

Safety in the Media

A safety resource from the National Science Teachers Association

Teachers routinely use media sources from many different outlets as part of their daily instruction. We recognize the value of using visuals to help students understand science concepts, simulate laboratory activities, and observe demonstrations too dangerous to conduct in the classroom; however, it is critical that teachers review each media item for safety. A teacher's responsibility for safety includes not only what happens inside the classroom but also includes the content and sources that teachers instruct students to use.

Teachers have a Duty of Care, defined as an obligation, recognized by law, requiring conformance to a certain standard of conduct to protect against unreasonable risk (Prosser et al. 1984). "The breach of a particular duty owed to a student or others may lead to liability for both the teacher and the school district that employs that teacher" (Ryan 2001). ([See NSTA Duty or Standard of Care.](#))

Several items should be considered when teachers review media prior to student viewing.

1. Eye Protection and other personal protective equipment (PPE) – When students conduct any type of investigation/demonstration, proper eye protection must be worn. If liquid phase biological and/or chemical hazards are being used, indirectly vented chemical-splash goggles (meeting the ANSI/ISEA Z87.1 D3 standard) must be worn by everyone depicted in the segment that is being viewed. For investigations/demonstrations that do not involve liquid phase biologicals or chemical hazards, indirectly vented chemical-splash goggles or safety glasses with side shields must be worn. This also includes physical hazards (e.g., springs, projectiles, metersticks, etc.). Other forms of PPE (e.g., non-latex protective gloves, lab coats or lab aprons) must be worn.
2. Odor Detection – Students should never be shown placing their nose near any type of odor source; if odor is to be detected, wafting should take place. Wafting will mix the odor with air and allow the student to detect a small amount of the substance. Putting your nose directly above a chemical or chemical reaction risks damage to mucus membranes within the nose.
3. Tasting – Protecting students from potential harm includes preventing them from tasting or eating anything in the laboratory. Media that depicts students eating in the laboratory, even with the caveat "don't try this at home," should not be shown.
4. Explosions – Students enjoy watching anything that explodes, and explosions in media are preferable to classroom explosions. Media that depicts explosions should show the person conducting the explosion protected with safety shields, safety goggles, and gloves. If the explosion takes place at a laboratory demonstration desk, a safety shield should be used to protect all students in the room. If the hazard/risk assessments determine that a safety shield provides insufficient safety defense, the activity should be

performed under a fume hood or not done at all. Refer to the fume hood manufacturer specifications to determine the level of protection the device provides with respect to explosions. The students should also be wearing safety goggles and seated away from the demonstration desk to reduce risk. If the explosion is to be performed outside, goggles, gloves, and possibly ear protection (depending upon the decibels of the explosion) must be worn. Care should be taken to ensure that the area is free of debris that could potentially catch fire.

5. Animals – Media should always demonstrate the humane and respectful treatment of animals.
6. Fume Hoods and Biological Safety Cabinets – When fume hoods or biological safety cabinets are depicted, they should only contain the investigation that is being discussed; they should not be shown as a storage site for chemicals or other scientific apparatus. The fume hood should also be operating properly, with the sash at the proper height, which allows the fumes to be vented out of the hood.

Some media will use the phrase “do not try this at home” as a way of warning students that something is dangerous. We cannot expect students to exercise the same sense of caution. Media depicting investigations conducted in a kitchen should be avoided. As adults, we may know that the scene has been set up for the camera; however, we cannot expect students—particularly elementary and middle school students—to draw the same conclusion.

Teachers and school districts may have a shared liability if a student tries an investigation at home that was depicted in media, even if the teacher has expressly warned the students not to do so. It is imperative that teachers review any media they plan to use either in the classroom or as an assignment **prior** to it being viewed by the students. This is better professional practice and permits the teacher to practice due diligence.

Resources:

[NSTA Position Statement: Liability of Science Educators for Laboratory Safety](#)

References

Prosser, W.L., W.P. Keeton, D.B. Dobbs, R.E. Keeton, and D.G. Owen. eds. 1984. *Prosser and Keeton on torts*. Eagan, MN: West Group.

Ryan, K. 2001. *Science classroom safety and the law: A handbook for teachers*. Batavia, IL: Flinn Scientific, Inc.