

## WHAT ARE WE INVESTIGATING?

What happens to a gummy bear if it soaks in different liquids?

## MATERIALS:

- Gummy Candy (gummy bears, gummy worms, fruit snacks, etc.)
- Bowls/Cups
- Water
- Sugar
- Salt
- Vinegar
- Strive Academy's Engineering Design Process Handout (found at [www.striveacademy.org](http://www.striveacademy.org))
- Pencil or Pen

## EXTENSION:

- \* Try this variable - soak the gummy bear in other liquids and see what happens. Or use different temperatures of water and see what happens.
- \* Try this variable - try a different type of gummy candy with the same liquids and compare your results.
- \* Add some math - mass your gummy bears before and after they soak in the bowls using a food scale.

# Grow A Gummy Bear

## DIRECTIONS:

1. Gather all your materials. Our materials are just suggestions - feel free to add other things too!
2. On your handout (found at [www.striveacademy.org](http://www.striveacademy.org)), fill in the title of your experiment (Grow A Gummy Bear).
3. On your handout, fill in your hypothesis. You want to answer the question: What will happen to a gummy bear when I soak it in water, sugar water, salt water, and vinegar?
4. On your handout, draw your experimental setup. Be sure to label which bowl/cup is which liquid. Feel free to use color!
5. In the first bowl/cup, pour in some water. Then add a gummy bear. Label your bowl/cup "water" (you can just use a sticky note to label).
6. Repeat step 5 for the other liquids. Bowl 2 is sugar water (water with some sugar dissolved in it). Bowl 3 is salt water (water with some salt dissolved in it). Bowl 4 is vinegar.
7. Leave your gummy bears in the bowls for at least an hour. You can leave them longer if you want. Under "Data Collection/Observation", draw a picture of what each gummy bear looks like after soaking in the bowls. Feel free to use color!
8. Under "Results", make a table with one column labeled "got bigger" and one column labeled "got smaller". List the liquids in the appropriate columns.
10. Answer the "Analysis" questions on your handout:
  - How did your results compare to your hypothesis?
  - Some of the gummy bears absorbed water. Were these the ones that got bigger or smaller? How do you know?
  - This experiment has to do with osmosis - the movement of a liquid through a barrier. What was the barrier in this experiment?

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