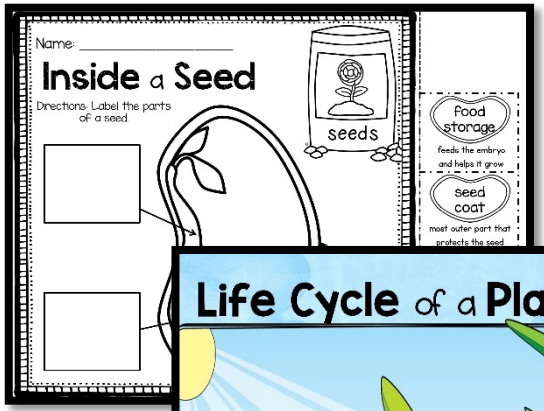
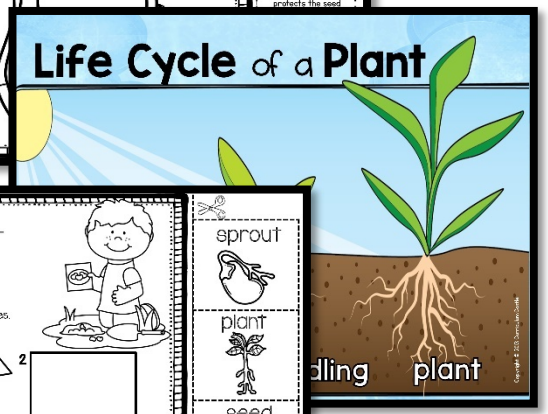
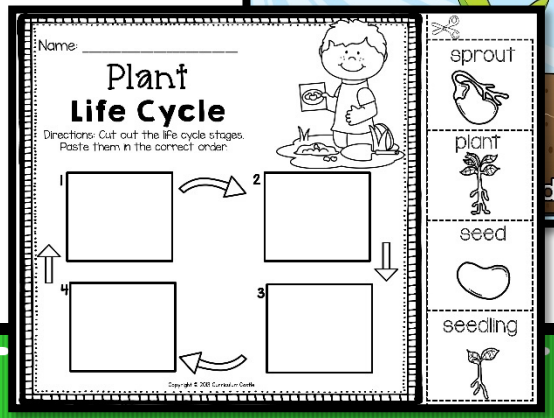
PLANT Investigation









BY: Curriculum Castle



Curriculum Castle units are designed to give your students a well-rounded learning experience that stimulates their cognitive learning and creativity.

We believe that all great learning takes place through hands-on and interactive activities, and what you will find in each unit are supplemental lessons and ideas to make learning about a particular subject come to life in a concrete way.

Ideally, these units are a wonderful way to explore concepts that you have already introduced using books and discussion. That is why we begin each unit with a recommended reading list that is designed to help you gather the information needed for each topic.

Our products are perfect for classroom environments and homeschool learning. If you have any questions or comments about our units, please feel free to contact us at: curriculumcastle@gmail.com.

Thank YOU for Downloading! ☺

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Recommended Book List!

Find these books at your local library or buy online and start your own personal library.



How a Seed Grows by Helene J. Jordan
Plants Are Living Things by Bobby Kalman
The Tiny Seed by Eric Carle
Plant Parts (Series) by Vijaya Bodach
Plant Life Cycles by Julie K. Lundgren
One Bean by Anne Rockwell & Megan Halsey
The Magic School Bus Plants Seeds by Joanna Cole
Jack's Garden by Henry Cole
The Vegetables We Eat by Gail Gibbons
Plant Secrets by Emily Goodman

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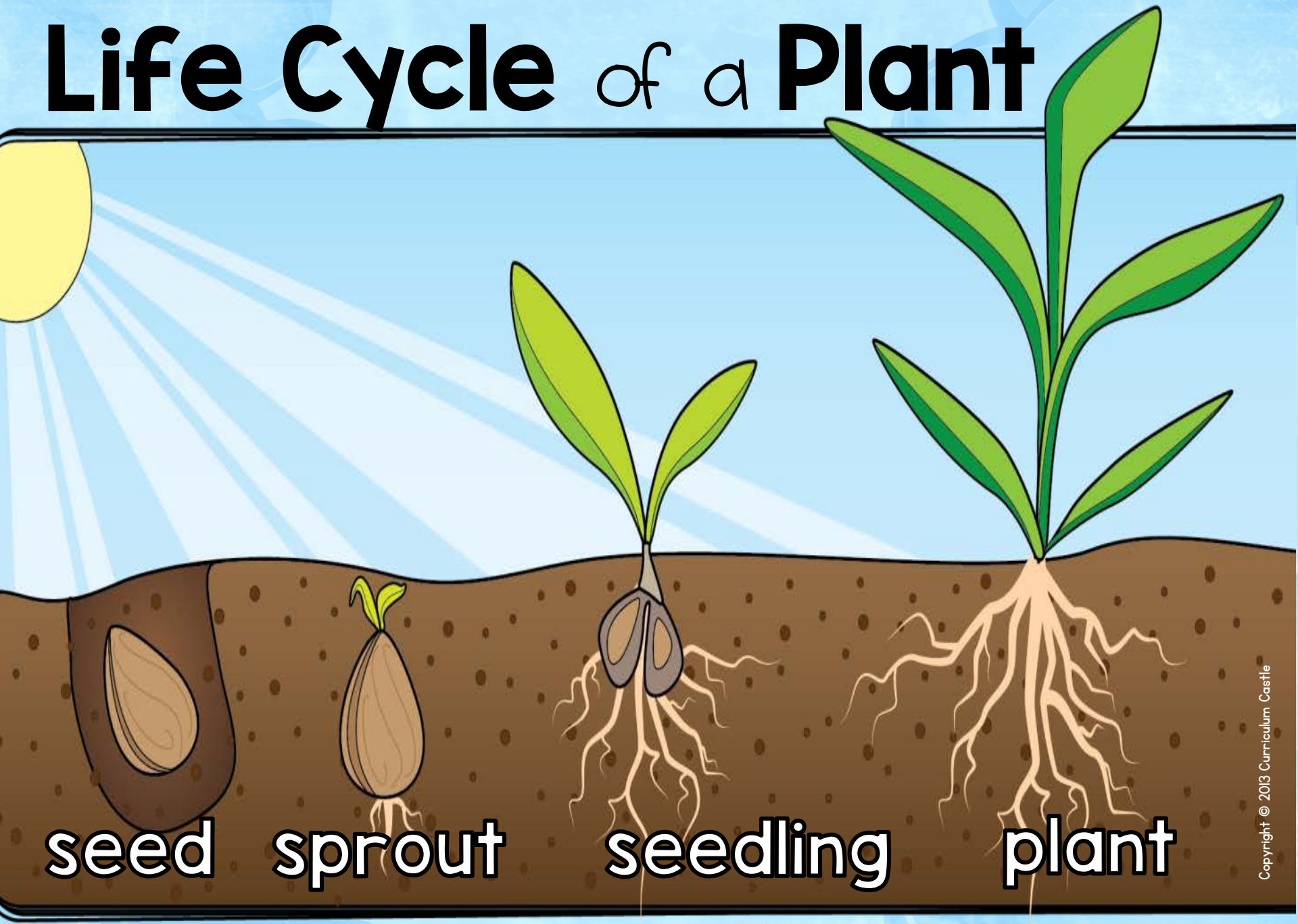
Life Cycle of a Plant



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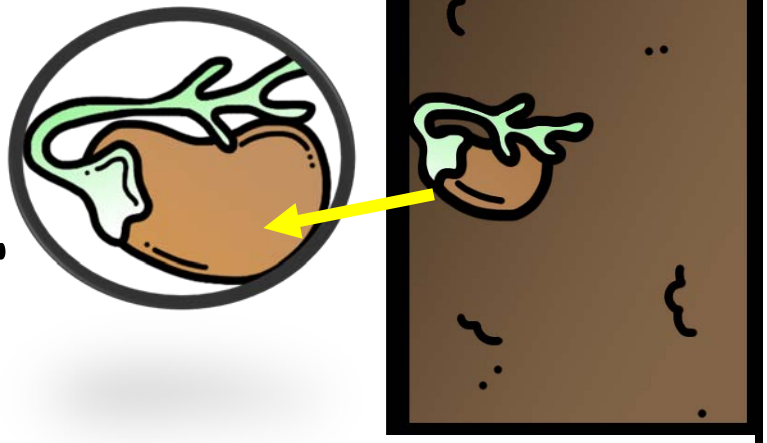
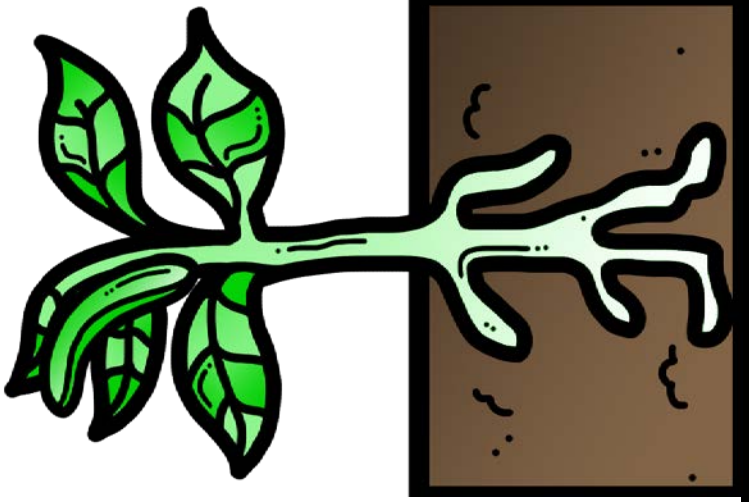
Life Cycle Cards

Tip for use: Laminate and cut out these cards. Place them in a center where students can practice putting them in the correct order or use them for your word wall.

