



ASCIP *RISK ALERT!*

Date: July 1, 2005

Attention: ASCIP Members

Subject: SCIENCE DEMONSTRATIONS AND EXPERIMENTS

Most school science classes will incorporate practical demonstrations or experiments to illustrate the nature of the subject matter being presented. Unfortunately, ASCIP receives periodic reports where these demonstrations or experiments have been associated with personal injury to school staff and/or students.

In 1999, ASCIP issued a *Risk Alert!* regarding the potential dangers associated with some science activities and offered recommendations through which reasonable science safety might be maintained. However, since that time additional incidents have occurred which draw renewed attention to this subject.

Each reported incident has some common aspects. Therefore, ASCIP deems it appropriate to re-issue its earlier Risk Alert! recommendations which remain applicable today. No science demonstration or experiment should be considered entirely 'harmless' and appropriate safeguards should be in place for every science activity. In addition to having each science demonstration or experiment pre-approved by the appropriate level of supervision, a periodic evaluation of a science experiment or demonstration should 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 demonstrations, 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