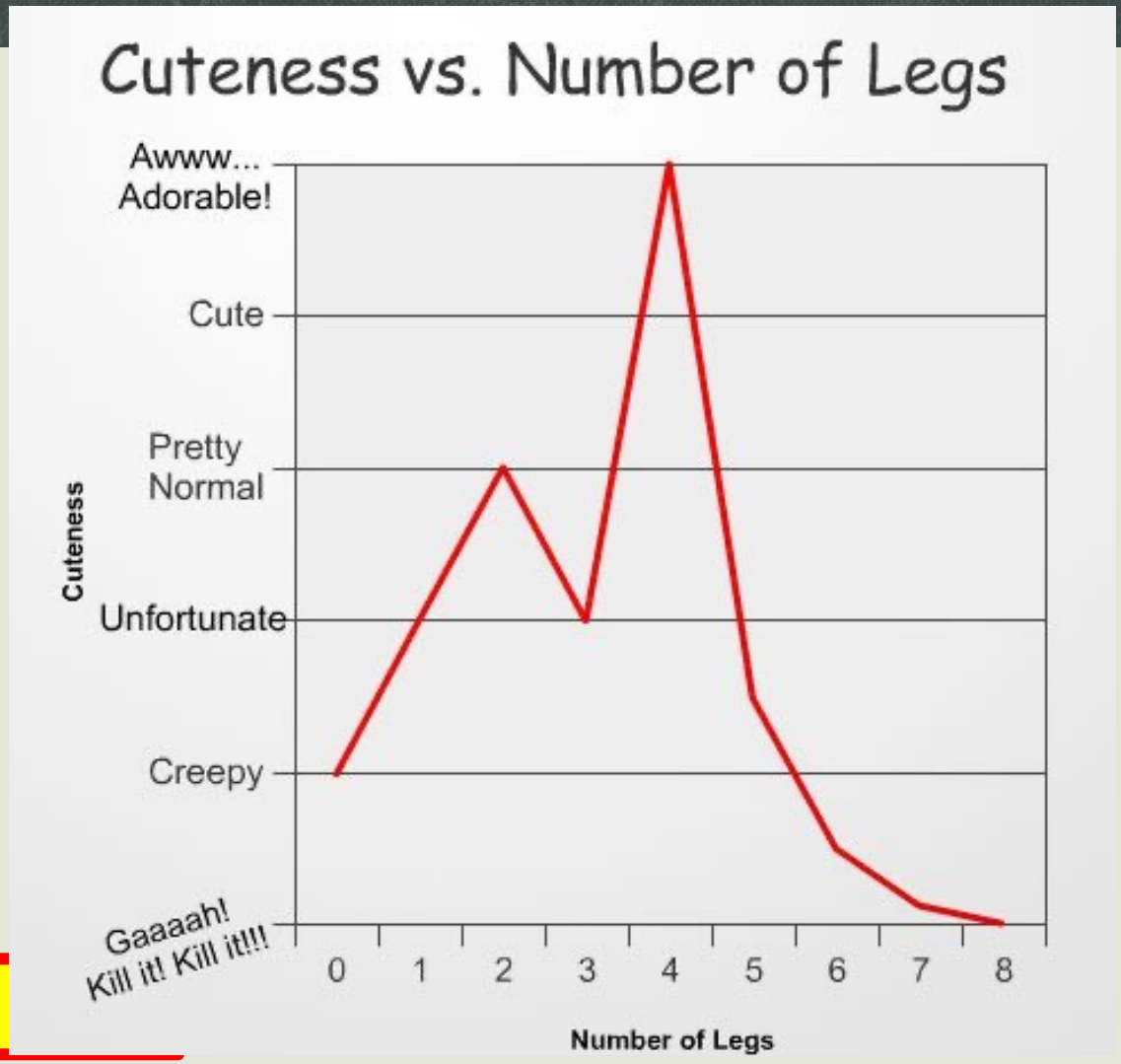
Agenda

- Line graph lab
- Class time for HW

Bell Work

- Interpret the graph below:

