

## INTRODUCTION

Hands-on activities are a fundamental part of science learning. Teaching science requires students' active involvement in developing safe and efficient procedures for conducting investigations. In the Early Years, students' exploratory activities with materials provide one of the key starting points for their concept and skill development. As students progress in school science, there is a natural increase in the sophistication of their investigations. Over time, students learn the techniques of controlled investigation and experimentation and, through practice, develop the skills of scientific inquiry and problem solving. Laboratory activities, carefully developed, can provide important connections for understanding the nature of science, the wide variety of creative ways in which science is conducted, and the interplay of evidence and theory.

The challenge for schools is to offer science activities that are simultaneously educationally rewarding, philosophically valid, and safe. These desired results can only be achieved through a team effort involving all of those who set and administer school policies, design and maintain the learning environment, plan and deliver science lessons, and select and prepare the materials used.

The goal of this K-12 science safety resource is to bring together information needed by administrators, planners, teachers, and support staff to help them make sound decisions regarding science safety. The document identifies areas for decision making and action at a variety of levels. It supports planning and action by providing information on safety legislation and standards, safety hazards, and examples of procedures for eliminating or minimizing hazards.

The materials in this safety resource have been compiled from sources believed to be reliable and accurate and to represent the best of current thinking on the subject. This resource is intended to serve as an informative source for planning good practices, but does not claim to provide the level of technical detail that some users may require, or to have anticipated every circumstance where safety may be a factor.

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