

Appendix I

Sample Safety Checklist for Science Instruction, Preparation, and Storage Areas

School: John Doe Elementary

Date: 10/1/2026

Teacher(s): Jane Doe

Room or area: 3207

Science teachers should check their instructional areas periodically to determine whether unsafe conditions exist. Teachers who have concerns about safety conditions related to facilities, equipment, supplies, curriculum, classroom occupant load, and so on should notify their department chairpersons and school-site administrators immediately in writing for assistance in alleviating the conditions.

The following checklist may be used to determine whether a safe environment exists and to indicate possible areas of concern and danger.

1. Good general housekeeping prevails, and aisles are clear of materials and apparatus.
2. Signs of the locations of first-aid and safety equipment are visible throughout the room (e.g., fire extinguishers, fire blanket, eyewash station).
3. Adequate storage space is provided for chemicals, materials, and apparatus.
4. The classroom/laboratory has no blind spots—that is, areas in which students cannot be supervised by the teacher from anywhere in the room.
5. There is adequate classroom/laboratory space for the various learning activities planned.
6. The following equipment or conditions are adequate:
 - Counter and work space for all students to do laboratory activities at one time
 - Three-prong Electrical outlets
 - Gas outlets
 - Sinks and water faucets
 - Space between laboratory stations

- Ventilation for the laboratory activities planned (or a manually controlled purge system for the rapid exchange of room air)
7. There are ground fault circuit interrupters (GFCIs) on electrical outlets near sinks.
 8. Cabinets and open shelves are equipped with lips or restraining wires to prevent chemical spillage or breakage of glassware during an explosion or earthquake.
 9. The room has at least two exits.
 10. The light level is adequate (about 75 to 100 foot-candles at work surfaces).
 11. Separate designated waste containers are provided for:
 - Broken glass
 - Spent matches, wood splints, toothpicks, and so on
 - Flammable waste chemicals
 - Nonflammable waste chemicals
 12. Quantities of hazardous chemicals kept on hand are limited to the amounts needed for one school year.
 13. Proper labels and signs are kept in place on all chemicals and on the storage area.
 14. A chemical-spill kit is available for emergency use.
 15. Chemical containers are inspected periodically for leakages or deterioration (such as sediments and discoloration), and approved disposal procedures are followed as necessary.
 16. Any cylinder gas is stored according to the required safety code (for example, chained or strapped in a cart or to the wall).
 17. Splash-proof indirectly ventilated safety goggles, face shields, aprons, safety shields, and so on are available to protect the teacher and students when hazardous conditions exist.
 18. Goggles and face-shield sterilization facilities are available.
 19. Eyewash fountains, hand-held drench hoses, and safety showers (as necessary) are easily accessible and are flushed weekly to remove scale and rust.
 20. Fume hoods are clean, are uncluttered, and have a streamer easily visible throughout the room when in operation; the hoods are tested periodically to ensure adequate air flow.

21. All equipment is properly maintained.
22. All electrical equipment is three-wire grounded (except for double- insulated tools and equipment).
23. Electrical outlets and extension cords are kept in safe, working condition.
24. Electrical equipment, such as the refrigerator and aquarium aerator, is connected directly to a wall outlet and is not serviced through an extension cord.
25. Gas outlets and burners are maintained in safe working condition.
26. A fire extinguisher capable of extinguishing class A, B, and C fires is kept in working condition at all times and in a conspicuous and accessible place.
27. Dry sand or other appropriate means is available to extinguish class D fires.
28. An approved fire blanket (preferably fire-retardant-treated 100 percent wool) is kept in a conspicuous and accessible place.
29. Flammable liquids are stored in the classroom in fireproof containers (not glass) and in quantities sufficient for only one day's supply.
30. Approved fire-retardant storage cabinets (with a bottom pan to contain spills temporarily), separate from the classroom, are used for storing larger quantities of flammable, corrosive, and other dangerous chemicals.
31. The larger storage containers of acids and bases are stored on the lower cabinet shelves.
32. Flammable liquids are not kept in refrigerators, unless the refrigerators are certified as explosion-proof.
33. Food is not kept in refrigerators that are used for storing science materials.
34. Ether on hand was purchased less than one year ago.
35. Ethers are periodically disposed of before they exceed their one- year shelf life. (See "Use and Disposal of Ethers" in Chapter 7.)
36. Sodium is stored underneath kerosene or oil.
37. Incompatible chemicals are not stored adjacent to one another. (See Appendix D for a list of incompatible chemicals found in high school laboratories.)