

What is Science?

- A special way of _____ and _____ the natural world

Types of Science

- _____ – The study of LIVING things
- _____ – The study of Matter * Energy * Motion * Forces
- _____ – the study of outer space, rocks & soil, and weather

FACT and OPINION

- Scientists all use a similar **method of** _____ to discover facts.
- _____ help them develop logical explanations about what happens in the natural world.
- Scientists only use _____ when they draw conclusions.... NEVER OPINION!

FACT: _____

Opinion:

Types of Investigations

Observation: One way to investigate the natural world is to just _____ and make notes that _____ what you see

Scientists sometimes _____ to help them make observation

Data Collection: Scientists use special tools to _____ what they see

Rulers * beakers * timers * graduated cylinders

When they record the measurements or observations it is called _____

Field Investigation: When scientists go out into the world to collect data

Example: observe squirrels making nests and collecting food

Controlled Experiment: Special tests that are conducted in a laboratory

Scientists usually make everything exactly the same and change _____ thing.

Scientists always write down what they see or the measurements they take.

- This is their _____ to support the _____ they reach
- They must write down exactly what they do so other scientists can _____
- They want to see if they get the _____

Model: Something _____ or built that _____ something else

- It can be as simple as a diagram or a small version of a big thing

A good model _____ scientists _____ relationships and _____

Scientists use models to make _____ and test them to see if they come true

The more closely a model _____ what it represents the better the predictions will be

Theory: An explanation about _____

A “_____” with a lot of _____ to _____ it

- **Must have lots of data collected from many observations and experiments**

Why Scientific Knowledge Changes

As we collect more _____ and _____ our ideas and conclusions _____.

The more scientists _____, the better they are able to improve their _____ of what we see in the world.

Diverse People Contribute to Science

Men & women from _____ and _____ have contributed to the development of science.

Use pages 35-36 to complete the chart below:

SCIENTIST	BACKGROUND	CONTRIBUTION TO SCIENCE

