

WHAT ARE WE INVESTIGATING?

Can I grow plants out of a ziplock bag?

MATERIALS:

- Bean Seeds (or any other plant seeds)
- Paper Towel
- Plastic Baggie
- Tape
- Strive Academy's Engineering Design Process Handout (found at www.striveacademy.org)
- Pencil or Pen

EXTENSION:

- * Try this variable - repeat the experiment but with a different type of seed.
- * Try this variable - repeat this experiment but with actual pinto beans.
- * Try this variable - repeat this experiment but don't put the wet paper towel in the bag. How does this affect your experiment?

DIRECTIONS:

**** Before beginning this experiment, soak your seeds in water overnight. You'll get faster results this way! ****

1. Gather all of your materials. Our materials are just suggestions - feel free to add other things too!
2. On your handout (found at www.striveacademy.org), fill in the title of your experiment (Ziplock Bag Plants).
3. On your handout, fill in your hypothesis. You want to answer the question: How long will it take for my plants to grow?
4. On your handout, sketch a design of your experimental setup. Feel free to use color and label the materials that you will be using!
5. Dampen a paper towel. Fold it in half and then in half again. Place it in the plastic bag.
6. Place the seeds along one side of the plastic bag and press them against the paper towel. Seal the bag tightly.
7. Tape the bag to a window. Make sure the seeds are on the side that you can observe each day.
8. Under "Data Collection/Observation", draw a picture of what your experiment looks like after it is all set up. Feel free to use color!
9. After 24 hours, observe what your seeds look like. Under "Results", write "1 Day" and draw a picture of what your seeds look like.
10. Repeat step #9 for the next 5-7 days. Under "Results", write "2 Days", "3 Days" and so on and draw a picture each day. You'll be seeing seeds sprouts and leaves emerge!
11. After a week, you can move the plants to a small pot and continue to watch them grow!
12. Answer the "Analysis" questions on your handout:
 - How many days did it take to see your seeds pop open and sprout?
 - How many days did it take to see leaves emerge?
 - How many days did it take to see roots form?

**** Try the extension activities on the first page for more fun! ****