



Grow Your Own Snack!



Upper Elementary STEM Mini-Project

Dear Junior Scientist,

We hope you are enjoying the spring season, and we hope you are looking forward to the first day of the summer season on June 20th. Spring is a great time for people to plan and plant their gardens if they want healthy snacks and meals in summer. A lot of the plants we eat grow well in warm soil and with lots of sunlight.

We got you some materials so that you can plan, plant and grow your own mini-garden in your home, or outside if you have the right spot. In this mini-project, you'll also go on a "seed scavenger hunt" where you'll look for flowering plants and the seeds they make to grow new plants.

Before you get started, we have some good news and some...*other* news. The good news: we were able to send you four different types of seeds! You have sunflower, radish, bean, and pea seeds. Yum! And the...*other* news: the seeds got all mixed up and you'll have to sort them before you can plan and plant your mini-garden. Now, go find the bag of seeds in this kit, and head to the next page to get started.

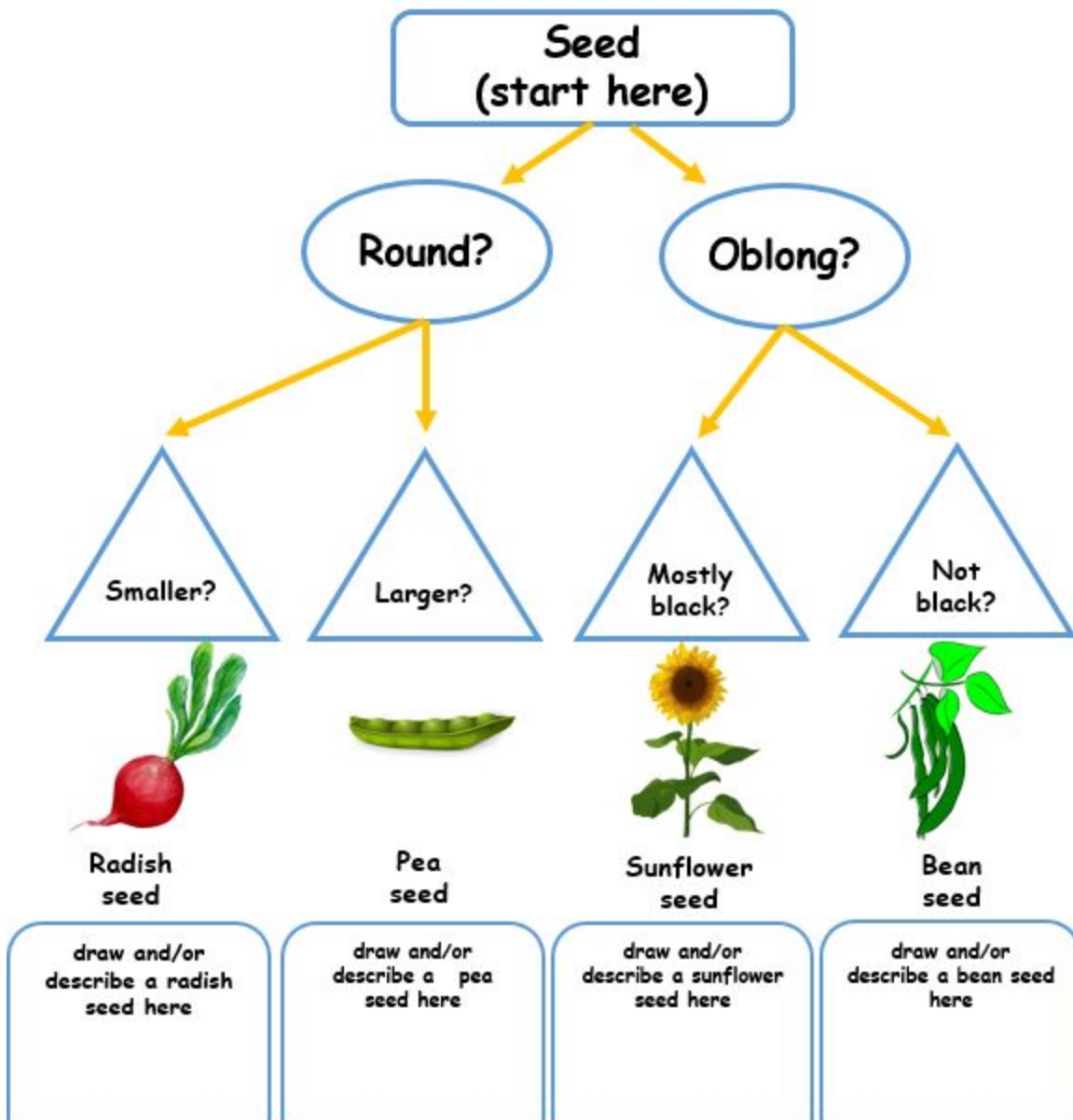
Good luck,

The ESD 112 STEM@Home Team!