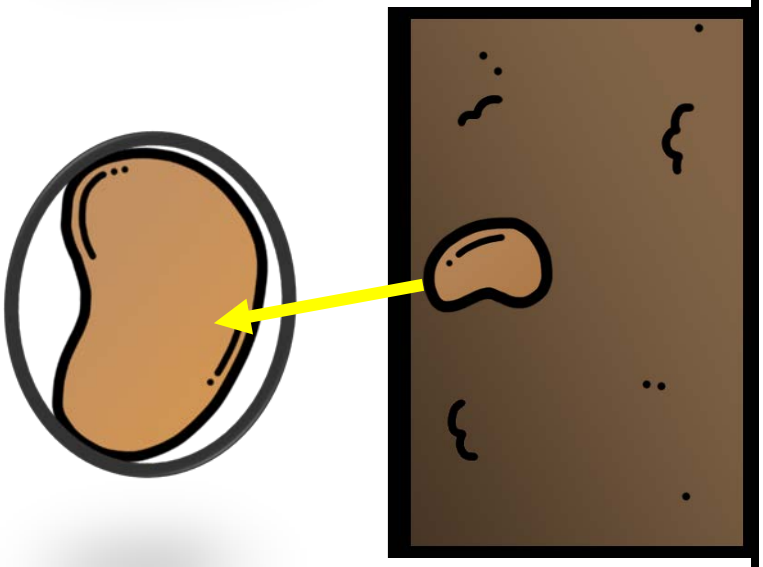
sprout



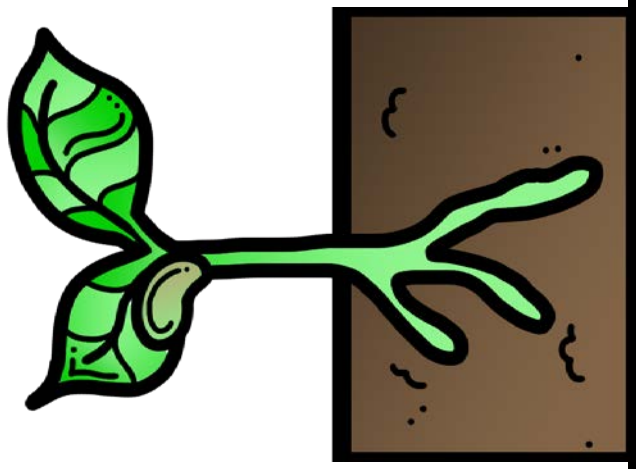
plant



seed



seedling



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Life Cycle Cards

Tip for use: Laminate and cut out these cards. Place them in a center where students can practice putting them in the correct order or use them for your word wall.

sprout



plant



seed



seedling



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Plant *Life Cycle* Flip Book

Materials:

- ❑ mini flip book pages on pages 8-9
- ❑ scissors
- ❑ crayons/markers
- ❑ stapler

Directions:

1. Have students color and cut out the mini book pages.
2. Next, layer the pages in the following order: cover (should be at the top), seed, sprout, seedling & plant (at the bottom of the book).
3. Staple the flip book at the top of the "From Seed to Plant" cover page.
4. Students can read their mini books independently, in groups, or as a class!





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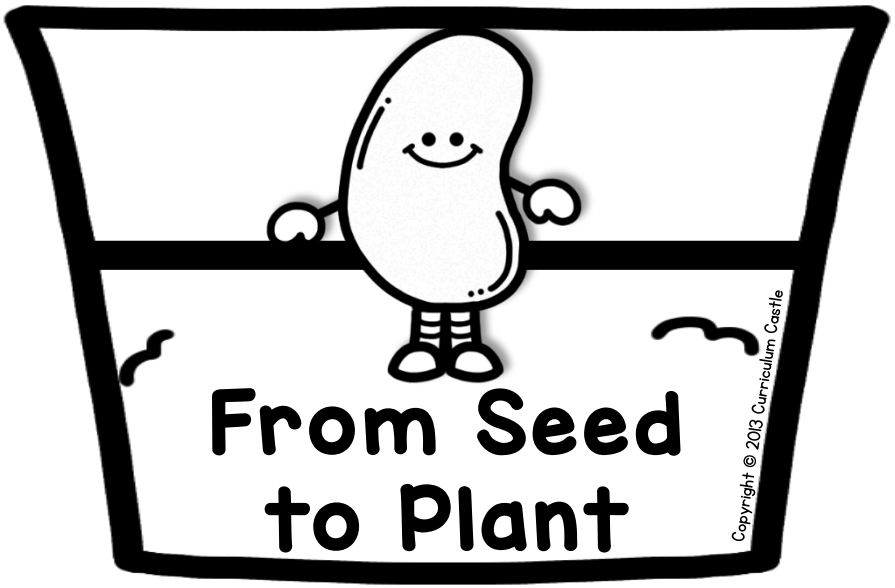

