

# **RATIONALE**

## CREATING THE SCIENCE COURSE OF STUDY

During its initial year of operation (1998) the SMART Consortium established its goal to improve science and mathematics literacy for the thirty participating school districts. Data from the TIMSS study (1994) revealed that American science curricula was a mile wide and an inch deep. The result of this study was a call to streamline the curriculum to increase science literacy. With the recognition of the need for change, a team of science leaders came together to create a coherent set of learning goals, which formed the basis for this document.

The SMART Science Course of Study (SCOS) calls for a change in what concepts we teach and when we teach them. It will enable each district to make informed curriculum decisions, provide for better instructional planning, and help with the development of appropriate assessments.

The team made the decision to use *Benchmarks for Science Literacy* (1993) as the framework for this course of study. This document provided an enormous wealth of information to help make decisions on the developmental appropriateness of the concepts taught at each grade level. Important science concepts were mapped in a logical progression, setting a developmental base of learning for what all students should know. Many students will learn more. Teaching for understanding takes time; instead of teaching too many concepts each year, it was decided to teach for greater depth of knowledge within fewer concepts.

The SMART Science Course of Study provides a research-based framework on which to build curriculum. It provides a age-appropriate sequence in which concepts can be presented. The placement of concepts in the sequence has been determined by the research on students' understanding and learning (See The Research Base for each set of Benchmarks). The document is aligned with the State of Ohio's Academic Content Standards.