Sort Your Seeds

Directions:

1. Choose a seed and place it on top of the rectangle that says, "Seed (start here)".
2. Make a decision - is your seed more round, or more oblong? Move your seed to the correct oval.
3. Then, make the next decision and move the seed into the correct triangle.
4. Draw and/or describe this seed in the box under the drawing of the grown plant.
5. Repeat steps 1-4 for each new kind of seed.



Seed Scavenger Hunt

Now that you've identified the seeds in your STEM kit, let's do some exploring and see what kinds of seeds you can find in the neighborhood. Ask a grown-up to take a walk with you and look for as many different types of seeds as you can. Record your findings on the next page.



Seed Scavenger Hunt

Seed Draw a picture of a seed you found	Location Where did you find it?	Parent Plant What plant do you think the seed came from?	Other Observations

****Extra challenge - can you find:**

- ☐ A seed that travels at least 3 feet when you blow on it
 ☐ A seed that might stick to an animal's fur
- ☐ A seed that might be food for an animal
 ☐ A seed from a tree
- ☐ A seed head that has more than 20 seeds in it
 ☐ A seed that is camouflaged or hard to see

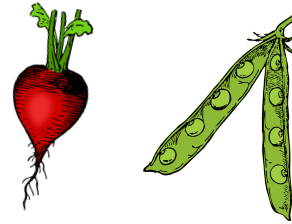
Let's talk!

How did the seed scavenger hunt go? Did you find lots of different types of seeds in your neighborhood? As you probably know, a seed is the part of a plant that can grow into a new plant. Seeds are **living** things. Although seeds are **dormant** (resting), their cells are still alive and waiting for the right conditions to grow. Because seeds contain nutrients for the young plant to begin growing, many types of seeds are also an important food source for people and animals. Can you think of any seeds that people eat? You might be surprised to learn that grains like wheat and rice are seeds. Talk with a grown-up and brainstorm as many examples as you can of seeds that we eat. How many seeds have you eaten today?

Record your **edible seed brainstorm** in the space below:

Planting Your Seeds

- ☐ Two different types of seed – two of each type
- ☐ Dixie cups
- ☐ Soil
- ☐ Pencil



Directions:

1. Use the sharp tip of a pencil to poke 4 small holes in the bottom of each small cup. This will allow extra water to drain out when you water your plants.
2. Put soil in your small cups. Fill to about 0.5 inch from the top of each cup.
3. Choose two plants that you want to grow, one for each cup. Label each cup with the type of plant you are trying to grow in it.
4. Make a hole into the soil using your pinkie finger or the end of a pencil to the correct depth for each seed you selected. (radish = 0.5 inch deep; bean = 1 inch deep; pea = 2 inch deep; sunflower = 1.5 inch deep) In case you don't have a ruler, you can use a quarter to measure. A quarter is about an inch wide.
5. Drop 2 seeds of your selected plants into the hole in each labeled cup. (Example: 2 bean seeds in the cup labeled "bean," and 2 sunflower seeds in the cup labeled "sunflower.")
6. Use your finger to move the top layer of soil around so the seed is covered with soil and the surface of the soil is flat.
7. Hold the cups over the sink and add enough water to soak all the soil in the cup, but no more. Let the extra water drain, then put the cups on a flat surface on a plate or stack of napkins so the water doesn't damage your flat surface.
8. Repeat step 7 every couple of days, or whenever you notice that the soil is dry.
9. Make observations of your germinating plants on your observation sheet.
10. If both seeds in a cup germinate, or start growing, use scissors to carefully cut off the top of the smaller plant so the bigger one has more room to grow.
11. After a couple of weeks, if you have a space outside to grow plants, consider planting your young plants outdoors by carefully cutting away the paper cup and placing the small plant into the ground.

Observe Your Plants

Over the next few weeks, be sure to care for your seeds and watch them closely for signs of growth. Once you see signs that your seeds are growing, use the table below to record your observations.

Seed: _____

Date	Height	Observations

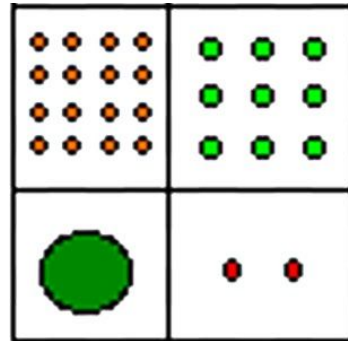
Seed: _____

Date	Height	Observations

Planning a Garden

1. On a blank piece of paper, draw a big square. Then, draw two straight lines to turn your big square into four equal-size squares in a 2-by-2 grid.
2. This grid is a model for your imaginary garden. Imagine that each small box is 12 inches across and 12 inches tall. Label your four boxes to show this.
3. Use the chart on this page to tell you how far apart your seeds need to be placed in order to have enough room to grow, and then plan your imaginary garden. You may choose to grow a different plant in each square, or you may choose to put a mix of plants in some squares. Just make sure you are giving your plants the space they need to grow the best!
4. If you have an outdoor space to plant a real garden, build your model garden outside with an adult's help.
5. Water your garden when you see that the soil is dry. Young plants need water and sunlight to grow into adult plants.

Plant Name	
Radish	



www.stemmaterials.org/stemathome for additional

