

science

knowledge or a system of knowledge covering general truths or the operation of general laws, esp. as obtained and tested through scientific method

such knowledge or such a system of knowledge concerned with the physical world and its phenomena: NATURAL SCIENCE

(Merriam Webster Collegiate Dictionary, Tenth Edition)

In science we assume that our observations give us useful information about the universe.

In science we propose natural explanations for natural phenomena.

In science we test proposed explanations using observations of the universe.

Such a test requires that we can identify observations that, if made, would be inconsistent with the proposed explanation.

Observations that are inconsistent with the proposed explanation are evidence against that explanation.

Observations that are consistent with the proposed explanation may be evidence for that explanation.

In science we work with evidence.

Proof is for mathematics and alcohol, not for science.

Hypothesis: “A statement of what might be true.” (Futuyma, 1998)

Fact: A hypothesis “confirmed to such a degree that it would be perverse to withhold provisional consent.” (Gould 1983)

Theory: “...a comprehensive explanation of some aspect of nature that is supported by a vast body of evidence.” (NASEM, 2016)