

Difference between hypothesis and theory

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TOK essay Difference between scientific law, theory and hypothesis 551

words In the world were living in nowadays people, groups or even some nations each has a different way of thinking. That's why opinions were created and people could have different perspectives and different ideas were developed all over the past centuries. That variation of ideas, perspective and ways of thinking had lead into the creation for methods for proving something as an idea an experiment a suggestion, and others.

This essay would be discussing those ways and their differences. Firstly, the first thing that leads into an opinion or way of seeing something is setting up your hypothesis, hypothesis is an educated guess based upon observation for a certain matter. It is an explanation of a single event or something based on what is observed not deeply observed but just observed, and it also has not been proved yet. Most hypotheses can be supported or disproved by experiment or a deep observation.

Some examples of hypothesis are, when an apple is put in the wind and sun it will rot, this is a simple example it's based on what's observed as when an apple is put in the sun it would rot but no further scientific explanation is given. After a hypothesis is set based on really weak and shallow observations it must be tested for that opinion or idea to be true it must be tested and observed scientifically and not only once it must be tried and observed a number of times, that what develops a theory and obeys scientific laws, a scientific law is a statement of fact that explains a certain matter or different action or habits.

It is generally accepted to be true and universal and can be proved and tested widely and sometimes they could be written as mathematical

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equations. Scientific laws must be simple, true and universal. Going back to a theory it is noted as more like a scientific law than a hypothesis. It is an explanation and prove for your hypothesis and sets of related observations or events based upon proven hypotheses and verified multiple times. A theory could hold on a definition as it is the way people could know this certain idea or issue is true by repeated experiments whom turn a hypothesis into a theory or it just keeps it a hypothesis untested. Some examples of scientific laws are some physics and maths rules as Newton's laws of motion, law of gravity, the laws of thermodynamics and other physics laws whom are proved and tested that's why they turn into a scientific law. Sometimes some laws can turn to theories as the law of gravity and gravitational forces, as it could go more general to be turned into a theory.

The biggest difference between a law and a theory is that a theory is much more complex and dynamic. A law runs a single action, whereas a theory explains an entire group of related matters and phenomena. That's what differs an experimented hypothesis whether it turns into a theory or it is more specified so it turns to be a law, an example of a theory is automobiles. Components of it can be changed or improved upon and more things invented in it, without changing the overall truth of the theory as a whole that it is an automobile.