

CROWLEY ISD ADMINISTRATIVE REGULATION

Board Policy: EMB (LOCAL) Original Cabinet Approval Date: September 18, 2006

RE: Teaching of the Theory of Biological Evolution in the Science Classroom

There exist as many descriptions of the creation of the earth and the formation of the life there on as there are religions and philosophies. The three most prominent in the United States are currently Creation Science, Intelligent Design, and the Theory of Biological Evolution. A brief description of these is included below:

- Creation Science - states that the Judeo-Christian God created the earth and all life therein in six 24 hour periods by miraculous means. All extant species exist as they were originally created, and the age of the earth is less than 10000 years. The scientific support of this description is extremely lacking and in conflict with the vast majority of scientific research.
- Intelligent Design - states that a superior intelligence designed and caused the creation of organisms as they are today. This description acknowledges the action of Darwinian natural selection acting to adapt organisms to their environments, but states that the creation of such structures as molecular machines by mere chance is mathematically unlikely. Based upon that stated mathematical improbability, there is an inference that a superior intelligence must have been involved in the creation process.
- Theory of Biological Evolution - is the most documented description based upon scientific research. In this description, the earth was formed by physical forces acting upon matter in space that coalesced into a sphere. The eventual appearance of life on earth did not occur until billions of years after the formation of the earth and was the result of random processes acting over millions of years. Once life began, the underlying mechanism for the evolution of organisms into their current forms is described by the Darwinian process of natural selection in which environmental pressures and mutations cause the frequency of the genetic traits of successful organisms to be increased over time in the genetic pool of a population while less successful traits are decreased in frequency and may be eventually lost. The support of this explanation is empirical and found both in current research of extant species as well as fossil evidence.

It is the position of the educational and scientific community of the district that, while any of these descriptions may be accepted by individuals within the district, teacher or student, **time will not be committed to Creation Science or Intelligent Design for the following reason: neither description can be adequately supported by empirical data.** Both present information to support their explanations, but they also have at their foundation an assumption that a superior being or intelligence is the ultimate origin of all life on earth. The science concepts taught within the district classrooms will be limited by the definition that science is based upon empirical evidence. Therefore, while

Creation Science and Intelligent Design may or may not be true based upon one's beliefs, neither is based upon an empirically testable hypothesis which is the fundamental criterion for study in the science classroom. In short, while these explanations may certainly have merit, they represent philosophical rather than scientific explanations.

The theory of biological evolution will continue to be taught in the Crowley public schools for the following reasons:

- First, the scientific literature is permeated with evidence of natural selection occurring even in the present times (for example, the adaptation of bacteria to become immune to antibiotic treatments, and the formation of new viral strains such as AIDS and Avian Flu) and is one of the unifying concepts in the study of biology. In fairness to the individual beliefs of those in the classrooms, the teaching of this concept will be limited to a discussion of the empirical evidence and scientific explanations. It is also appropriate for teachers to address in a limited way the controversy that exists regarding this concept and to discuss both strengths and limitations of scientific thought in the context of the scientific process. Hence, there is no evidence for a conclusion, nor should assumptions be made, regarding the existence or non-existence of a superior being or intelligence. Since no experiment can be designed to test that possibility, that conclusion is beyond the scope of empirical science.
- The other, and perhaps more practical, reason for the teaching of the theory of biological evolution is that this concept is included in the state science curriculum, the Texas Essential Knowledge and Skills (TEKS). In order for students to graduate from a Texas public school they must pass the Texas Assessment of Knowledge and Skills (TAKS). Since this concept is tested on that assessment, teachers in the district have an obligation to include this concept in the preparation of their students.