

Unit 1: The Nature of Science

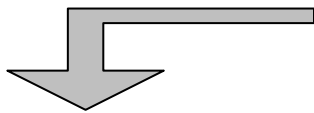
1.1 A Brief History of Advances in Science



* Rational Thinking

is basic to science

Rational Thinking: searching for cause & effect relationships



Where & When

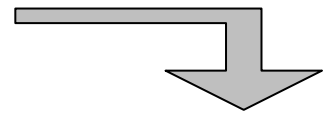


Greece

3rd and 4th centuries BC

"Modern Science"

HISTORY



Scientists

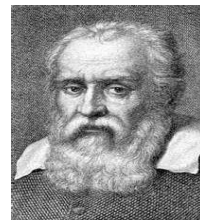


Copernicus

Polish
Astronomer

Idea:

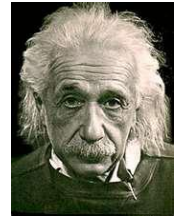
Sun is
stationary,
Earth
revolves
around the
sun



Galileo

Italian
Physicist

Used
experiments,
not
speculation,
to study
nature's
behaviors



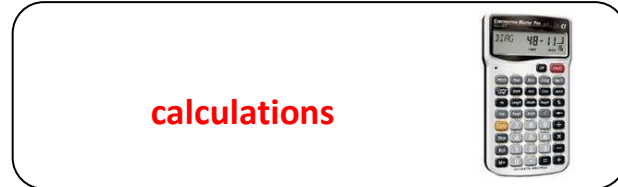
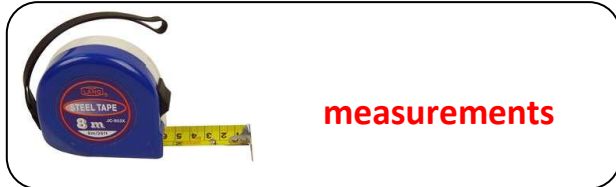
Einstein

Stated "...it
only takes
one
experiment,
provided it is
repeatable, to
show that I
am wrong."

1.2 Mathematics and Conceptual Physical Science

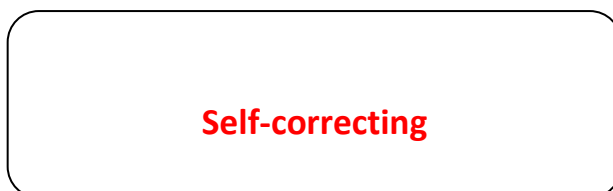
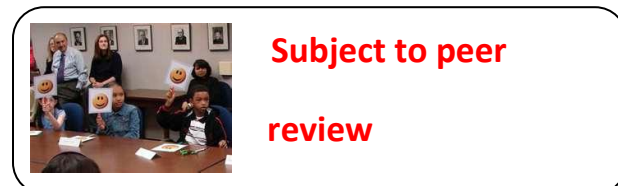
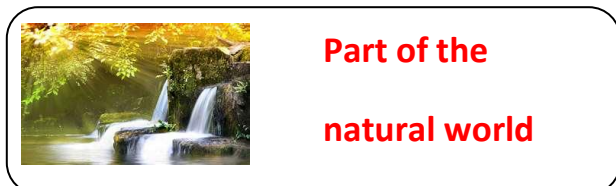
➤ Math is a **tool** of Science

Science Uses Math for



1.6 Science Has Limitations

Science MUST BE:



Examples:

Biology, Physics, Chemistry

NON-Examples:

Math, Technology, Supernatural

Pseudoscience Reading



What are 3 things you learned or found to be interesting from the reading

- A.
- B.
- C.

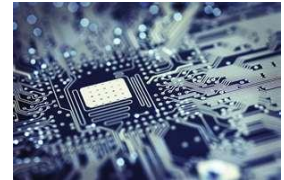
Name 2 types of Pseudosciences

1. **Astrology**
2. **Phrenology**

Give 1 definition for what a pseudoscience is

My Definition:

1.8 Technology – Practical Use of the Findings of Science



- Technology **IS** _____ **NOT** _____ Science
- Technology is an _____ **instrument** _____ used to conduct investigations.
 - Allows us to use our knowledge for practical purposes

What is Science?

Using the words in the box, write your own definition for “science”

Self-correcting	common sense	nature	technology	organized
rational	verifiable	supernatural	observation	continuous
Repeatable	natural world	mathematics	subject to peer review	

Your Definition:

Our “Simple” Definition: **A body of knowledge about nature**