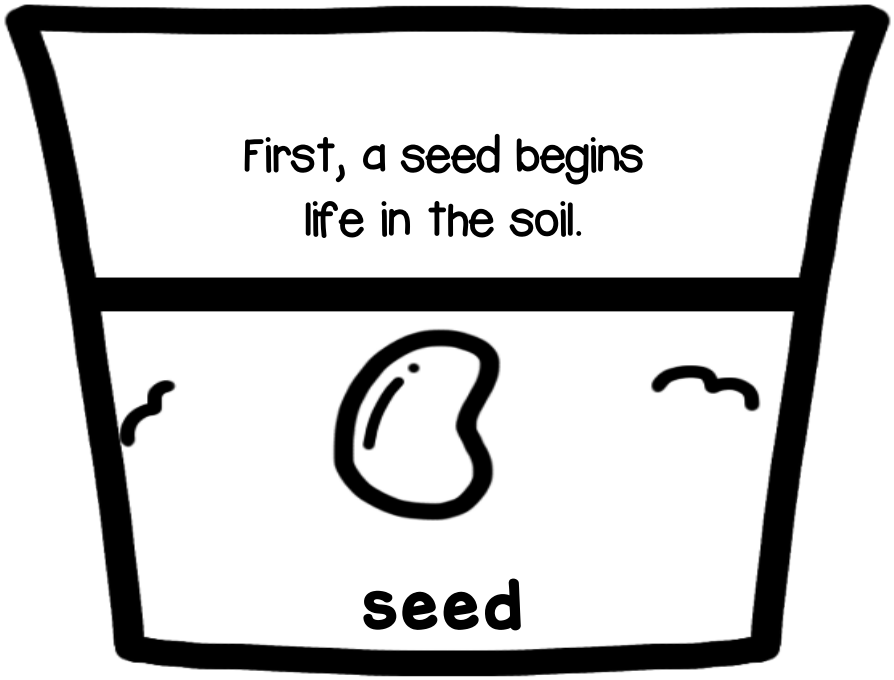

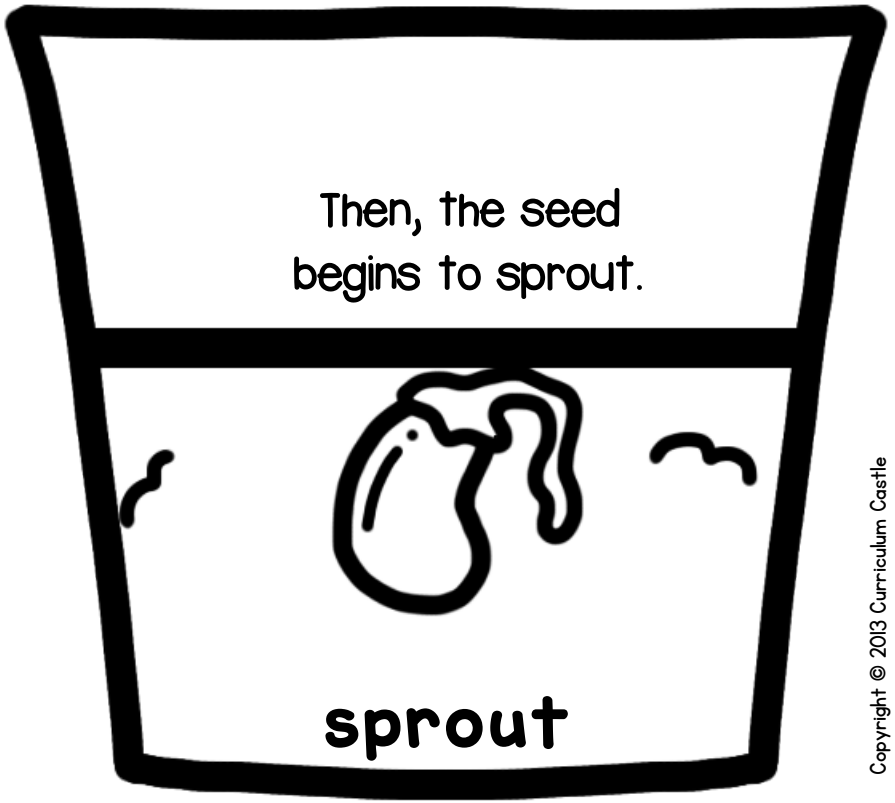

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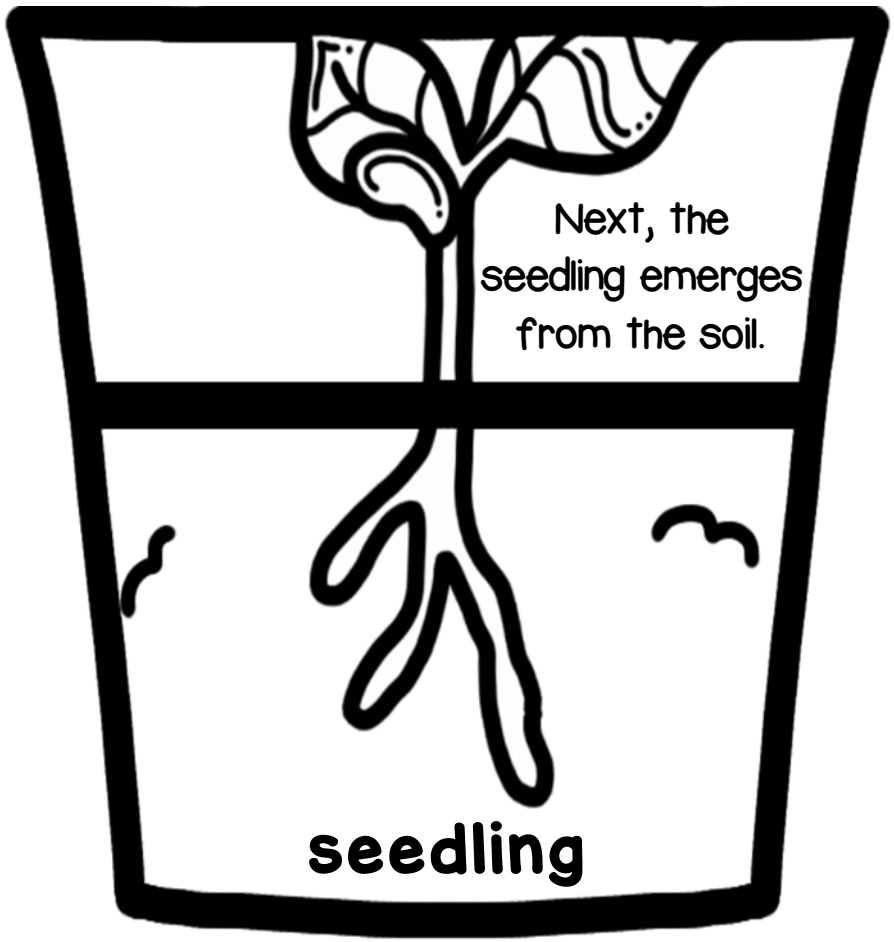

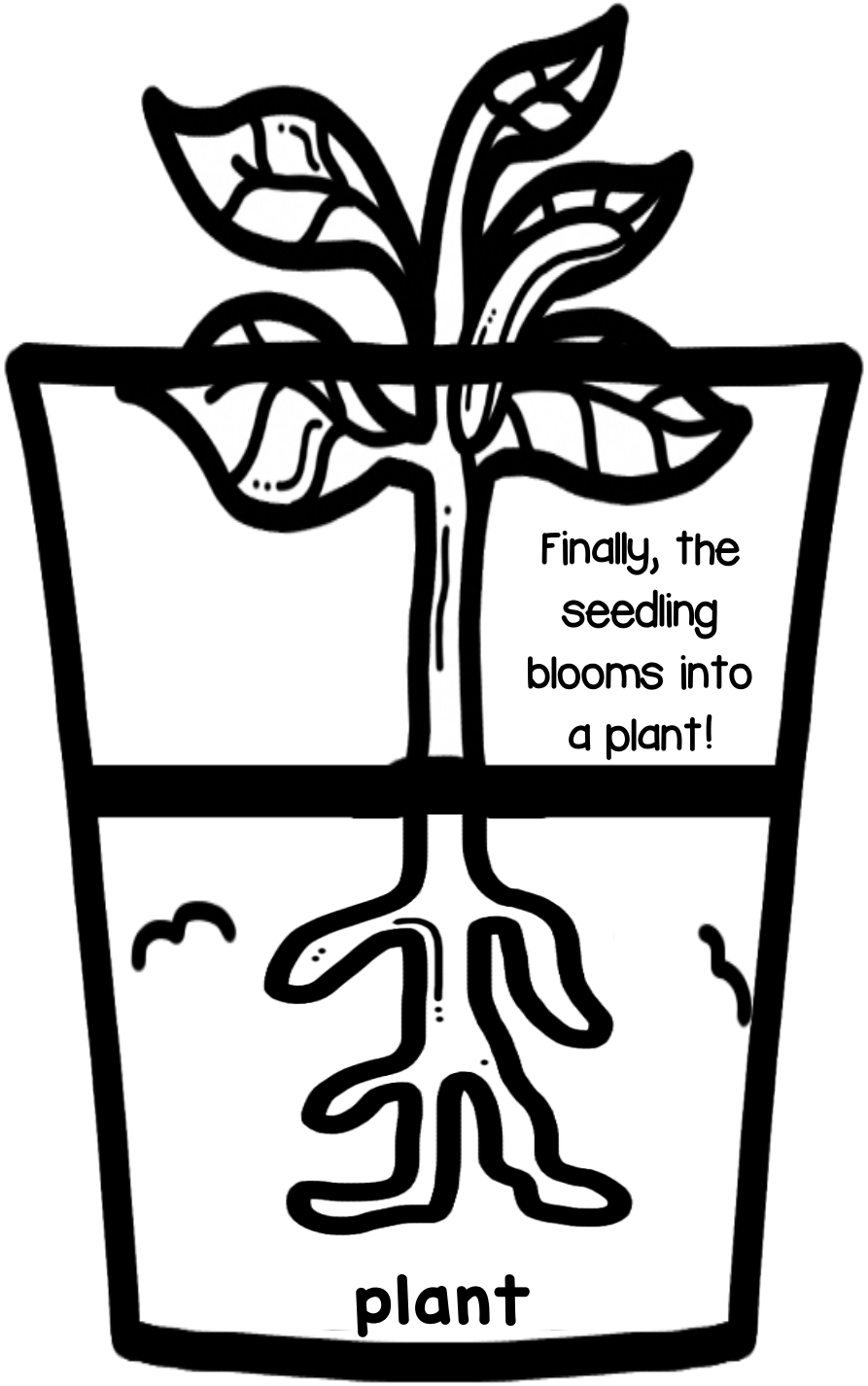

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Name: _____

Plant
Life Cycle

Directions: Cut out the life cycle stages.
Paste them in the correct order.



1

2

3

4

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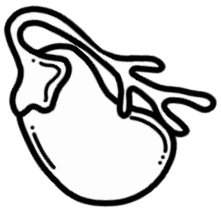
sprout



plant



seed



seedling

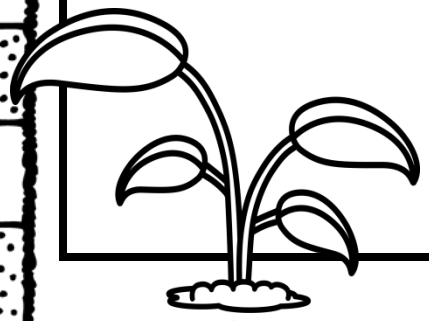


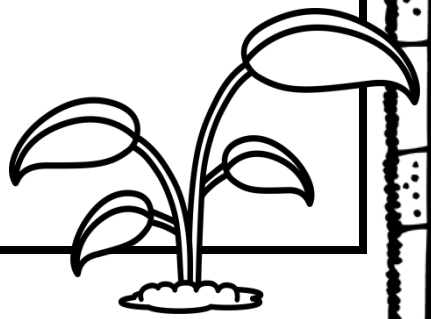
Name: _____

Plants
KWL Chart

Directions: As we learn about plants, complete each section below.

What I already KNOW...	What I WONDER...	What I LEARNED...





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Name: _____

Plants

Directions: As we learn about plants, complete each section below.

can	have	are



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Name: _____

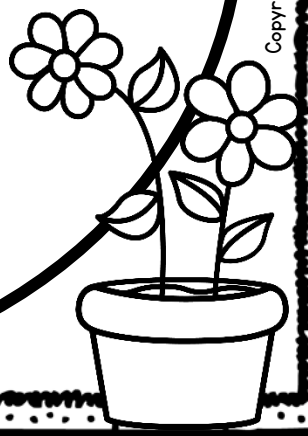
Plant
Venn Diagram

Directions: Compare and contrast two different plants. Complete the Venn Diagram.

Plant "A"

Plant "B"





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Name: _____

Comparing Plants!



Directions: Answer the questions below. Be sure to use complete sentences!

Compare the two plants. How are they alike?

Contrast the two plant. How are they different?

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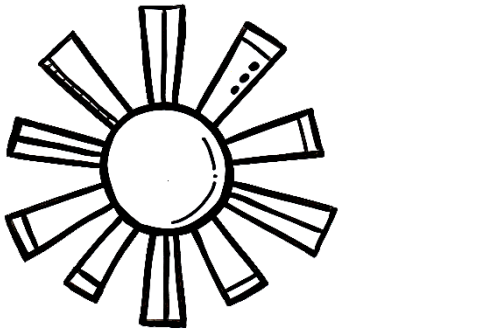
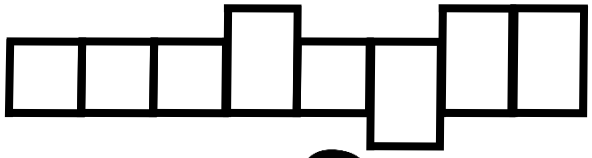
Name: _____

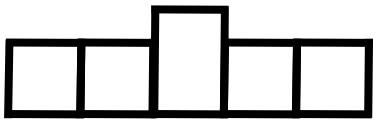
Plants Need...

Directions: Write each word from the word bank under the correct picture.