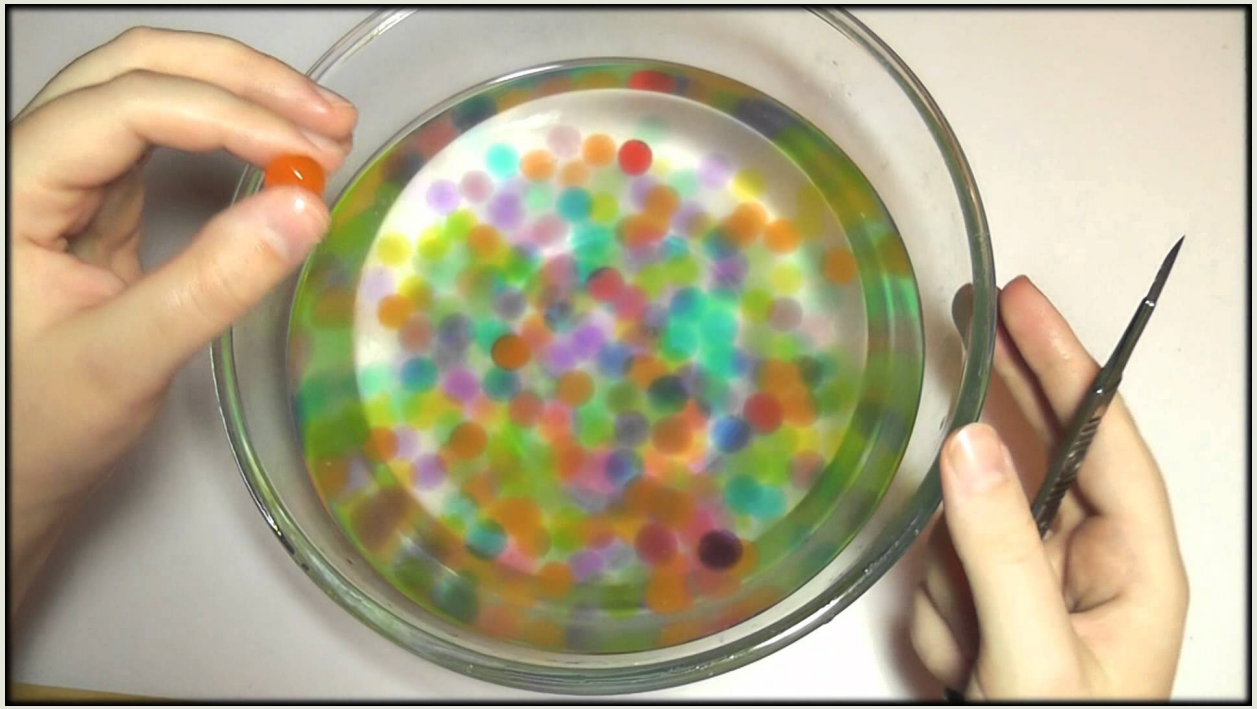


ON YOUR DESK!!! CJ, bellwork notebook

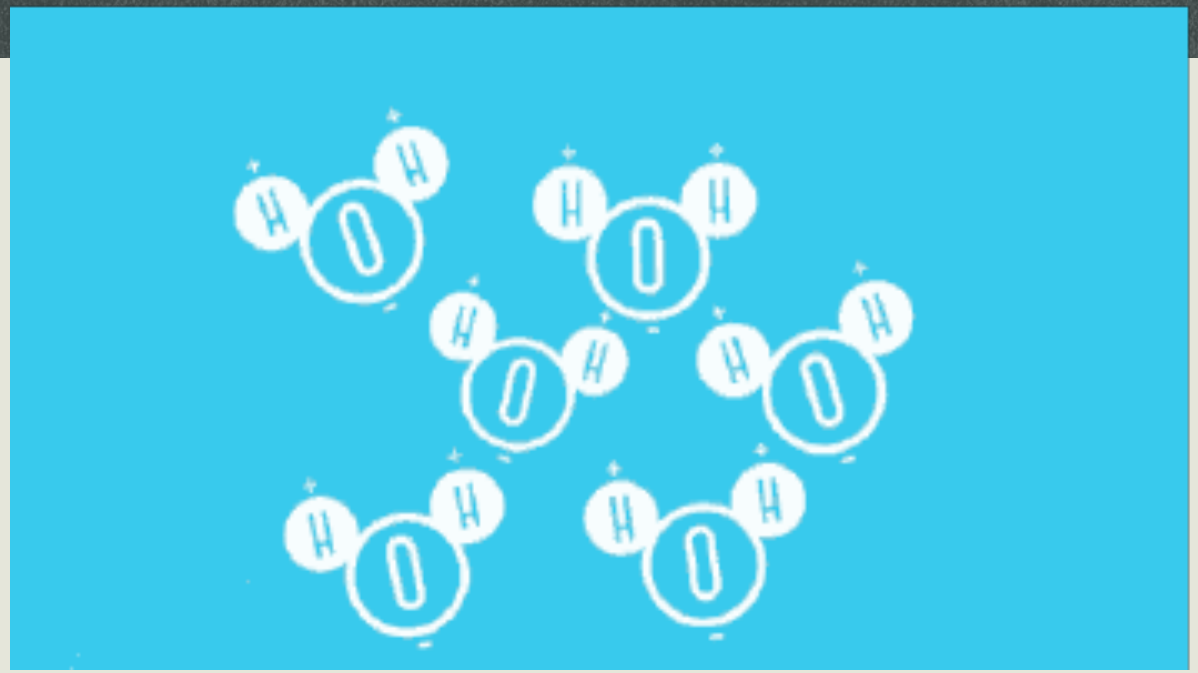
Line Graph Lab!

WATER MARBLES!

- We are going to put water marbles in water that is room temperature and water that is cold and measure how big it gets over time!



