PHILOSOPHY

The science component is designed to assist educators in planning, implementing, and assessing a science program that allows "students to develop an understanding of what science is, what science is not, what science can and cannot do, and how science contributes to culture." (National Science Education Standards, 1996, p.21) It is based on the belief that:

- Science is a human activity that can be characterized by participants' processes.
- All students can learn and succeed in science.
- Learning science is something students do, not something that is done to them.
- Everyone can describe, explain, and predict natural phenomena.
- Science, technology and society are interrelated.
- Attitudes toward science established in childhood shape adult scientific literacy.

The goal of the North Carolina Standard Course of Study is to achieve scientific literacy. The National Science Education Standards define scientific literacy as "the knowledge and understanding of scientific concepts and processes required for scientific decision making, participation in civic and cultural affairs, and economic productivity." (p. 22) The tenets of scientific literacy include the ability to:

- Find or determine answers to questions derived from everyday experiences.
- Describe, explain, and predict natural phenomena.
- Understand articles about science.
- Engage in non-technical conversation about the validity of conclusions.
- Identify scientific issues underlying national and local decisions.
- Pose explanations based on evidence derived from one's own work.

This philosophy is based on research, state and federal documents, and ideas of professional societies. Though research shows that all students can learn and succeed in science, all students will not become scientists nor achieve the same level of understanding. Rather, the goal is to create a scientifically literate society crucial to our increasingly complex and technological world. The decisions of future policy makers will, in large measure, be based on attitudes developed in today's classrooms. Research in cognitive science and science education supports the need for concept development through science and technology instruction. All students, in all grades, deserve continuing and meaningful science instruction.