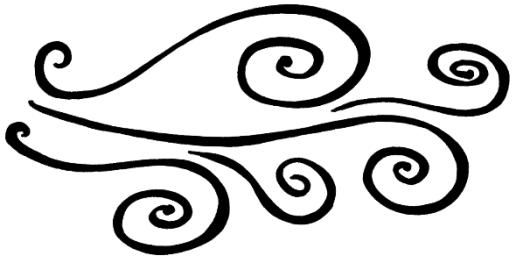






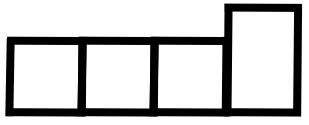












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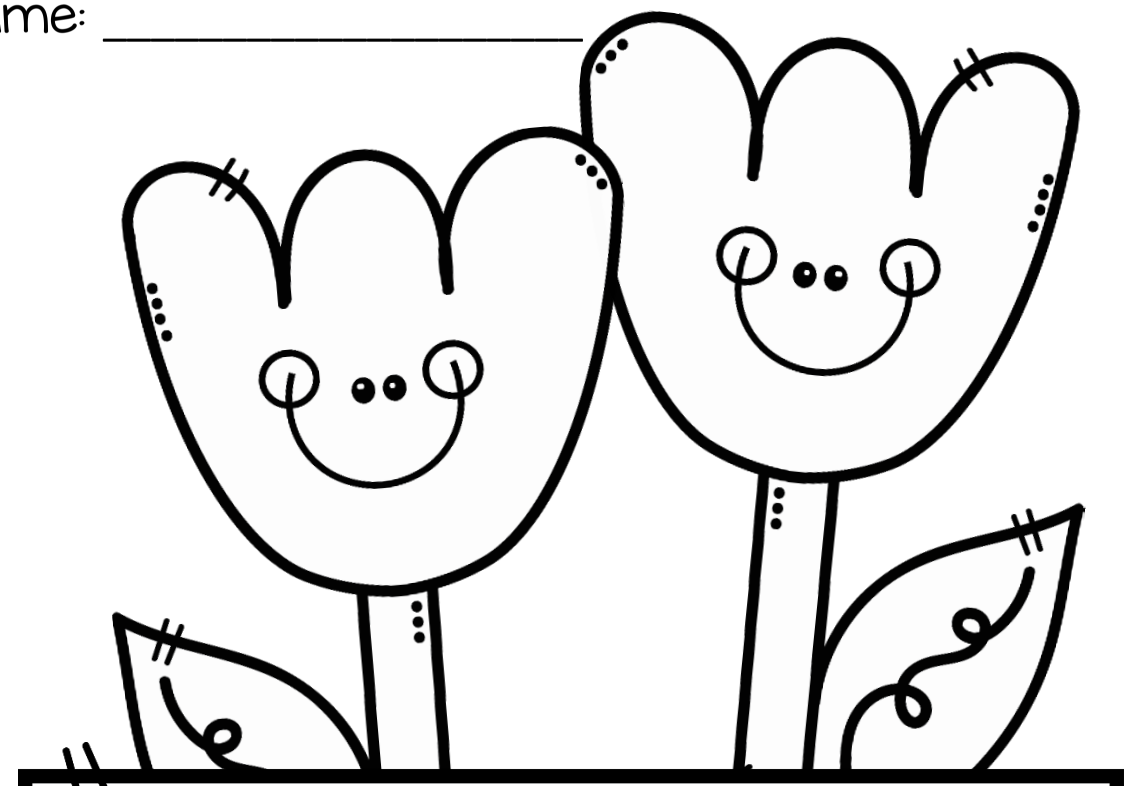
Name: _____



This is how I can help a plant to grow:

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Sprouting Seeds: Class Project

Materials:

- ❑ "My Sprout House" page 18
- ❑ colored cardstock/construction paper
- ❑ zip bags (lunch size)
- ❑ paper towels
- ❑ water
- ❑ Lima beans (or other bean)
- ❑ stapler
- ❑ tape



Directions:

1. Print and copy the "My Sprout House" template on colored paper.
2. Cut out the house and "window".
3. Dampen a paper towel with water and fold so that it fits inside a plastic zip bag.
4. Give each student a few (3-4) lima beans to place inside the bag on the moist paper towel.
5. Close the bag and staple the 'house" on top so that you can see the seeds through the "window".
6. The sunlight and wet paper towel will create condensation and continue to provide water for the seeds. If you notice the paper towel drying out, open the bag and spray the towel a few times.
7. Tape the sprout houses to a window that gets enough sunlight and watch as the seeds begin to sprout and grow!



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My Sprout House



Cut out the inner "window".

Name:

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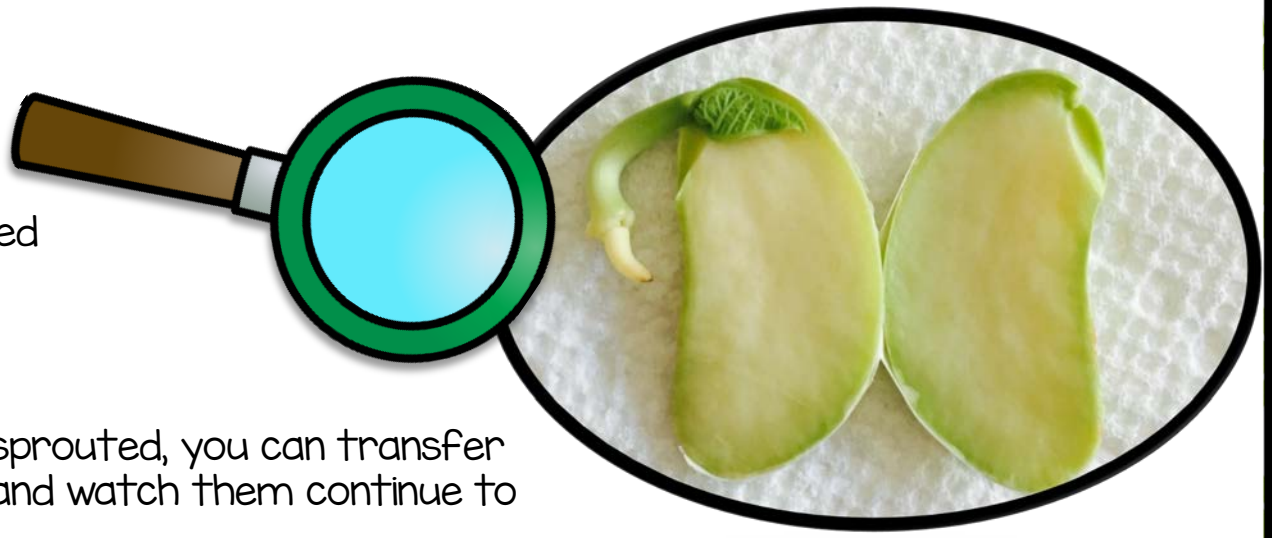
Inside a Seed

Materials:

- ❑ sprouted seeds
- ❑ magnifying glass
- ❑ knife to open the seed



Directions:

1. Once your seeds have sprouted, you can transfer them to a cup with soil and watch them continue to grow.
2. You can also take some of the sprouted seeds and open them up down the center to observe the inside of the seed. Usually you can split them open by hand. Some seeds may require you to pry them open with a knife.
3. Have students use a magnifying glass to view each part of the seed.
4. Use the printables on pages 20 and 21 to reinforce their learning.



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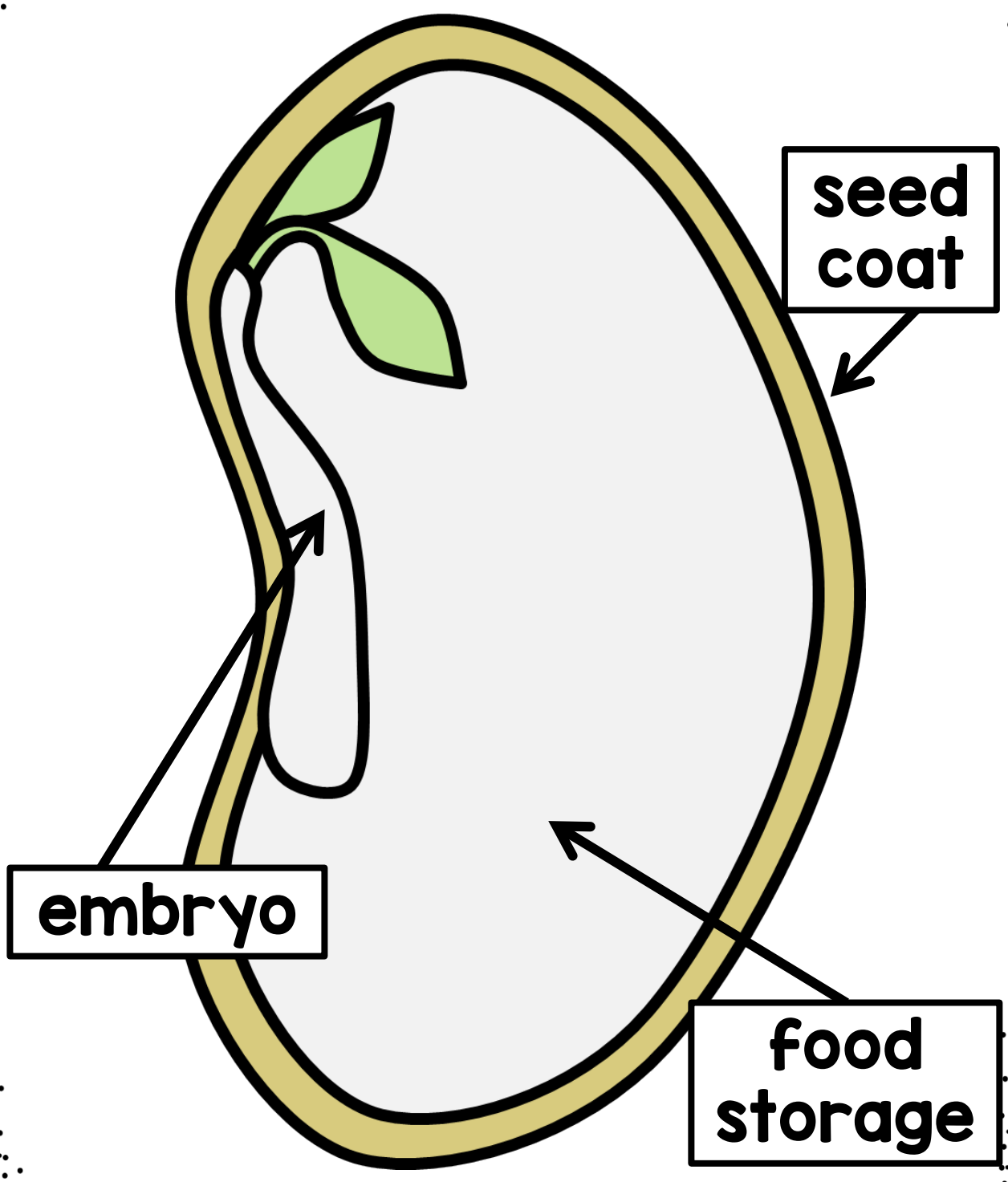
Inside a Seed



