[FEDERAL] The Science of Biology

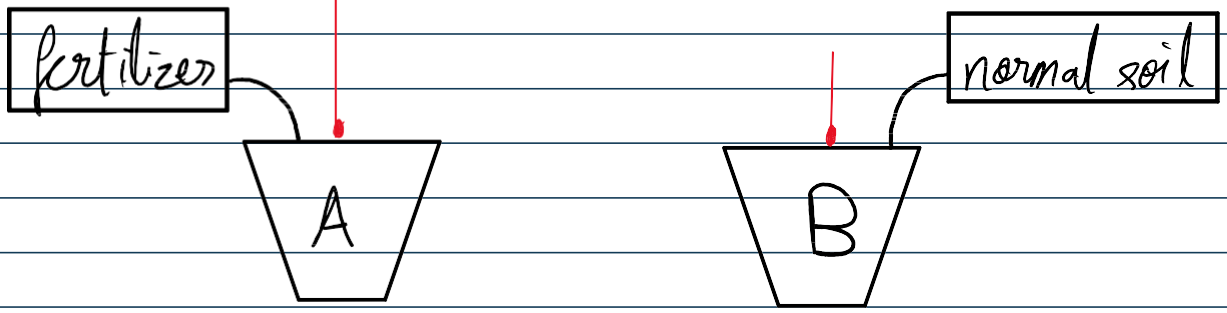
1.7 HYPOTHESIS, THEORY AND LAW

A hypothesis is a tentative answer to a question. It is based on past experience and the available data. A scientific hypothesis makes prediction that can be tested by recording additional observations. In deduction-based science, deduction usually takes the form of predictions about what outcomes of experiments or observations. We should expect if a particular hypothesis is correct. We then test the hypothesis by performing the experiment to see whether or not the results are predicted. This deduction reasoning takes the form of 'if...then' logic.

Hypothesis ⟶ tukka (A hypothesis is a tentative answer to a question.)

Experiment ⟶ test our tukka ⟶ we get results by the end

Deduction ⟶ faisla karna ke kiya hypothesis correct or not.
↳ in the form of 'if... else...'



hypothesis: Pot A will have a taller plant

deductions: if plant in Pot A taller than in Pot B
then hypothesis correct

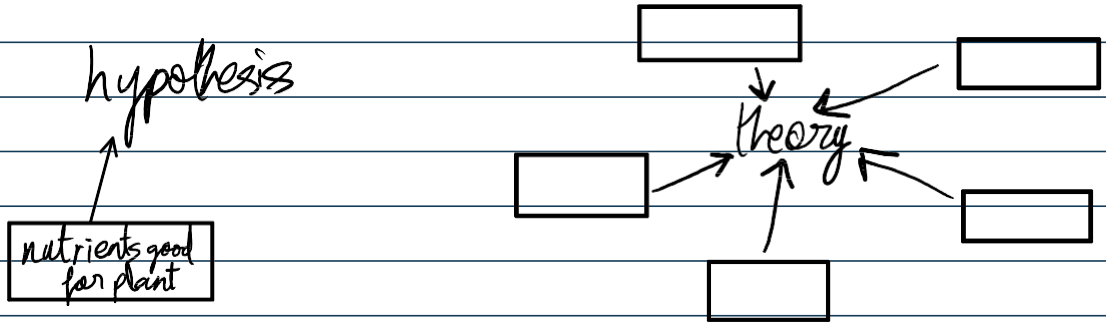
else, hypothesis wrong.

Theory

What is a scientific theory and how it is different from a hypothesis? A scientific theory is much broader in scope than a hypothesis. Compared to any one hypothesis, a theory is generally supported by more evidence.

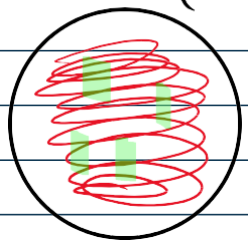
In spite of the body of evidence supporting a widely accepted theory, scientists must sometimes modify or even reject theories when a new research method produce results that do not fit.

A theory that has been verified and appears to have wide application may become biological law for example, Mendel's law of inheritance.

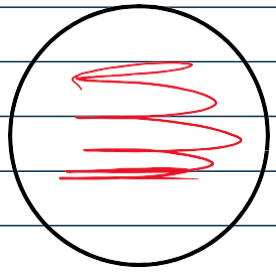


theory is like an aatay ki ball

malaria



healthy



Spread of Malaria