

# Flinn Scientific Five-Minute Safety Inspection

Answer yes or no to each question. A comment section is provided to identify any equipment that needs to be repaired or replaced.

Room Number \_\_\_\_\_

Date \_\_\_\_\_

Inspector \_\_\_\_\_

1. Do you have a 15-lb. ABC type fire extinguisher? \_\_\_\_\_

\_\_\_\_\_

2. Do you have a fire blanket? \_\_\_\_\_

\_\_\_\_\_

3. Do you have an eyewash that treats both eyes at the same time, provides a continuous wash for 20 minutes, and is supplied with water from a clean water source?

\_\_\_\_\_

\_\_\_\_\_

4. Do you have a safety shower or body drench? \_\_\_\_\_

\_\_\_\_\_

5. Do you have a first aid kit? Is it completely stocked? \_\_\_\_\_

\_\_\_\_\_

6. Do you have safety placards (signs) prominently posted next to all required safety equipment?

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7. Do you have spill control equipment? \_\_\_\_\_

\_\_\_\_\_

8. Has your fume hood been tested within the last three months and does it have a face velocity of 100 ft/minute?

\_\_\_\_\_

9. Are an adequate number of goggles and aprons available? \_\_\_\_\_

\_\_\_\_\_

For those questions where the answer was no, you have now identified a problem that needs to be corrected. For every question asked on the 5-minute safety inspection checklist, we have provided the correct procedure, policy or equipment to solve the problem.

# Flinn Scientific Five-Minute Safety Equipment Inspection Policy and Procedures Guide

For every question on the safety inspection checklist, we have provided the correct procedure or policy to solve the safety problem. Please call Flinn Scientific at 1-800-452-1261 if you have any questions or would like more information. Please consult the *2007 Flinn Scientific Catalog/Reference Manual* for detailed descriptions of the suggested products.

## 1. Do you have a 15-lb. ABC type fire extinguisher?

ABC dry chemical fire extinguishers are your best choice for the science laboratory. In comparison with CO<sub>2</sub> fire extinguishers, the ABC fire extinguisher treats more types of fires, is safer, and has a much longer “shooting distance” or range of stream. Always use ABC dry chemical fire extinguishers in science labs and in all chemical preparation and storage areas. Fire extinguishers must be easily accessible and unobstructed.

*Product suggestion:*

Fire Extinguisher, ABC type, 15 lbs. Catalog No. SE3001

## 2. Do you have a fire blanket?

There should be a fire blanket in every laboratory, chemical storage or preparation area, and any other rooms where chemicals are stored or used. A fire blanket is an essential safety aid—it can be used in many different accident situations. The fire blanket can be used to extinguish a fire involving a person, contain and control any type of event or spill (like a bench fire or acid spill), warm a victim in shock, or raise a victim’s head or legs while awaiting medical attention. The fire blanket must be easily accessible and unobstructed.

*Product suggestions:*

Fire Blanket with Case, Catalog No. SE3006

Fire Blanket only, Catalog No. SE3007

An inexpensive option is to purchase a 100% wool camping or utility blanket from an Army/Navy surplus store. The blanket must be 100% wool.

## 3. Do you have an eyewash that treats both eyes at the same time, provides a continuous wash for 20 minutes, and is supplied with water from a clean water source?

An ANSI-approved eyewash is a critical piece of safety equipment for all labs or storage areas where chemicals will be used. An eyewash must treat both eyes at the same time, provide a continuous wash for 20 minutes, and have its water come from a clean water source. The eyewash should be visible, easily accessible, and unobstructed.

Portable eyewashes or eyewash bottles usually treat only one eye. If you get a splash in both eyes, you have to decide whether you will save the right eye or the left eye—a choice no one should ever have to make. Eyecare professionals say that when a splash occurs, the eyes should be irrigated with clean water for at least 20 minutes. A portable eyewash will last less than five minutes and is not suitable for school use.

Portable eyewashes can also be tampered with and contaminated. You don’t want to aggravate a possible eye injury using poor quality or contaminated water. Having permanently-plumbed eyewashes connected to a clean water source is absolutely critical.

*Product suggestions:*

Eyewash, connects to a gooseneck faucet, Catalog No. SE1040

Eyewash, Economy, wall mount, Catalog No. SE2514

Eye/face wash, wall mount, Catalog No. SE1010

Eyewash, swivel, Catalog No. AP1905

Eyewash/body drench combination, wall mount, Catalog No. AP2264

Eyewash/body drench combination, bench mount, Catalog No. AP8731

## 4. Do you have a safety shower or body drench?

A safety shower or body drench is an important safety device to provide a flow of water to handle body splashes. Showers and body drenches are especially important in the chemistry laboratory and chemical storage rooms. If a shower cannot be purchased, a less expensive body drench should be considered. The body drench is like a mini shower—it can direct water to a specific location on the body and may be used as a crude secondary eyewash if hands-free operation is available. The safety shower/body drench must be easily accessible and unobstructed.

We are aware of cases where teachers have had to crawl up on top of a laboratory bench and place their feet into a small sink to rinse a chemical splash to the legs. Be prepared! Consider installing either a full body shower or a hand-held body drench.