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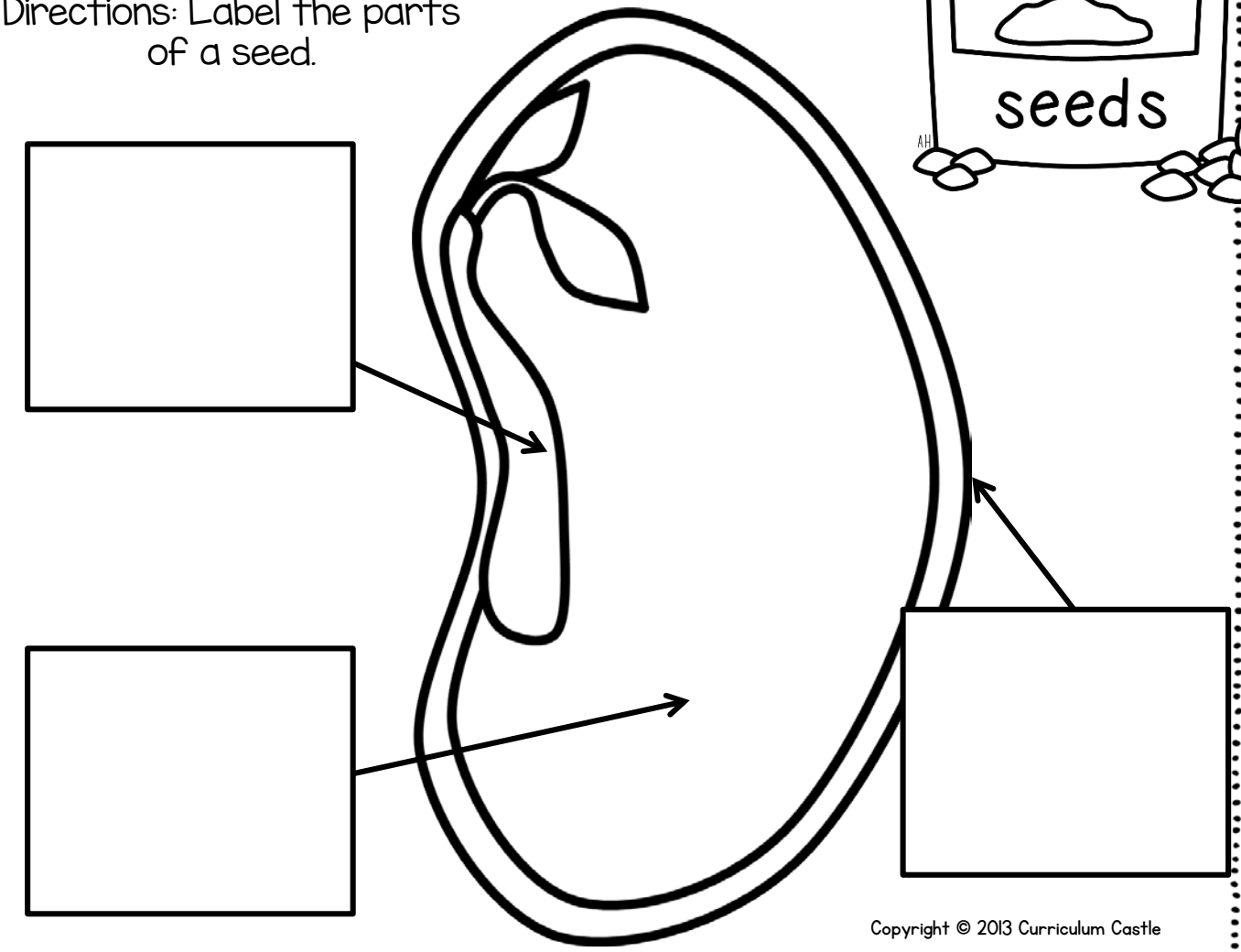
Name: _____

Inside a Seed

Directions: Label the parts of a seed.





food storage

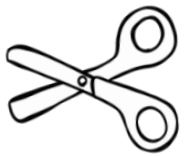
feeds the embryo and helps it grow

seed coat

most outer part that protects the seed

embryo

baby plant made up of root and leaves



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Growing Plants: A Teacher's Guide

When studying plants, teachers have a perfect opportunity to actually grow them in the classroom! Some of the easiest plants to grow are:

✓Marigolds
✓Sunflowers
✓Lambs Ear
✓Lima Beans

Once you decide which plant to grow, research the best way to plant and store them in your classroom or outdoor garden.

Allow anywhere from 4-7 days for the seeds to begin germinating. A seedling will emerge in about 2-3 weeks, so explain to children that this is a long term science project!



Tip: Have student's keep a journal of their plant's progress as it grows. You can use pages 23-25 (print out as many pages of page 24 as you need) and have students make observations and record their results! Placing their completed journals next to their blooming plant makes a wonderful classroom display.

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My Plant Journal



BY: _____

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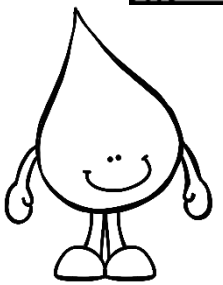
Date: _____

Today, I planted a

_____ seed.

Here is the seed:

Glue or draw seed here



Watered my seed:

YES NO

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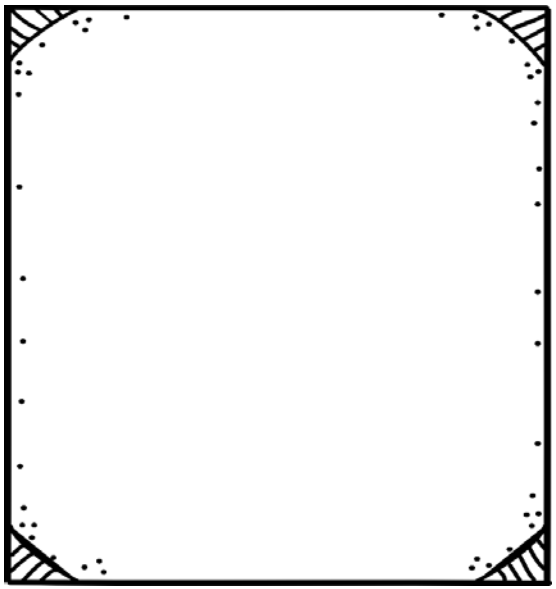
Plant Journal: Student Pages

Date: _____

Today, my plant looks like this:



water:

YES

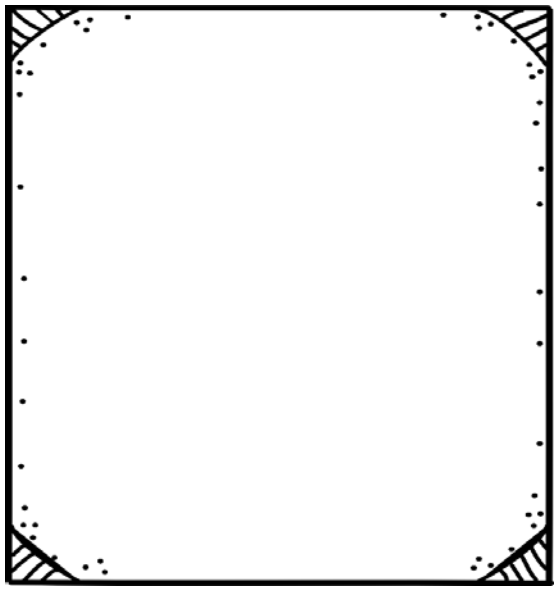
NO

Notes: _____

_____

Date: _____

Today, my plant looks like this:



water:

YES

NO

Notes: _____

_____

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Plant Journal: Student Pages

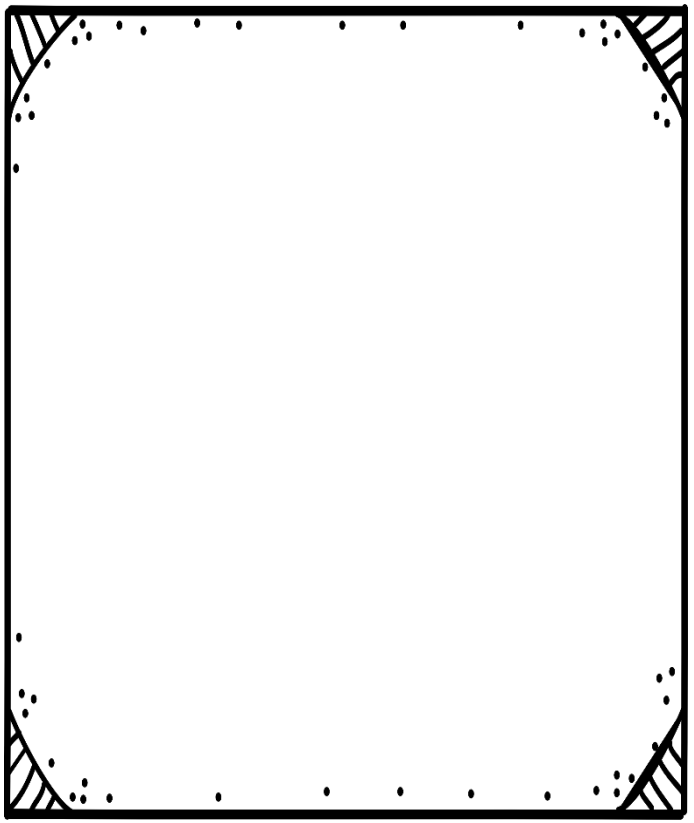
Date: _____

My plant needed these four things to grow:

1.	2.
3.	4.

Date: _____

Here is my plant in full bloom!



