SCIENCE MIDDLE SCHOOL COURSE OFFEREINGS

Course Description for Sixth Grade Science

The sixth-grade science course assists students in becoming life-long learners who grow in their understanding of the world. The nature of science includes the concepts that scientific explanations are based on logical thinking; are subject to rules of evidence; are consistent with observational, inferential, and experimental evidence; are open to rational critique; and are subject to refinement and change with the addition of new scientific evidence. The nature of science includes the concept that science can provide explanations about nature, can predict potential consequences of actions, but cannot be used to answer all questions.

The concept of change is explored through the study of transformations of energy and matter. The standards present an integrated focus on the role of the sun's energy on the Earth's systems, water in the environment, air and atmosphere, and basic chemistry concepts. A more detailed understanding of the solar system and space exploration becomes a focus of instruction. Natural resource management and its relation to public policy and cost/benefit tradeoffs are introduced.

Course Description for seventh grade Life Science

The Life Science standards emphasize a more complex understanding of change, cycles, patterns, and relationships in the living world. Students build on basic principles related to these concepts by exploring the cellular organization and the classification of organisms; the dynamic relationships among organisms, populations, communities, and ecosystems; and change as a result of the transmission of genetic information from generation to generation. This scientific view defines the idea that explanations of nature are developed and tested using observation, experimentation, models, evidence, and systematic processes based on logical thinking. Inquiry skills at this level include organization and mathematical analysis of data, manipulation of variables in experiments, and identification of sources of experimental error.

Course Description for eighth grade Physical Science

The Physical Science Standards stress an in depth understanding of the nature and structure of matter and the characteristic of energy. The standards place considerable emphasis on the technological application of Physical Science Principles. Major areas covered by the standards include the organization and use of the periodic table; physical and chemical changes; nuclear reactions; temperature and heat; sound; light; electricity and magnetism; and work, force, and motion.
The Physical Science standards continue to build on skills of systematic investigation with a clear focus on variables and repeated trials. Student will plan and conduct research involving both classroom experimentation and literature reviews from written and electronic resources.