TEMPERATURE AND MOVEMENT OF WATER MOLECULES



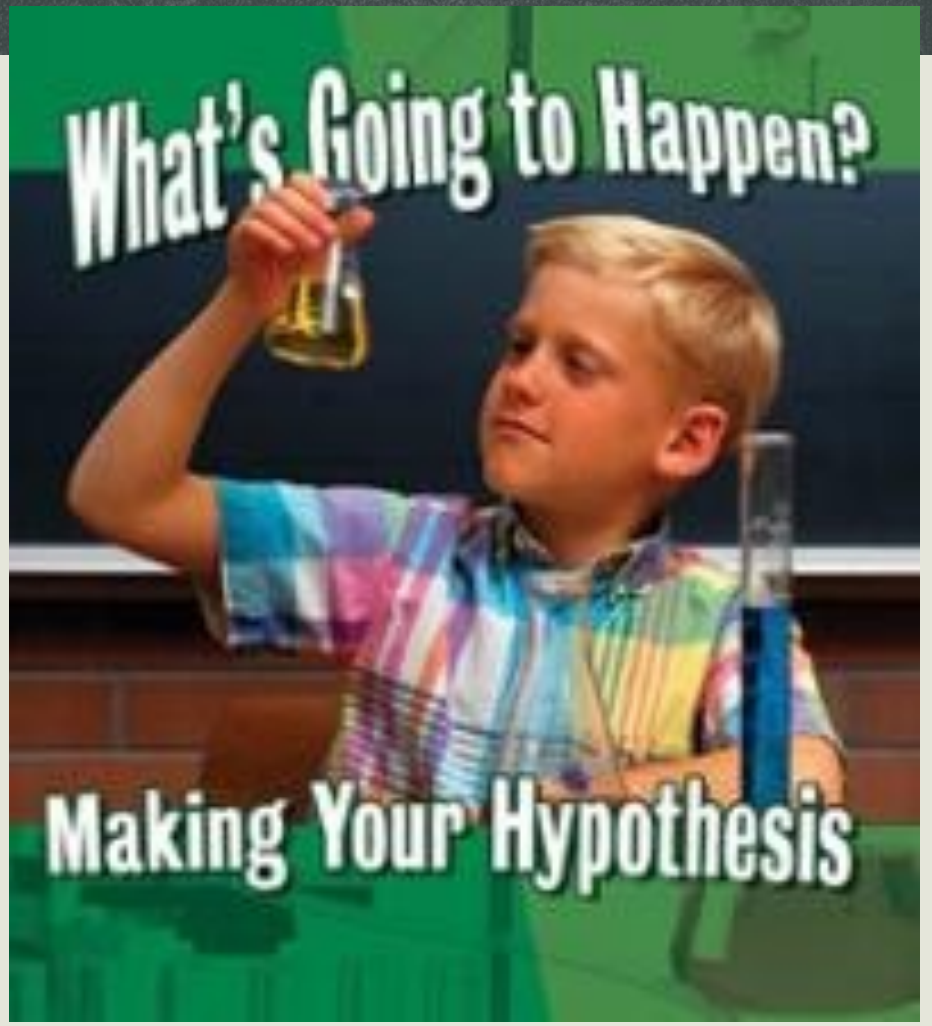
- Water molecules are constantly **moving**.
- **Temperature** affects the speed at which water molecules move.
  - **Colder** temperatures will slow down molecules.
  - **Warmer** temperatures will speed up molecules.