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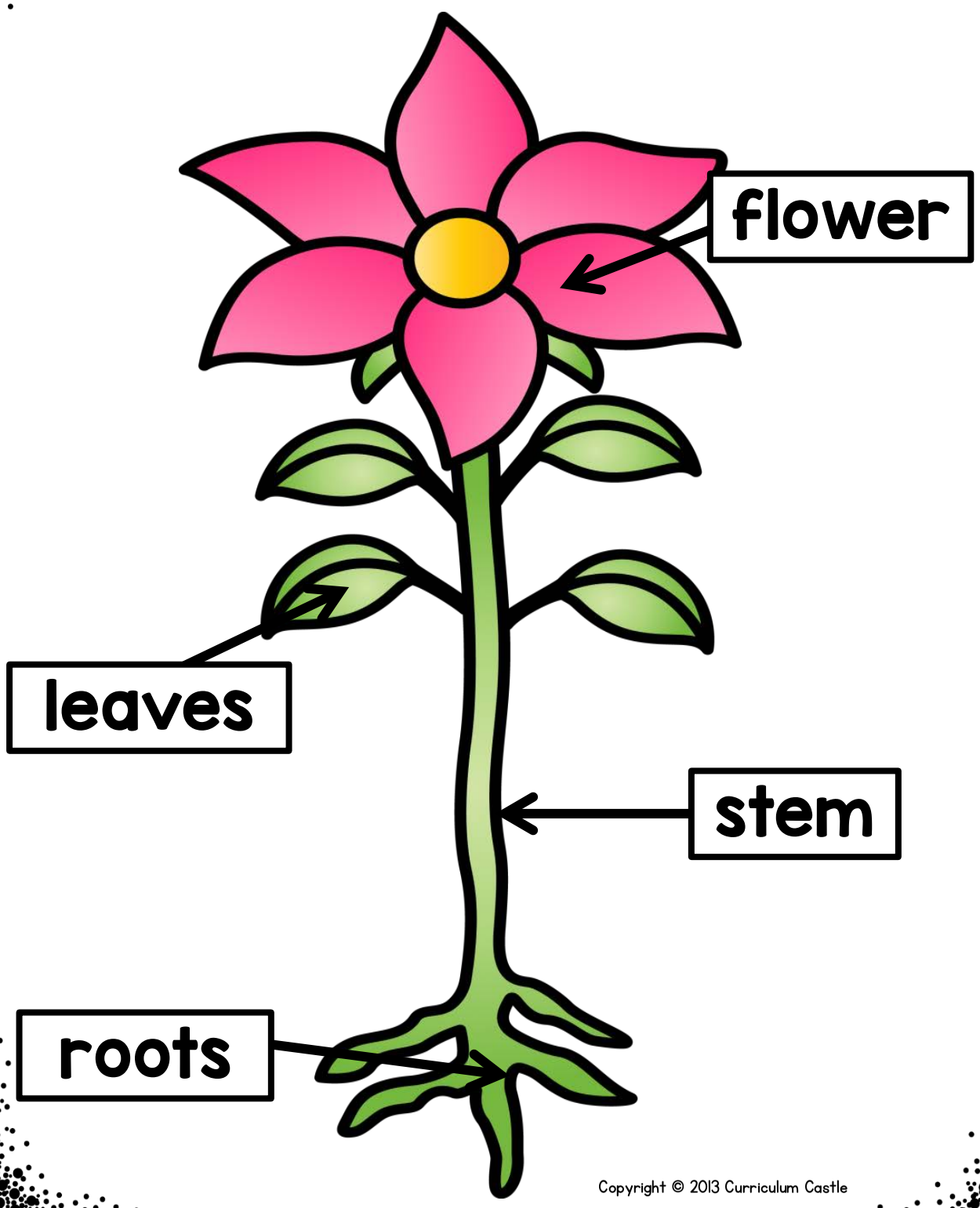
Parts of a Plant



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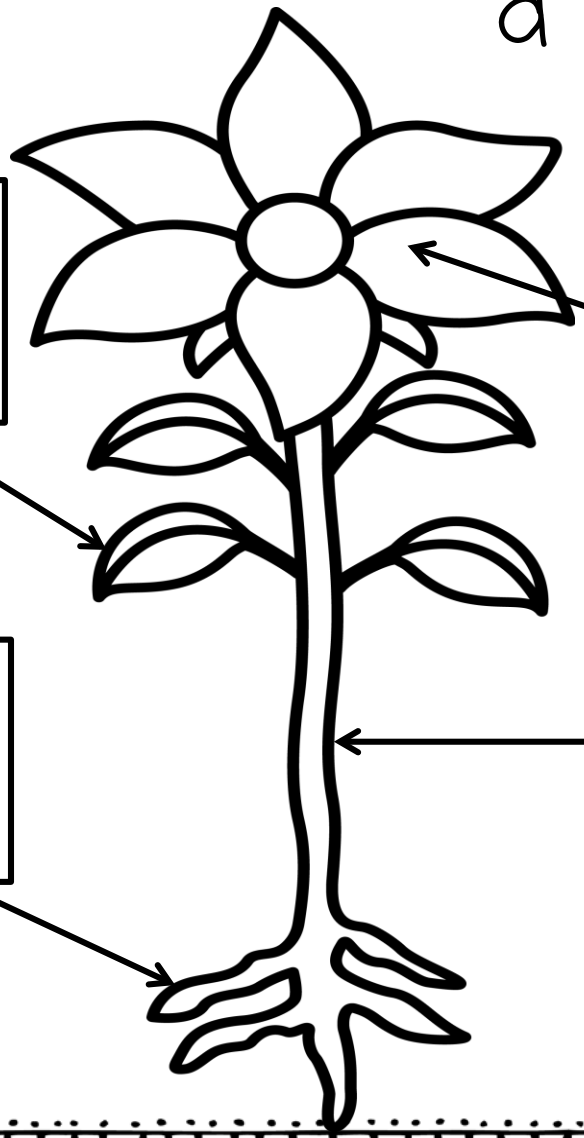
Name: _____

Parts of a Plant

Directions: Label the parts of a plant.



leaves

flower

roots

stem

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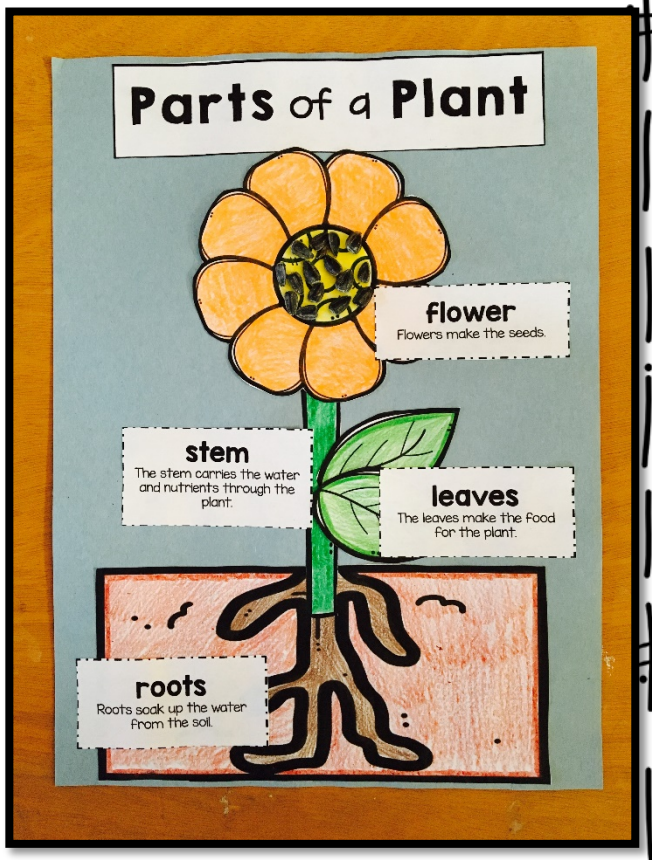
Parts of a Plant Craftivity

Materials:

- construction paper
- " Parts of a Plant" header (p.29)
- flower parts template (p.30)
- flower parts labels (p.31)
- crayons/markers
- scissors
- glue
- *Optional: seeds*

Directions:

1. Print and copy pages 29 -31.
2. Have students color and cut out the flowering plant parts. Instruct students to glue them onto a piece of construction paper and assemble the plant.
3. Glue seeds (for example, sunflower seeds) to the center of the flower, if desired.
4. Give each student one column of plant part labels. Students will now cut and paste the correct label near each part of the flowering plant.
5. Finally, use the "Parts of a Plant" header to label the craftivity!



