

NOTES

PS CHAPTER 1:

Introduction to Physical  
Science

1.1 What is Physical Science?

**Science is a way of learning about the natural world by gathering information through:**

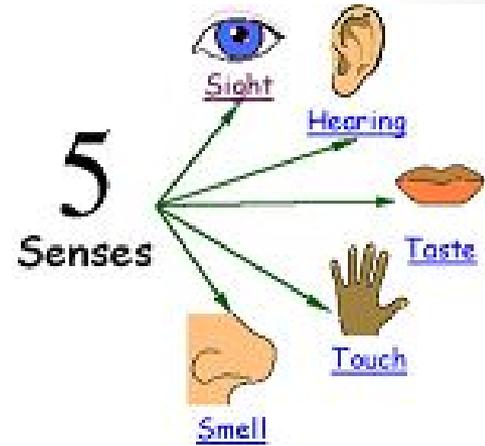


**observing,**

**inferring,**

**and predicting.**

**OBSERVING** means using one or more senses to gather information.



**QUALITATIVE OBSERVATIONS** are descriptions that do NOT involve numbers or measurements.

- The dog is...
- The candy tastes...
- The teacher looks...

**QUANTITATIVE OBSERVATIONS** are measurements. This is called data, or evidence, in science.



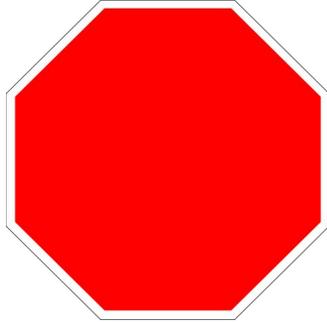
How tall are you?  
How much does a pound of feathers weigh?

Did you know there are National Pillow Fight Days all around the world?



**INFERRING** is when you give an explanation for what you have observed, based on reasoning from what you already know.

That's inferring!



What word do you think goes on this sign? Why?

inferring = verb    inference = noun

Are inferences always right?

How could you prove your inference?



Let's say you ate a chocolate chip Pop-tart before taking a science test, and you aced it! Would a reasonable inference be that eating a chocolate chip Pop-tart before taking a science test caused your amazing grade?

PREDICTING means making a forecast of what will happen in the future based on past experience or evidence.

If I say that our girls' volleyball team will beat ALA in the next match-up, is that a guess or a prediction?



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The difference between a guess and a prediction is a PREDICTION is based on data.



WE ARE

**CHARGERS!**



WE ARE

**CHARGERS!**

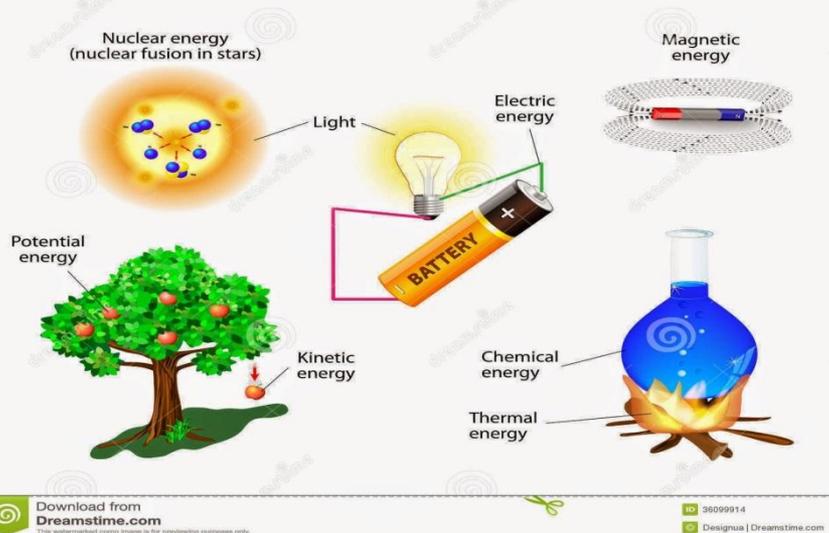
**PHYSICAL SCIENCE** is the study of matter, energy, and the changes they undergo.

**Matter** is anything that has mass and occupies space.



**Energy** is the ability to do work or cause change.

### FORMS OF ENERGY



# PHYSICAL SCIENCE is divided into two main areas:

## 1. CHEMISTRY



the study of the properties of matter and how matter changes



Two atoms,  
walking down a street...

## 2. PHYSICS

the study of matter and energy and how they interact