TEMPERATURE AND MOVEMENT OF WATER MOLECULES

- Each group will get a cup of room temperature water, a cup of ice water, and 2 water marbles.
- In what temperature water do you think the water marble will get big the *fastest* in and why?

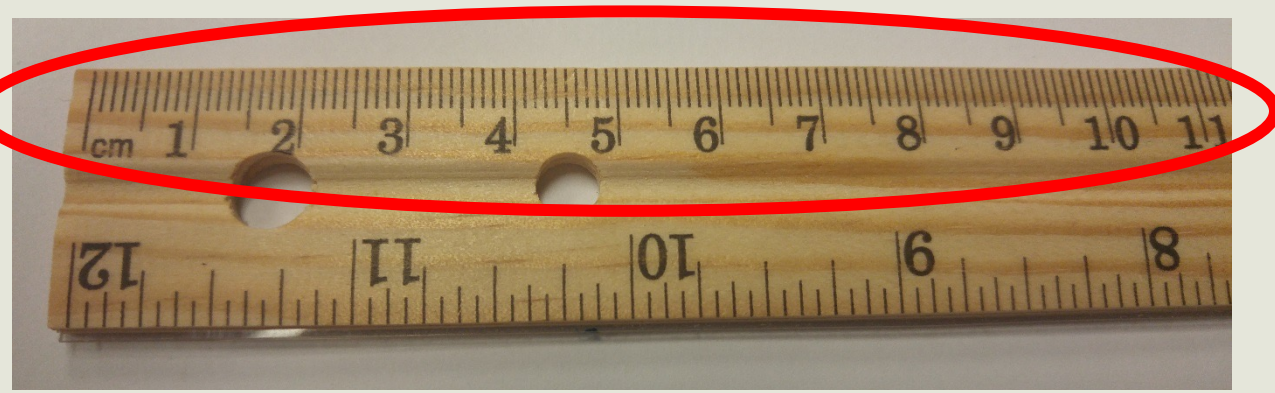
  Warmer because warmer temperatures speed up molecule movement
- Write a hypothesis in the appropriate format!

  <u>Water marbles in warm water will get bigger faster.</u>



METHODS

1. Divide into groups of 2 - 3
2. Once you get your water marbles make an **initial measurement**.
   - We are measuring in **millimeters**!
3. Once Ms. Gburek starts the timer drop 1 water marble in the room temperature water and 1 water marble in the cold water.
4. Every **2 minutes** remove the water marbles with the spoon, put them on a paper towel, and measure them with the ruler.
5. Record your measurements in the two **data tables**.
6. Stop after **20 minutes**.