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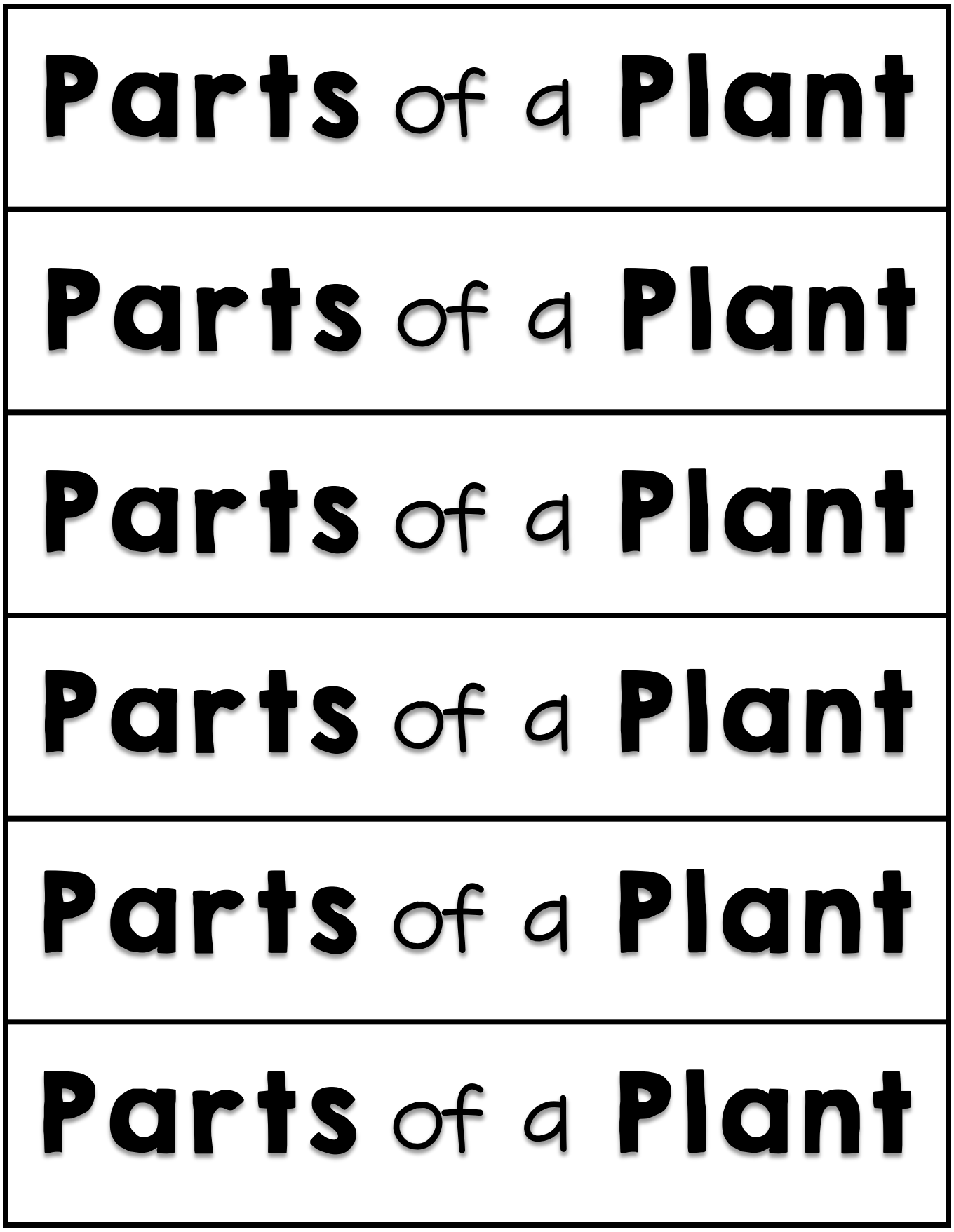
Parts of a Plant: header (one per student)



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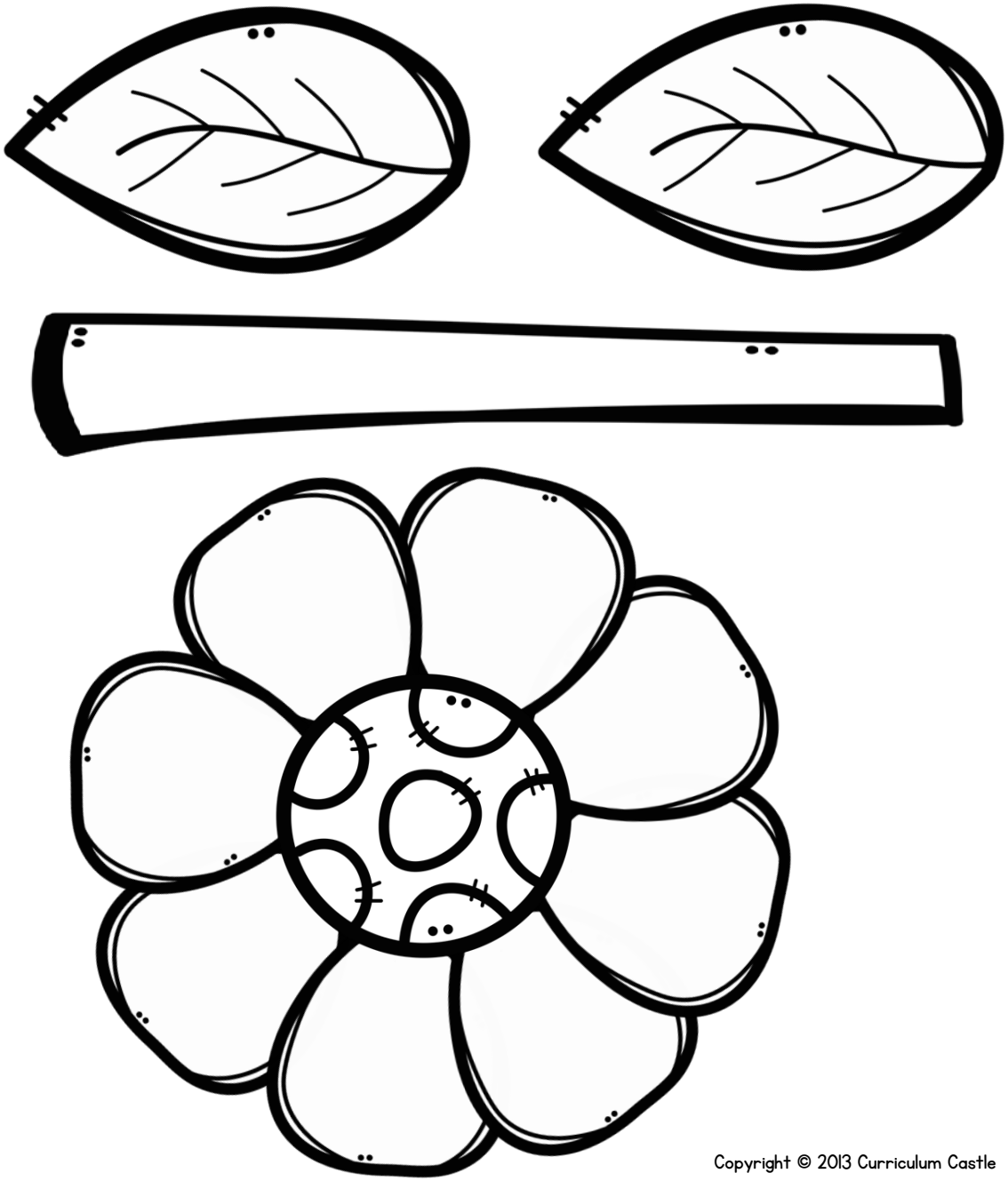
Parts of a Plant: parts to assemble



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Parts of a Plant: labels (one column per student)

roots Roots soak up the water from the soil.	**roots** Roots soak up the water from the soil.	**roots** Roots soak up the water from the soil.
stem The stem carries the water and nutrients through the plant.	**stem** The stem carries the water and nutrients through the plant.	**stem** The stem carries the water and nutrients through the plant.
leaves The leaves make the food for the plant.	**leaves** The leaves make the food for the plant.	**leaves** The leaves make the food for the plant.
flower Flowers make the seeds.	**flower** Flowers make the seeds.	**flower** Flowers make the seeds.

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How Does a Plant *Drink* Water?

Materials:

- ✓(2) clear cups or jars
- ✓food coloring (blue and red)
- ✓celery stalks with leaves
- ✓scissors
- ✓magnifying glass (optional)

Directions:

1. Place 10 -15 drops of food coloring into each cup or jar filled with half a cup of water; (one cup with red and one with blue).
2. Use scissors to cut about a half inch off the bottom of the celery stalk.
3. Place the celery into the colored water.
4. After a few hours, have students gather around to see how a plant absorbs the water through the stem like a straw. This is the same way water travels from the roots up to the stem and finally reaches their leaves.
5. The children will notice that the celery is "drinking up" the water as they see it start to take the color of the water in the jar! Have them use the observation sheet on page 33 to record the results.

***NOTE: We start this experiment in the morning and observe the results in the afternoon or the next day.







After the experiment, cut open and peel the celery stalks. Allow students to use magnifying glasses for an up close view of the "tubes" that carry the water through the plant!

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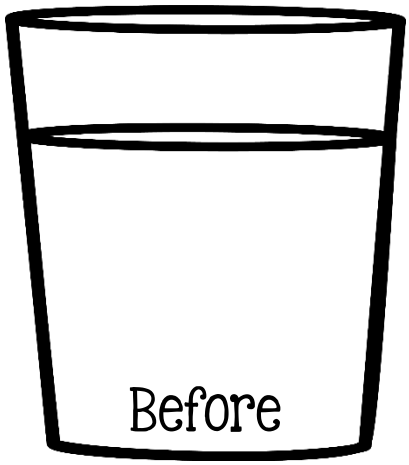
Name: _____

Celery Observations

Directions: Draw your results and answer the question.





What happened to the celery when it was placed in the colored water?

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Pollination: BEE-ing a Plant Helper!



Materials:

- ❑ cheesy Puffs or Cheetos
- ❑ cupcake liners
- ❑ glue sticks
- ❑ flower template



Directions:

1. Print and copy the flower template (page 35). Cut in half and give each student one half sheet.
2. Have students paste one cupcake liner to the center of their flower.
3. Place a small handful of cheesy puffs inside each cupcake liner.
4. Instruct the student to touch the cheesy puffs with their fingers (if you desire, they can eat them as special treat)!
5. DO NOT allow them to lick or rub off the cheese power that is remains on their fingertips.
6. They can now "visit" their neighbor's flowers by touching the petals with their fingers.
7. Have them observe how the cheese powder is being transferred to the different flowers.
8. Explain to them that this similar to the way a bee's legs would be covered in pollen. Part of a bee's job is to transfer pollen from flower to flower!

