



Nature of Science

What is Science?

- **Take out a piece of paper**
- **Write down the following words and explain how you use the words in “everyday language”**
- **Law, theory, hypothesis, and fact**

Science Talk

- This is what the words mean in “science lingo”;
- Theory- well supported explanation of an aspect of the natural world. Can include; facts, laws, inferences and tested hypotheses.
 - You may have used it before as; a guess, inference, etc. In everyday language, it’s an unsupported guess.
- Fact (scientific)- Observation that has been repeatedly confirmed.
 - Previously used as hard evidence, always true

- **Law**- descriptive generalization about how some aspect of the natural world behaves.
 - Think of a law as a “set of rules” that can also predict future occurrences
- **Hypothesis**- testable statement about the natural world that can be used to build a more complex explanation.
 - You may have used it as; an educated guess, question

- **Get into groups of 4-5**
- **Make sure you EACH have a paper and pencil!**
- **Each group will work in a different location (4 in the back at the lab desks and 1 or 2 in each side of the front of the room)**

Cube #1

- **DON'T PICK YOUR CUBE UP!!!! YOU CAN'T SEE THE BOTTOM!!!**
- **You are going to make observations and hypotheses to test**
- **Observe the different sides of the cube, what do you believe is on the bottom? Why? TAKE NOTES of your observations and hypotheses.**

Cube #2

- First... why did I take cube #1 away without letting you see the bottom?
- Do the same for cube #2 as you did for #1, don't forget to write down your observations and hypotheses.
- What is on the bottom of cube #2?

Cube #3

- **This one is different!!!**
- **As a group, you're going to make a cube for the other groups to analyze.**
- **Make sure that there is a logical way to come to a conclusion of what is on the bottom of your cube. You will get a grade for this!!!!**
- **There are markers, crayons, scissors and tape in the back of the room for you to use.**

Exit Pass

- Before you leave the classroom you need to answer the following question AND attach your answers from the beginning (what are a fact, law, etc?) to the exit pass.
- How do *scientific* laws, facts, theories and hypotheses fit into a scientific investigation????
Use examples!!!!
- **HAND IN:**
 1. cube and piece of paper that explains which cube is yours and the NAMES of the members in your groups.
 2. Your answers from the beginning attached to your exit pass.