

How Instructors at the LCER/AAE Scientifically Present Controversial Issues in the Science Classroom

Science educators have had the experience that certain topics, principally but not limited to the theories of evolution and the big bang as well as bioethical questions, have certain controversial implications when taught in the classroom. With this in mind, the Lewis Center for Educational Research has developed a system of educational beliefs. Classroom instructors at the Academy for Academic Excellence are asked to use the following information as the basis for the presentation of any material that is potentially controversial.

Definition of terminology as it relates to science:

Fact: In science, an observation that has been repeatedly confirmed and for all practical purposes is accepted as true. Truth in science is never final. What is accepted as fact today may be modified or even discarded tomorrow.

Hypothesis: A tentative statement about the natural world that can be tested through scientific investigation. If evidence from the investigative process supports the hypothesis statement, it becomes probable that the hypothesis is correct.

Law: A descriptive generalization about how some aspect of the natural world behaves under stated circumstances. A law has a higher level of general acceptance than does a theory.

Theory: A well-substantiated explanation of some aspect of the natural world that can incorporate facts laws, inferences and tested hypotheses. A theory can not become a fact.

Science: The body of knowledge and theories on the nature and operation of the universe and everything in it. Theories and hypotheses in this domain are always subject to the possibility of rejection and modification in the light of new knowledge.

The contention that potentially controversial topics, such as evolution, should be taught as a theory, not a fact confuses the common use of these words. In science, theories do not turn into facts through the accumulation of evidence. Theories are more than that. Theories are actually the understandings that result from extensive observation, experimentation and creative reflection. Theories incorporate a large body of scientific facts, laws, tested hypotheses, and logical inferences.

The Lewis Center for Educational Research and The Academy for Academic Excellence support the view that science is not the only way of acquiring knowledge about ourselves and the world around us. The Lewis Center for Educational Research and The Academy for Academic Excellence acknowledge that humans gain understanding through a tapestry of science, literature, the arts, philosophical reflection and religious experiences.

The LCER and the AAE are of the viewpoint that creationism is separate from science by definition. The nature of science is to develop theories and hypotheses that are continually subject to change in light of new knowledge. Creationism is an idea that is not subject to change.