

# Fire Safety Inspection



## Introduction

A science department safety plan, or chemical hygiene plan (CHP), should include a comprehensive plan for fire safety. This plan should include the procurement, storage, use, and disposal of flammable materials, as well as the inspection, training and use of firefighting equipment. Perform a fire safety inspection to identify areas of preparation, training, and equipment that need to be improved. A fire safety inspection should be performed on an annual basis.

## Fire Safety Inspection

1. Is there a plan in existence to immediately notify the fire department in the event of a fire? Is a telephone, intercom, or fire alarm available in all science rooms? Are all emergency numbers clearly posted?
2. Has a science department fire evacuation plan been established and practiced? Is there a regular schedule for fire drills?
3. Are fire extinguishers present and located in all science classrooms, laboratories, and chemical storage areas?
4. Are the fire extinguishers appropriate for existing fire risks? The science areas should be equipped with an ABC, dry chemical fire extinguisher. CO<sub>2</sub> fire extinguishers are common in many schools but do not provide enough protection in science areas.
5. Are "special" fire extinguishing materials available for special risks such as flammable metals (sodium, potassium, magnesium, etc.)? Dry sand or a Class D extinguisher are recommended.
6. Are fire extinguishers the proper size for the risk present? Is the size appropriate for the teacher in the classroom? A 10- or 15-lb fire extinguisher is a common size for schools.
7. Are fire extinguishers fully charged and operational? Has a fire extinguisher maintenance schedule been established and monitored? A discharged, broken, or nonfunctioning fire extinguisher offers no protection.
8. Is the travel distance from a potential fire source to the nearest fire extinguisher a maximum of twenty feet or less? Create a crude floor plan of the entire science laboratory and plot the best locations for all fire extinguishers.
9. Are fire extinguisher locations unobstructed and visible from all areas in the room? Are large, overhead, locator signs placed near all extinguishers? Do all teachers and students know the locations of all fire extinguishers in the science area?
10. Is each science teacher knowledgeable and capable of handling a hand-held fire extinguisher? Do not wait for a fire to occur before learning how to use a fire extinguisher.
11. Is your chemical storage area equipped with a smoke detector, fire blanket, and fire extinguisher? Do the walls and doors of the chemical storage area meet local fire codes?
12. Are high-risk, flammable, laboratory chemicals stored in approved and dedicated flammable cabinets for protection? Reduce your risk by protecting flammable liquids.
13. Are all chemicals stored in compatible families to reduce the risk of fires during storage?
14. Do purchasing plans include sensible acquisition of flammable liquids and solids aimed at minimizing the inventory of these hazardous materials?
15. Are all passageways, fire doors, and exits kept clear and unobstructed?
16. Have students (and teachers) been taught the "Stop, Drop, and Roll" technique to be used if their clothes catch on fire?
17. Are fire blankets and/or safety showers available to assist in extinguishing clothes that are on fire?
18. Are strict safety procedures in place whenever flammable materials are used in demonstrations and laboratory activities? Procedures should cover dispensing, handling, using, and disposing of flammable materials.
19. Be aware of all ignition sources in the laboratory (open flames, heat, and electrical equipment). When flammable liquids are used, take extra precautions around ignition sources.
20. Make sure that all electrical cords are in good condition. All electrical outlets should be grounded and accommodate a 3-pronged plug.

### Summary

An annual fire inspection is a valuable department exercise but nothing compares to an inspection from a local fire chief or inspector. These trained professionals can help improve the safety of your laboratories and chemical storage areas. A good working relationship with local fire officials is highly recommended.

### Fire safety equipment is available from Flinn Scientific, Inc.

Catalog No.	Description
SE3006	Fire Blanket with Case
SE1034	ABC Dry Chemical 5-lb Fire Extinguisher
SE3001	ABC Dry Chemical 10-slb Fire Extinguisher
SE3004	Fire Extinguisher, Powder Class D
S0009	Dry Sand

Consult your *Flinn Scientific Catalog/Reference Manual* for current prices.