

THE OKLAHOMA ACADEMY OF SCIENCE POSITION REGARDING
SCIENTIFIC CONTENT OF SCIENCE COURSES

Adopted November 13, 1981

The scientific content of science courses should be determined by scientists and science teachers and not by political directives. In particular, science teachers should not be required to teach, as *science*, ideas, models, and theories that are clearly *extra-scientific*. An extra-scientific hypothesis, as such, might legitimately be discussed in a science class when examination of its logical construction and criteria for acceptance would illuminate the corresponding features of scientific hypothesis and scientific method. Any requirement for equal time for such hypotheses is not justifiable.

Scientific hypotheses have a number of distinguishing properties, the foremost of which is that one should be able to deduce, from the basic postulates, logical consequences that can be tested against observation. Attention should be paid to the possible kinds of evidence that would falsify the hypothesis, rather than just the evidence that might confirm it. Other properties include:

1. The hypothesis should have more general consequences than those observations which initially suggested it. Thus it should be independently testable and not *ad hoc*.
2. It should be fruitful, suggesting new lines of research to pursue, raise new questions to be investigated by future research.
3. It should be logically consistent.
4. It should be consistent with general scientific philosophy that the observed phenomena of the universe are real and that nature is consistent and understandable, that is, describable and explainable in terms of laws and theories.

Hypotheses that postulate miracles or supernatural events are falsified scientifically because they explicitly admit they cannot explain the phenomena within their sphere of application. Furthermore, they are extra-scientific and non-explanatory because those phenomena are declared to be beyond human understanding. Thus they cannot be considered alternate explanation to any scientific hypothesis because, by their very nature, they are anti-explanatory, seeking only to establish and perpetuate a mystery or mysteries. All such hypotheses, models, and theories that claim to be scientific should be required to meet the same criteria as do those hypotheses commonly considered to be scientific by the scientific community at large.

(earlier adopted by the Oklahoma State Teachers' Association)