

NSTA Middle School Safety Acknowledgment Form

Note to science teachers and supervisors/administrators: Safety is the most important part of a science lesson. This includes monitoring student behavior and taking care of lab materials and equipment. The attached safety acknowledgment form is for your use in the science classroom, laboratory, and field site. It should be given to students at the beginning of the school year— after safety training is completed—to help them understand their role in ensuring a safer and more productive science experience.

When selecting activities for middle school students involving chemicals, only plan to use chemicals for which you have appropriate engineering controls (e.g., ventilation, eyewash station, etc.) and personal protective equipment (e.g., safety goggles, aprons, etc.). Be sure to have storage and disposal procedures in place as set forth in the Safety Data Sheet (SDS). Substitute a less hazardous chemical whenever possible. Teachers should conduct a hazard analysis and risk assessment, and review appropriate safety actions to determine if the activity is feasible or should be altered or eliminated.

For more information, visit the NSTA website at www.nsta.org/safety to view and download safety resources. Also seek out your state's safety resources and OSHA regulations.

Resources:

[Safety in The Science Classroom, Lab, and Field](#)

[Safety Acknowledgment Form for Working With Microorganisms](#)

NSTA would like to thank its Science Safety Advisory Board for developing this resource. Questions or comments about its content should be directed to NSTA at 703-243-7100 or safety@nsta.org.

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Science is a process of discovering and exploring the natural world. Explorations can occur in the classroom, laboratory, or field. As part of your science instruction, you will conduct many activities and investigations using a variety of materials, equipment, and chemicals. As a result, you may be exposed to biological, chemical, or physical hazards.

Safety is the FIRST PRIORITY for students, instructors, and parents. To ensure safer experiences, the following safety operating procedures—based on legal safety standards and better professional safety practices—have been developed for the protection and safety of everyone. Your instructor will provide additional safety procedures for specific situations or settings. The safety operating procedures must be followed at all times.

Review these procedures with your instructor and parents/guardians, then sign and get the signature of a parent/guardian. Your signature indicates that you understand the lab can have hazards, and that you have read the safety procedures and agree to follow them at all times. Signatures are required before you can participate in any activity or investigation.

Safety Standards for Student Conduct in the Classroom, Laboratory, or Field

- Conduct yourself in a responsible manner at all times. Inappropriate behavior such as throwing things, and doing unauthorized experiments are prohibited.
- Read all lab and safety operating procedures before conducting an activity and follow all verbal and written instructions during the activity or investigation.
- Eating, drinking, chewing gum, applying cosmetics (including lip balm), touching contact lenses, or other unsafe activities are not permitted. Food storage is not allowed in the laboratory.
- Do not enter or work in the laboratory unless an instructor is present.
- Unauthorized and unsupervised activities or investigations are prohibited.
- Never enter chemical storage or preparation areas.
- Removing chemicals or equipment from the classroom or laboratory is prohibited unless authorized by the instructor.
- Do not touch any materials, equipment, etc., for a lab activity until instructed to do so by the teacher.

Personal Safety

- Sanitized indirectly vented, chemical-splash goggles (ANSI/ISEA Z 87+ D3) or safety glasses (ANSI/ISEA Z 87+ D3), as appropriate, should be worn during setup, hands-on activity, and take-down/cleanup unless the instructor specifically states that the activity or demonstration does not require the use of eye protection. ***Indirectly vented, chemical-splash goggles must be worn whenever you are working with chemicals, a heating source, particulate matter, or glassware. Notify the teacher immediately if your goggles are damaged or do not fit properly.***

- When an activity requires the use of non-latex laboratory aprons, the apron should be appropriate to the size of the student and the hazard associated with the activity or investigation. The apron may be removed only when the instructor notes it is safe to do so.
- Dress appropriately for laboratory work by protecting your body with clothing and shoes. Long hair should be tied back collars tucked in. Avoid wearing loose or baggy clothing and dangling jewelry. Acrylic nails are a safety hazard near heat sources and should not be used. Sandals or open-toe shoes are not to be worn during any lab activities. Refer to pre-lab instructions. If in doubt, ask!
- Know the location of and how to operate all safety equipment in the room. This includes eyewash stations, deluge shower, fire extinguishers, fume hood, and the safety blanket. Know the location of emergency master electric and gas shutoffs and exits.
- Certain classrooms or laboratories may have living organisms including plants and animals in aquaria or other containers. Students should never handle organisms without approval from your instructor. Wash your hands with soap and water after handling organisms.
- When an activity or investigation requires the use of non-latex laboratory gloves for hand protection, the gloves shall be appropriate for the hazard and worn throughout
- the activity. Cover all cuts, broken skin, or wounds with a waterproof dressing to reduce or prevent exposure. Wash hands thoroughly with soap and water after removing gloves.
- Keep hands away from the face at all times. Do not put hands or other objects in or near your mouth or eyes.
- All accidents, chemical spills, broken glassware, and injuries (including minor burns)
- must be reported immediately to the instructor, no matter how trivial they may seem at the time. Follow your instructor's directions for immediate treatment.