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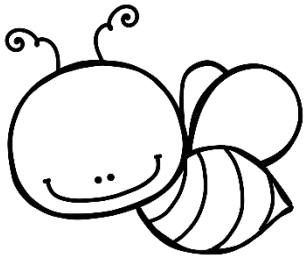
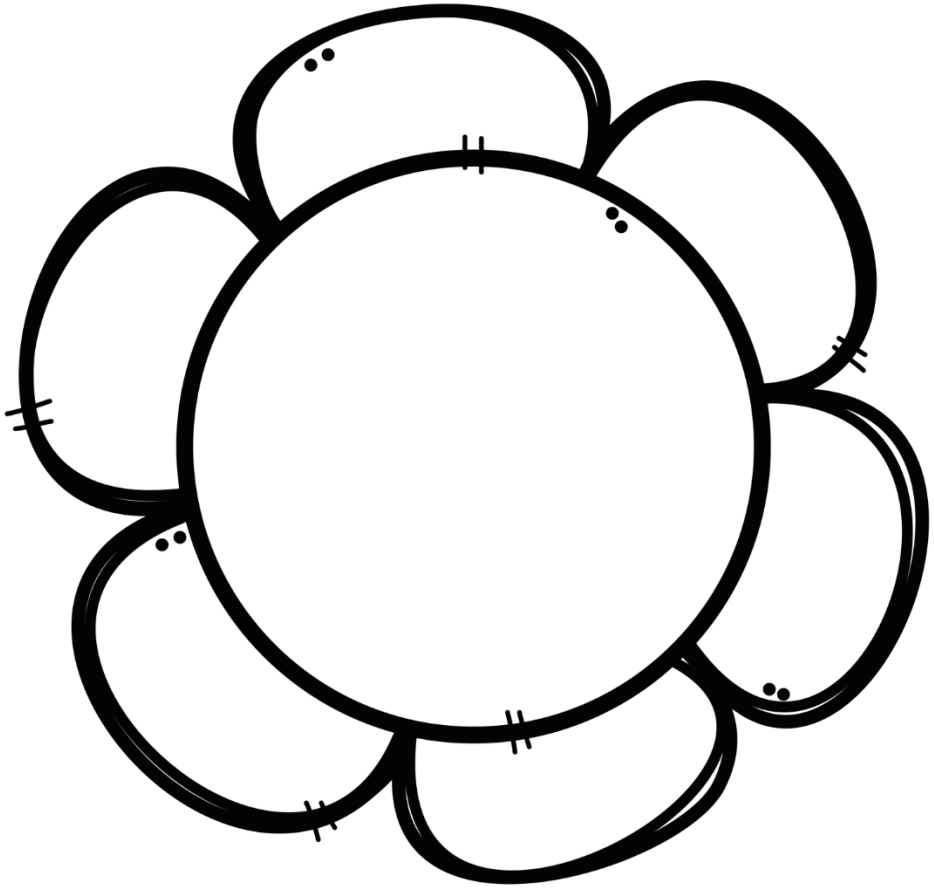
Name: _____



Bee-ing a Plant Helper!



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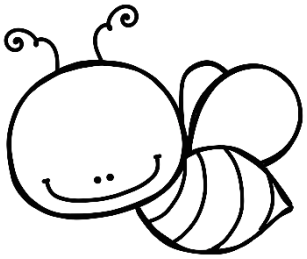
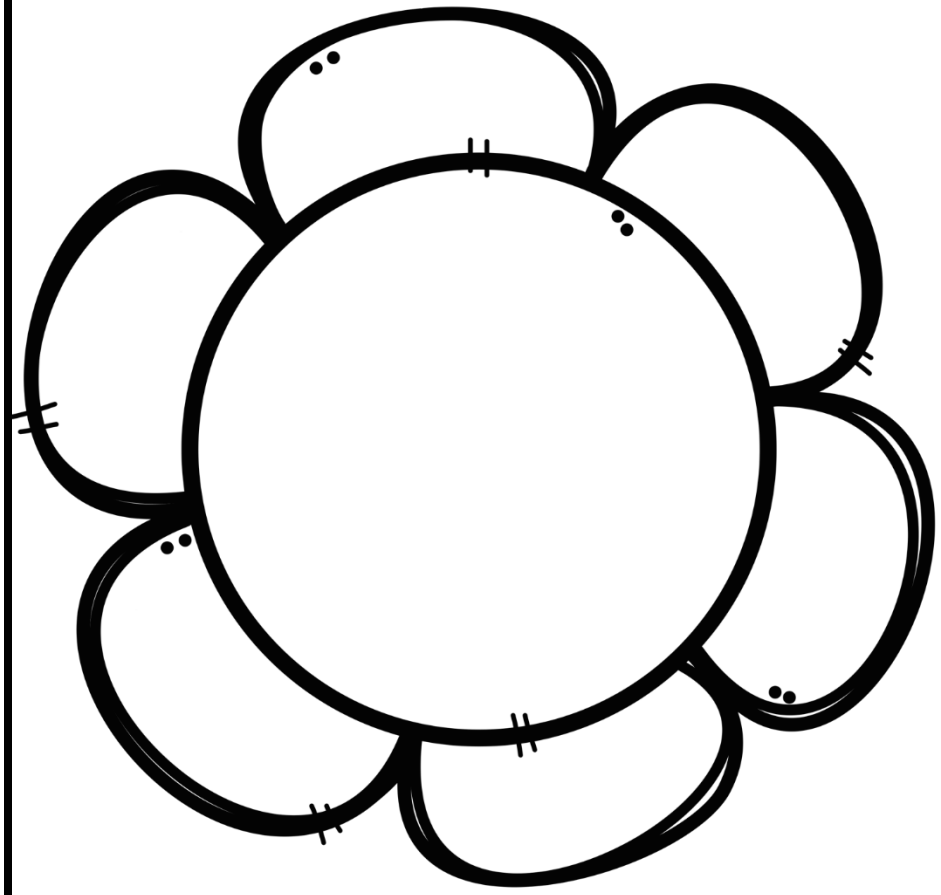


Bee-ing a Plant Helper!



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Snack Idea: I Can Eat a Whole Plant!



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Materials:

- ❑5 bowls labeled with the different plant parts as follows: roots, stems, leaves, flowers, seeds
- ❑food for each bowl (see chart on page 37)
- ❑"I Can Eat a Whole Plant" printable (page 38)

Directions:

1. Ask students if they have ever eaten a whole plant (roots, stem, leaves, flower and seeds). Tell them that will have the chance to do so today!
2. Show them each labled bowl and discuss how each food item comes from that part of the plant (for example, a single pea is a seed; a piece of spinach is a leaf).
3. After washing their hands, have them take one food item from each bowl and place it on their "I Can Eat a Whole Plant" sheet in the correct section.
4. Once they have correctly placed each item, allow them to taste each part of the plant!

Plant Snack:

I Can Eat a Whole Plant

Use one food item from each section:

seeds: peas, corn, kidney beans, lima beans
flowers: broccoli, cauliflower
stems: celery, asparagus
leaves: lettuce, cabbage, spinach, basil
roots: carrots, sweet potatoes, turnips, beets, radishes



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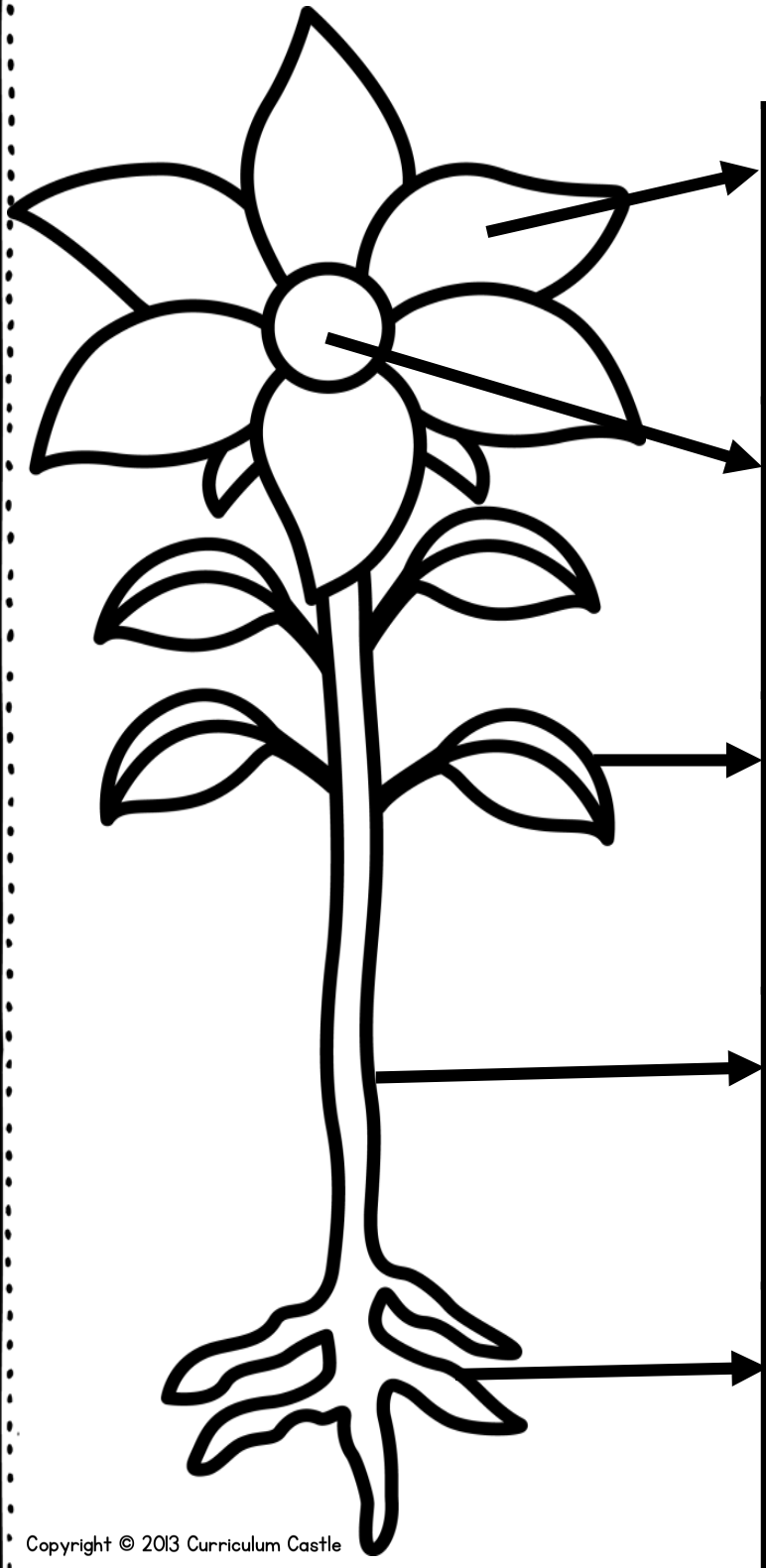
I Can EAT a Whole Plant



flower

seed

leaf

stem

root

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