

Use of Models in Science

Dr Y Ramma
Science Education Department

Models in Science

A model is the most basic element of the scientific method.

Do you resort to models in teaching a specific concept?

Models in Science

Please watch this short video on models.

or

Modeling a phenomenon. 

Models in Science

Models serve as referents for analogies, which appear to be indispensable in most aspects of scientific theorizing, especially for the understanding of the submicroscopic levels of reality. *Giuseppe Del Re, 2000*

Models in Science

Science makes extensive use of **models.**

```
graph TD; models((models)) --> Mathematical; models --> Physical;
```

Mathematical

Physical

Models in Science

The role of models in science

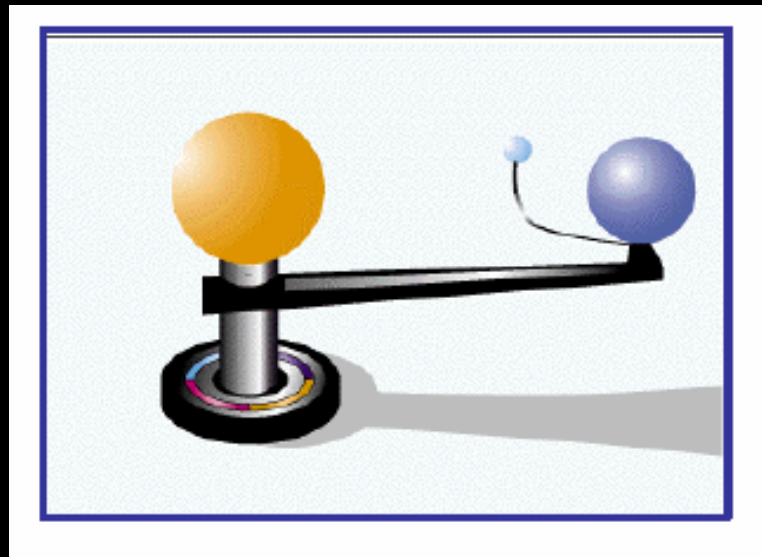
Models are developed to enable reasoning within an idealized logical framework about processes and are an important component of scientific theories.

Models in Science

The role of models in science

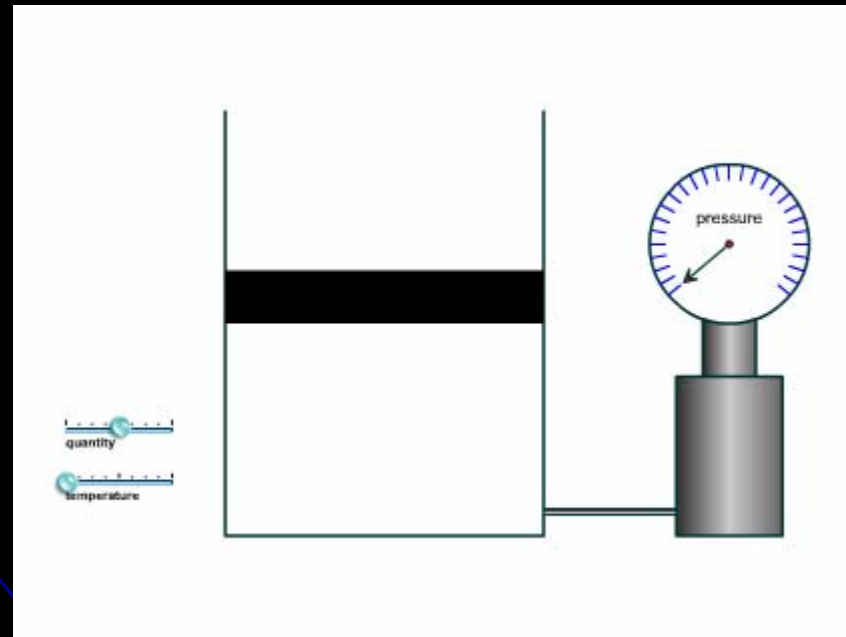
Models in Science

solar system



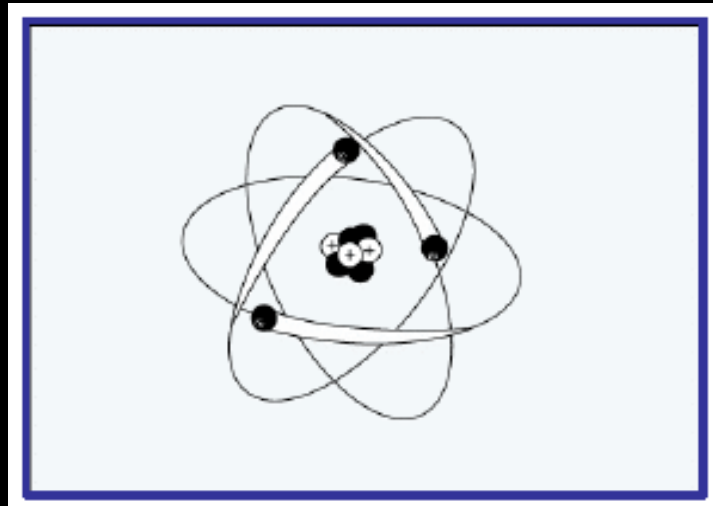
Models in Science

Models in physics



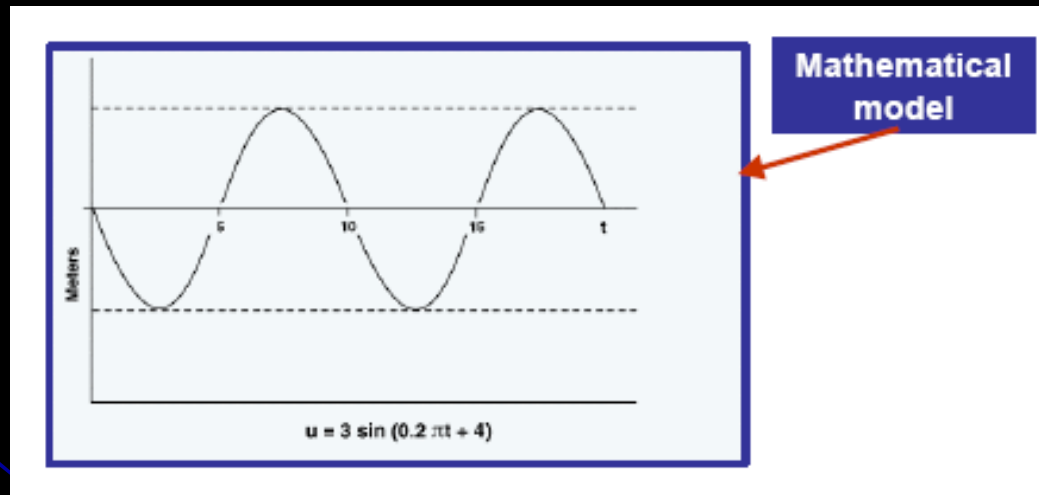
Models in Science

The Atom



Models in Science

The Wave model



Models in Science

Models in Chemistry

Models in Science

Models in Biology

Models in Science

Mental Models

Models that enables us construct building blocks in our mind to interpret and understand a number of processes.

Models in Science

models

Models in Science



Models in Science

A mental model?

Models in Science

Consider an abstract concept in your subject area and choose an appropriate model with a view to enabling students to develop a good logical understanding of the concept.

Models in Science

Thanks for your attention