Safety Standards Regarding Chemicals and Lab Equipment

- Never taste or smell a chemical solution. When checking for odor, waft by sweeping your hand over the container. Avoid inhaling fumes that may be generated during an activity or investigation.
- Never fill pipettes by mouth suction; use the suction bulbs or pumps.
- Do not force glass tubing into rubber stoppers. Use glycerin as a lubricant and hold the tubing with a towel as you ease the glass into the stopper.
- Proper procedures should be followed when using any heating or flame-producing device, especially gas burners. Remove all flammable materials from the area before lighting a match, candle, or Bunsen burner. Never leave a flame unattended.
- Never dispense flammable liquids near an open flame or heat source. Avoid facing the open end of a test tube toward yourself or other students when being heated.
- Remember that hot glass looks the same as cold glass. After heating, glass remains hot for a very long time. Determine if an object is hot by placing your hand close to the object without touching it. After using a hot plate or working with hot glass, warn others of a possible burning hazard by placing a sign nearby indicating that it may be hot.

- In the event of a fire drill, lockdown, or other emergency during an investigation or activity, turn off all gas burners and electrical equipment. During an evacuation emergency, exit the room as directed. During a lockdown, move out of the line of sight from doors and windows as directed. Lights should be turned off.
- Always read reagent bottle labels twice before you use the reagent to be certain you are using the correct chemical. Do not use any chemicals stored in unlabeled bottles and inform your teacher if a label is missing from a reagent bottle.
- Replace the top on any reagent bottle immediately after use and return the reagent to the designated location. Follow the teacher's instructions for carrying chemicals.
- Do not return unused chemicals to the reagent container. Follow the instructor's directions for the storage or disposal of these materials.

Standards for Maintaining a Safe Laboratory Environment

- To prevent potential cross contamination, backpacks and books are to remain in an area designated by the instructor and should not be brought into the laboratory area.
- Never sit or stand on laboratory elevated platforms (e.g., tables, desks, etc.).
- Work areas should be kept clean and neat at all times, and cleaned at the end of each laboratory or activity.
- Solid chemicals, metals, matches, filter papers, broken glass, and other materials designated by the instructor are to be deposited in the proper waste containers, not in the sink. Follow your instructor's directions for disposal of waste.
- Sinks are to be used for the disposal of water and those solutions designated by the instructor. Other solutions must be placed in the designated waste disposal containers.
- Glassware is to be washed with hot, soapy water and scrubbed with the appropriate type and size of brush, rinsed, dried, and returned to its original location.
- Appropriate eye protection (e.g., safety goggles, safety glasses) is to be worn during setup, hands-on activity or investigation, and take down/cleanup, and until hands can be thoroughly washed with soap and water.
- To prevent accidental release, discharge, or injury, handle with extreme caution all projectiles, spring-loaded devices, meter sticks or similar levers, and other physical hazards, such as bare wires, blades, and other sharps. Eye protection must be worn.
- Safety Data Sheets (SDSs) contain critical information about hazardous chemicals of which students need to be aware. Your instructor will review the important points on the SDSs for the hazardous chemicals students will be working with and also post the SDSs in the lab for future reference.
- Indirectly vented, chemical-splash goggles (ANSI/ISEA Z 87+ D3) or safety glasses (ANSI/ISEA Z 87+ D3), as appropriate, must be worn by all students, teachers, and visitors in the laboratory during work periods **INCLUDING SETUP, HANDS-ON ACTIVITY, and TAKE-DOWN/CLEANUP** in accordance with legal safety standards and/or better professional practices. ***Indirectly vented, chemical-splash goggles must be worn whenever chemicals, a heating source, particulate matter, or glassware are present.***

WHEN IN DOUBT, WEAR GOGGLES!