

What is Science Education?

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What's Coming UP

Narrow focus from last session

- What is Science? (A knowledge base/a body of facts and figures? A process? A set of skills?)
- What is Science Education?
 - What is Science literacy?
 - Why study Science?
- What is Science Education in Nepal?
 - What role does Science play in the everyday lives of a Nepali?

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What is Science?

- From the Latin: “scire” – “to know”.
- Characterised by “if – then” knowledge.
- “Identifying universal cause-and-effect relationships.” [REDACTED].
- Knowledge of how the world works. *For the purposes of prediction and control.*
- Based on theories – giving us a means of making predictions. [REDACTED].

What is Science?

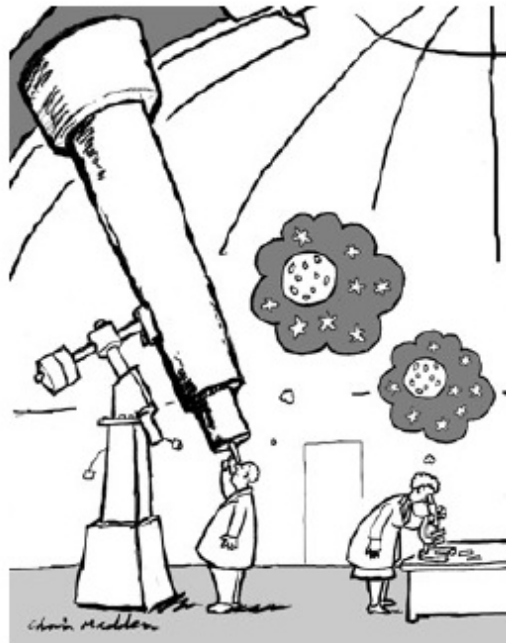
“A branch of study in which facts are observed and classified, and, usually, quantitative laws are formulated and verified: involves the application of mathematical reasoning and data analysis to natural phenomena.”

Dictionary of Scientific and Technical Terms

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What is Science?



Science is a way of learning about the natural world. Science also includes all the knowledge gained from exploring the natural world.

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What is Science?

Science is the process of gaining **KNOWLEDGE** and **INVESTGATING** by making **OBSERVATIONS**, posing **QUESTIONS**, and testing through **EXPERIMENTATION**

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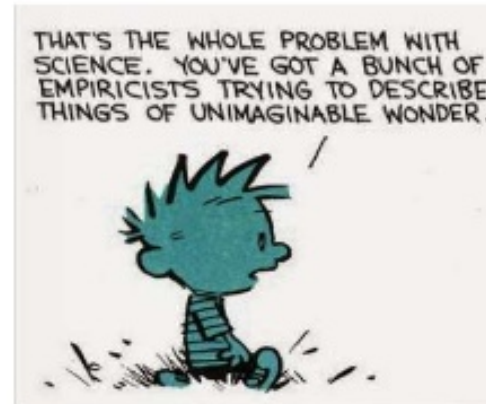
What is Science?

- Modern science is a **process** by which we try to **understand how the natural world works** and how it came to be that way.
- It is NOT a process for merely collecting "facts" about, or just describing, the natural world, although such observations do provide the raw material for scientific understanding.
- There is **no certainty** in science, only degrees of probability (likelihood), and potential for change.



What is Science?

- 'Science' can be defined simply as a methodology of testing knowledge claims through empirical observation (experimentation)
 - Hypothesis
 - Experimentation
 - Analysis of results
 - Develop scientific laws
 - Develop scientific theories
 - Repeat the cycle
- This is integrated with publication, peer review, replication and falsification



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'science' is therefore not really just a body of knowledge, as is commonly thought

Philosophy of Education

- My own Philosophy of Education
 - Necessary to apply for jobs
 - What do you notice about its content?

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