



# ASCIP *RISK ALERT!*

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**Date:** July 20, 1999

**Attention:** ASCIP Members

**Subject:** Science Experiments & Demonstrations:  
Model Rocketry, Chemical Reactions,  
Release of Energy, and Others

Science experiments and demonstrations are a historic part of our educational process. However, because many of these activities are conducted year after year without mishap, participants in these activities may not appreciate the potential danger presented by the powerful processes associated with some of these learning experiences.

Long associated with such classes as biology, chemistry, and physics, hands-on learning involving light, heat, chemicals, electricity, and other forces have their place in the science curriculum of many schools. It is essential however, that periodically, the manner in which this learning takes place is reviewed and evaluated to ensure that the conduct of the science experiments or demonstrations is appropriate. This is most important when the activity presents the possibility of personal injury to staff or pupils as a result of the forces or materials involved.

Actions which may be appropriate to consider during a periodic evaluation of a science experiment or demonstration may include:

- Review of the curriculum and how the activity fits the learning process
- Review of the history of the science activity and any previous mishaps
- Ensure that an appropriate place or location for the science activity is provided
- Ensure that appropriate equipment and materials are provided for the activity
- Review the activity for materials found on various lists of substances restricted for use in K-12 school environments, or requiring special permits, handling, storage, or disposal
- Ensure that appropriate personal protective and emergency equipment, if needed, is provided
- Ensure that activities beyond the ability of a pupil to perform safely are performed by properly trained staff or teachers who themselves should receive periodic retraining
- Evaluate alternative activities or teaching methods representing lower levels of potential risk to staff, students, or the school facility
- Ensure adequate and appropriate supervision of pupils and the activity
- Discontinue activities which cannot be conducted with an acceptable level of safety

ASCIP appreciates that school administrators and teachers attempt to make the science classroom conducive to the educational process. However, when potential risks outweigh the benefits of continuing certain experiments or demonstration practices, the decision to seek safer alternatives becomes imperative. **ASCIP members seeking assistance in reviewing science safety issues may contact ASCIP staff at any time to discuss specific issues of concern.**

*Reviewed July, 2006*