

Science and Technology/Engineering

Safety Guidelines and Procedures Agreement for Students in Grades 6-12

Purpose

Characteristically, science and technology/engineering education is hands-on. Safety in these classrooms is the #1 priority for students, teachers, and parents. To ensure a safe classroom, a list of safety rules and procedures has been developed and provided to you in this student safety rules and procedures agreement. These rules and procedures must be followed at all times. This rules and procedures agreement must be signed by both you and a parent or guardian before you can participate in the class. Also, please note that this rules and procedure agreement is comprehensive for all students in all grades across the district. Keep in mind that all guidelines may not pertain to you now in your current science placement, but eventually will as you move through all grade levels in this district.

General Guidelines

1. Conduct yourself in a responsible manner at all times in the classroom/laboratory space. Follow all written and verbal instructions carefully. If you do not understand a direction or part of a procedure, ask your teacher before proceeding.
2. No student may work in the classroom/laboratory space without a teacher present.
3. Never touch any equipment, chemicals, or other materials until you are instructed to do so.
4. You may not eat or drink in the work space.
5. Carefully follow all instructions, both written and oral. Unauthorized experiments are prohibited.
6. Be prepared for your work in the classroom/laboratory. Read all procedures thoroughly before entering the work space.
7. Work areas should be kept clean and neat at all times. Bring only your instructions, worksheets, and/or reports to the work area. Other materials (books, purses, backpacks, etc.) must be stored away from the work area.
8. Know the locations and operating procedures of all safety equipment including the first aid kit, eyewash station, safety shower, fire extinguisher, and fire blanket. Know where the fire alarm and the exits are located.
9. Dispose of all chemical waste properly. Never mix chemicals in sink drains. Sinks are to be used only for water and those solutions designated by the instructor. Solid chemicals, metals, matches, filter paper, and all other insoluble materials are to be disposed of in proper waste containers.
10. Keep hands away from face, eyes, mouth and body while using chemicals. Wash your hands with soap and water after performing all experiments. Clean and wipe dry all work surfaces and apparatus at the end of the experiment.
11. You will be assigned a station at which to work. You may not wander around the work area.
12. If there is a fire drill during your class period, turn off all gas valves and electrical equipment before leaving.
13. When using knives and other sharp instruments, always carry with tips and points pointing down and away. Always cut away from your body. Never try to catch falling sharp instruments. Grasp sharp instruments only by the handles.

Clothing

14. Safety goggles MUST, without exception, be worn any time chemicals, heat, or glassware are used.
15. Contact lenses should not be worn in the work area unless you have permission from your instructor.
16. Dress for safety when working in the classroom/laboratory. Long hair must be tied back and dangling jewelry and loose or baggy clothing must be secured. Shoes must completely cover the foot. Sandals are not allowed.

Accidents and Injuries

17. Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) to the instructor immediately.
18. If a chemical should splash in your eye(s) or on your skin, immediately flush with running water from the eyewash station or safety shower for at least 20 minutes. Notify your teacher immediately.

Handling Chemicals

19. All chemicals in the work area are to be considered dangerous. Do not touch or smell any chemicals unless specifically instructed to do so. The proper technique for smelling chemical fumes will be demonstrated to you. NEVER taste any chemicals.
20. Check the label on chemical bottles before removing any of the contents. Take only as much chemical as you need. Never return unused chemicals to their original containers.
21. When transferring reagents from one container to another, hold the containers away from your body.
22. Acids must be handled with extreme care. Always add acid to water slowly and carefully swirl or stir the solution.
23. Never remove chemicals or other materials from the work area.

Handling Glassware and Equipment

24. Carry glass tubing, especially long pieces, in a vertical position to minimize the likelihood of breakage and injury.
25. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Place broken or waste glassware in the designated glass disposal container.
26. Never insert or remove glass tubing from rubber stoppers. Students are never allowed to perform this task.
27. Examine glassware before each use. Never use chipped or cracked glassware. Never use dirty glassware.
28. Do not immerse hot glassware in cold water; it may shatter.
29. When removing an electrical plug from its socket, grasp the plug, not the electrical cord. Hands must be completely dry before touching an electrical switch, plug, or outlet.
30. Report damaged electrical equipment immediately. Look for things such as frayed cords, exposed wires, and loose connections. Do not use damaged electrical equipment.
31. If you do not understand how to use a piece of equipment, ask the instructor for help.