Data Tables

Room Temperature Water

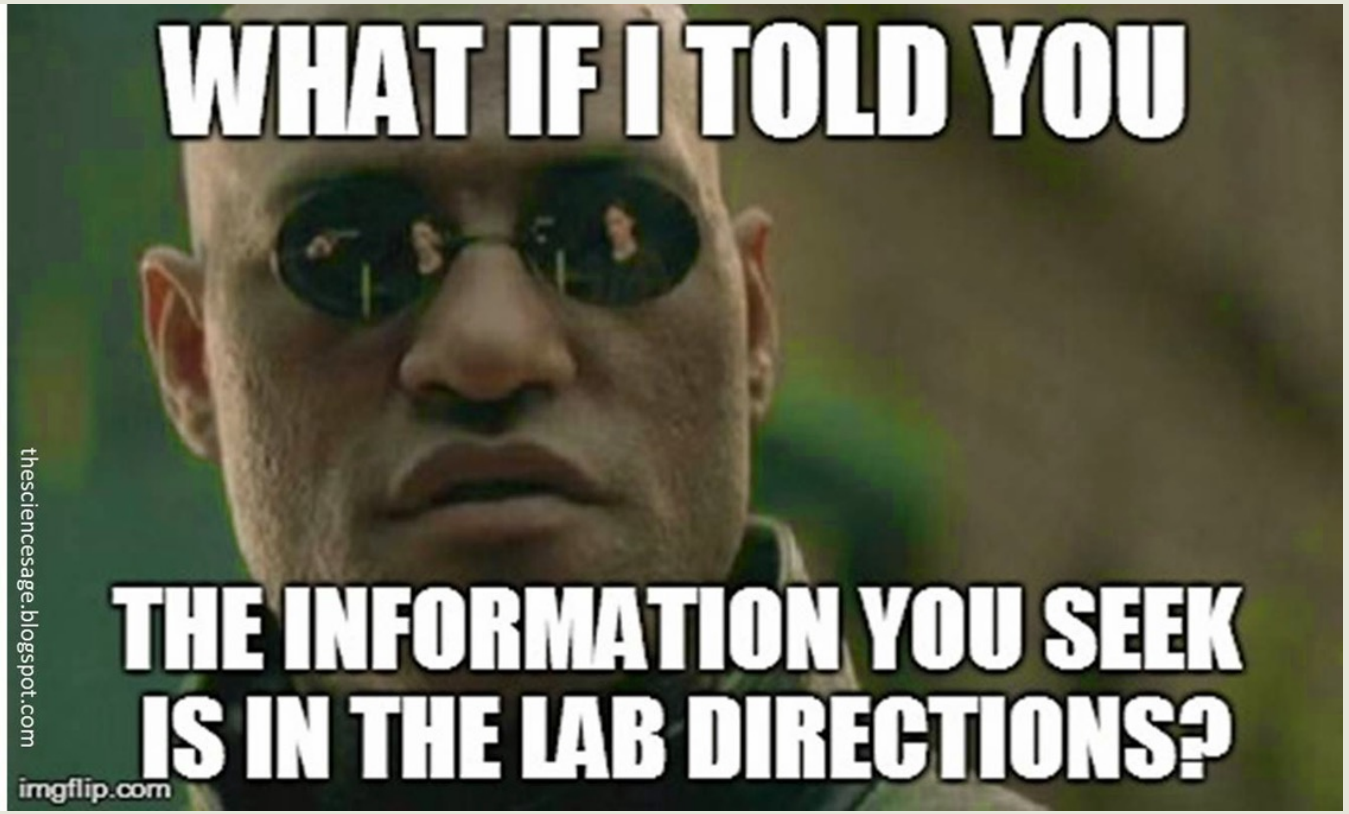
Time (minutes)	Size (millimeters)
0 minutes (initial)	
2 minutes	
4 minutes	
6 minutes	
8 minutes	
10 minutes	
12 minutes	
14 minutes	
16 minutes	
18 minutes	
20 minutes	

Ice Water

Time (minutes)	Size (millimeters)
0 minutes (initial)	
2 minutes	
4 minutes	
6 minutes	
8 minutes	
10 minutes	
12 minutes	
14 minutes	
16 minutes	
18 minutes	
20 minutes	

Lab Questions and Graphing

- Answer your pre-graphing lab questions
- Do **NOT** throw away cups or spoons! Rinse in sink and set out to dry!
- Put your water marbles in the beaker!
- You will be making TWO graphs! Use colors!
    1. Water marble in room temperature water
    2. Water marble in cold water
- If there's time left, begin answering your post-lab questions!



Class experiment!!! Expanding starfish!!!

Pick 1 person in your group to get your supplies!!!!

- Per group:
  - 1 cup room temp. water
  - 1 cup ice water
  - 2 water marbles
  - 1 ruler
  - 2 spoons
  - 1 paper towel

http://www.online-stopwatch.com/countdown-timer/