

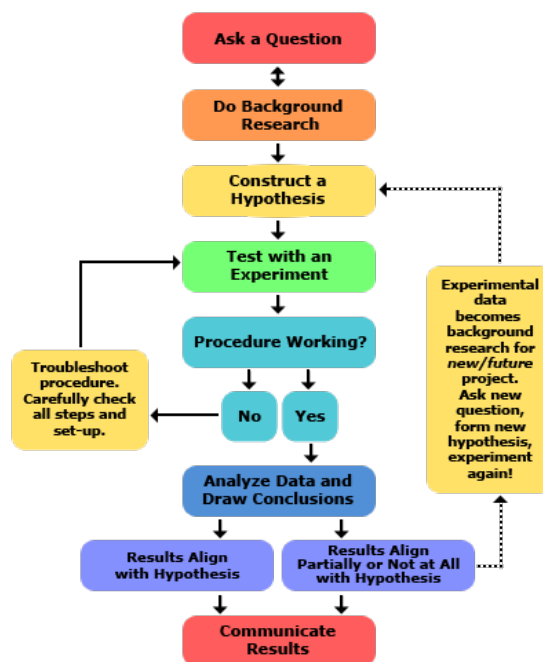
# Homework: The Scientific Method

The **scientific method** is an idealized version of the way scientists use to create scientific knowledge. Its a process that tries to make sure the scientist does not jump to conclusions or just guesses at the result and claims this to be true.

To get an idea, study the flow chart and read the steps here: <https://www.sciencebuddies.org/science-fair-projects/science-fair/steps-of-the-scientific-method>

This is not the only way to do science, but it is a useful guideline to make sure you're not forgetting anything. (In the same way mathematicians don't usually use the middle school algorithm to solve equations, but it is still a useful thing to make sure you understand what you are doing.)

This is why in this homework, you are going to try and relate what you did in the labs to the method described here.



Write a short essay (aim for one page or less):

- **Pick a hypothesis/rule** you tested in one of the previous labs. (e.g., you can use prediction in point 4 of the springs lab or the bubble laws in point 4 of the surface tension lab as hypotheses).
- Go **through the steps** in the flow chart and describe how they relate to what you did in the labs.
- Discuss whether and how you **deviated** from the procedure in the flow chart in the lab and assess whether that might have affected your results
- Try to play **devil's advocate**: can you find anything in how you conducted the experiment that can be improved upon?

Bring a **hard copy of your paper** with you.