Heating Substances

32. Exercise extreme caution when using a gas burner. Take care that hair, clothing and hands are a safe distance from the flame at all times. Do not put any substance into the flame unless specifically instructed to do so. Never reach over an exposed flame. Light gas (or alcohol) burners only as instructed by the teacher.
33. Never leave a lit burner unattended. Never leave anything that is being heated or is visibly reacting unattended. Always turn the burner or hot plate off when not in use.
34. You will be instructed in the proper method of heating and boiling liquids in test tubes. Never point the open end of a test tube being heated at yourself or anyone else.
35. Heated metals and glass remain very hot for a long time. They should be set aside to cool and picked up with caution. Use tongs if necessary.
36. Never look into a container that is being heated.
37. When bending glass, allow time for the glass to cool before further handling. Hot and cold glass has the same visual appearance. Determine if an object is hot by bringing the back of your hand close to it prior to grasping it.

Technology/Engineering

38. You should attentively watch all demonstrations given on proper hand and power tools use, maintenance and storage; first aid station locations; etc., and be tested on such critical information.
39. You should be informed of any and all personal protective equipment (PPE) requirements for using specific hand and power tools (e.g., approved eye protections, gloves, proper hearing protection, etc.) as the situation requires.
40. Dirty, cluttered and oily tools and work areas can cause accidents. Always clean and put away unneeded tools and materials and maintain a large enough workspace for the job being done. Unplug and properly store power tools when not in use and avoid using power tools in damp or wet areas. Also work in a sufficiently lit workspace and keep paths to exits clear.
41. Damaged or broken hand or power tools should not be used. Always use tools only for the job for which they were intended. Forcing a small tool to do a job meant for a large one, dulled tools, tools in disrepair, broken or missing power tool guards, exposed electrical wiring or power tools, striking hand tools not meant to be hit, carrying sharp tools in pockets or with tips pointed in a direction other than straight down, etc., are some examples of hand and power tool misuse.
42. You should always use a vice or clamps to secure small projects that are too difficult or dangerous to hold by hand.
43. Again, as previously stated, always dress for safety (#16). Long hair must be tied back and dangling jewelry and loose or baggy clothing must be secured. Shoes must completely cover the foot. Sandals are not allowed.

Safety Guidelines and Procedures Agreement

Student Name

Teacher

Block/Period

Student Questions

1. Do you wear contact lenses?
2. Are you color blind?
3. Do you have allergies? If so, please list specific allergies?

I, _____ (student's name, please print) have read this safety guidelines and procedures agreement. I agree to follow all of the safety rules and procedures set forth in this agreement. I realize that I must obey these rules and follow the procedures to insure my own safety, and that of my fellow students and instructor(s). I will cooperate to the fullest extent with my instructor(s) and fellow students to maintain a safe work environment. I will also closely follow the oral and written instructions provided by the instructor(s). I am aware that any violation of this agreement that results in unsafe conduct in the classroom/laboratory or misbehavior on my part, may result in being removed from the classroom/laboratory, detention, receiving a failing grade, and/or dismissal from the course.

Student Signature

Date

Dear Parent or Guardian:

We feel that you should be informed regarding the district's effort to create and maintain a safe science classroom/laboratory environment. With the cooperation of the instructors, parents, and students, a safety instruction program can eliminate, prevent, and correct possible hazards. You should be aware of the safety rules and procedures your son/daughter will receive before engaging in any hands-on work. Please read the list of safety rules and procedures above. No student will be permitted to perform classroom/laboratory activities unless this contract is signed by both the student and parent/guardian and is on file with the teacher.

Your signature on this agreement indicates that you have read this safety guidelines and procedures agreement, are aware of the measures taken to insure the safety of your son/daughter in the science classroom/laboratory and will instruct your son/daughter to uphold his/her agreement to follow these rules and procedures.

Parent/Guardian Signature

Date

Teacher Signature

Date