

Safety Guidelines for Presentations, Demos and Workshops *Nebraska Association of Teachers of Science*

It is the goal of NATS that all material presented to teachers is both educational and SAFE! **It is not** the intent of NATS to exclude dynamic and informative demonstrations and presentations as long as common sense and safety guidelines are followed.

1. Material Safety Data Sheets (MSDS) for any chemical or compressed gas that is used during a presentation should be available in the room where the presentation takes place. NATS will have MSDS notebooks available for any presentation requiring them.
 - a. This MSDS notebook must be briefly mentioned and prominently displayed during any presentation requiring it.
 - b. If you have unusual chemicals (i.e. those not commonly found in high school chemistry lab) the presenter should bring along the MSDS for them.

NOTE: The Flinn Chemical Company catalog and reference manual can be obtained for free by calling 1-800-452-1261. It includes many useful comments on chemical handling, storage and disposal.

2. A written list of procedures and cautions for any demonstrations carried out must be included with any handouts for the session.

- Remember—more and more teachers are doing hands-on activities and are attending our fall conference to get new ideas for their classrooms. It is important to include all procedures necessary for classroom teachers to carry out demonstrations or laboratory activities safely.
3. NO mercury metal or mercury compounds, no chromium or chromium compounds (especially the ammonium dichromate volcano). Avoid use of heavy metals. No carcinogens or suspected carcinogens, no explosives or explosive chemicals (such as potassium metal, etc.)
 4. Do not carry out demonstrations or activities that generate toxic gases. (Presenters should be aware of the TLV[Threshold Limit Values] for any gas generated.)
 5. A fire extinguisher should be available if you have an open flame or if combustion is likely.
 6. The presenter will have waste containers and use correct disposal techniques (see disposal methods in sources such as Flinn or Merck reference manual) for chemicals used in the presentation.
 7. No demonstrations or experiments that place the demonstrator or audience at unreasonable risk. (E.g. –dipping hand in molten lead—lead fumes are toxic and if the demonstrators don't know proper procedures they can hurt themselves and the audience.
 8. Approved eyewear must be used when carrying out demonstrations! Remember that you are modeling proper techniques! Impact resistant glasses may be appropriate for physics or geology type activities while goggles would be necessary for chemistry activities. People learn by example!
 9. Certain hands-on activities may require the use of eyewear by participants. Participants can be asked to bring appropriate eyewear, but presenters should anticipate having some “loaners” available. (Eyewear can be easily sanitized by rinsing in a 1.5 oz Lysol/gal distilled water and then rinsed with distilled water.)
 10. Any lasers or laser devices that emit a beam outside of the case must be visible light lasers (no IR) with a maximum output of approximately 1.0 milliwatt.
 11. Any sources of high voltage should be properly shielded to reduce the risk of shock.
 12. No blood or body fluid activities! The risk of Hepatitis B or HIV is simply too great.