*Product suggestions:*

Shower, ceiling mounted, Catalog No. SE1020  
Shower, wall mounted, Catalog No. SE1021  
Shower/eyewash combination, Catalog No. SE1025  
Body Shower Drench, Catalog No. SE1013  
Body Shower/Drench/Eyewash, wall mounted, Catalog No. AP2264  
Body Shower/Drench/Eyewash, bench mounted, Catalog No. AP8731

**5. Do you have a first aid kit? Is it completely stocked?**

First aid kits with supplies to treat minor cuts or burns are a helpful safety aid in cases where school policy allows teachers to provide basic first aid treatment. Some schools have medical professionals on staff to provide medical treatment.

Having a first aid kit in every science laboratory is useful for providing basic medical assistance.

*Product suggestion:*

First Aid Kit, Catalog No. SE240

**6. Do you have safety placards (signs) prominently posted next to all required safety equipment?**

Visibility of safety equipment is critical for prompt action. The teacher should be able to stand in any location in the laboratory or storage area, make a visual sweep around the room, and immediately locate every safety aid.

Some equipment, like a fire extinguisher, may stand out because of its red color and cylindrical shape. Do not make the assumption that everyone will identify the red cylindrical shape as a fire extinguisher.

All safety equipment must be clearly marked with signs identifying their location. Below is a list of safety equipment requiring signs:

Fire Extinguisher	First Aid Kit
Fire Blanket	Spill Control Equipment
Eyewash	Master Utility Controls
Safety Shower	

Signs can either be homemade or purchased.

*Product suggestions:*

Fire Extinguisher Sign, 24"H × 4"W, Catalog No. SE320  
Fire Extinguisher Sign, 7"H × 17"W, Catalog No. SE1916  
Fire Blanket Sign, 3.5"H × 14"W, Catalog No. SE331  
Eyewash Station Sign, 7"H × 17"W, Catalog No. SE1911  
Emergency Shower Sign, 7"H × 17"W, Catalog No. SE1912  
First Aid Kit Sign, 3.5"H × 14"W, Catalog No. SE1915  
Personal Safety and Emergency Equipment Signs, Set of nine signs, 8½"H × 11"W, Catalog No. AP4519

**7. Do you have spill control equipment?**

No matter what precautions you take, sooner or later an accidental chemical spill will occur. What will you use to contain, control, and clean up the spill? Proper spill control equipment should be available in every science laboratory, preparation area, and storeroom where laboratory chemicals are used.

A good spill control kit will have sand to contain the spill, a cat litter-type material to absorb a liquid spill, and sodium carbonate to neutralize an acid spill.

*Product suggestions:*

E-Z Pour Spill Control Kit, Catalog No. SE102  
E-Z Pour Base Neutralizer, Catalog No. SE107  
Flinn Spill Control Center, Catalog No. AP6448  
Absorbent Spill Pillows, 250-mL size, Catalog No. SE150  
Sand, 25 lbs., Catalog No. S0005  
Super Sorb® Absorbent, 20 lbs., Catalog No. SE101  
Neutralizer, Sodium Carbonate/Calcium Hydroxide Mixture, 25 lbs., Catalog No. SE106

**8. Has your fume hood been tested within the last three months and does it have a face velocity of 100 ft/minute?**

Fume hoods should be tested every three months. A fume hood should have a face velocity of 100 feet/minute.

First of all, never assume a fume hood is operating efficiently just because you hear the motor running. The only way to test a fume hood is using either a velometer (aka Vaneometer) or a smoke generator.

Testing a fume hood with a velometer is simple. Lower the sash to within 10–12" of the bench top. Keep the velometer level and take 4–5 readings at various locations across the opening of the fume hood.

To test the hood using smoke generators, place a smoke generator at or near the center of the fume hood and light it. With the fume hood on, the smoke should move immediately to the back of the fume hood and then up and directly out of the fume hood exhaust stack. While you will not get an exact measurement of the air velocity in the fume hood, you will have a better idea of whether the fume hood is operating efficiently.

Another great reason to test a fume hood using a smoke generator is to discover where the smoke goes. The smoke should go directly out-of-doors. The only way to know for sure is to have someone on the rooftop monitor where the smoke comes out. If you perform a smoke generator test, notify the fire department and your principal in advance so they don't respond to your "smoke."

Reasons for poor fume hood performance include inadequate motor/blower size, a damaged motor, inadequate vent piping, or a blockage in either the vent or on the roof where the fume hood vent stack is located (e.g., bird's nest).

*Product suggestions:*

Velometer, Catalog No. SE4055

Smoke Generator, 30-second, Catalog No. SE5010

**9. Are an adequate number of goggles and aprons available?**

It is important to have a firm goggle policy. Flinn Scientific recommends the following simple safety rule regarding goggles: "Anytime chemicals, heat or glassware are used, students and teachers must wear their goggles." There should be no exceptions to this rule.

All goggles should be marked with the ANSI code Z87.1 or Z87+ on either the goggle frame or the lens. Goggles that are not Z87.1 approved should be discarded. Enough goggles should be available for every student in the classroom.

Students using laboratory chemicals should always wear chemical-resistant aprons. Aprons should be available for all students and should loosely fit students' bodies. The apron should cover from the top of the student's chest down to above the knees. Rubber or heavy-duty plastic aprons work fine for school science laboratories.

*Product suggestions for goggles:*

Goggles, Chemical Splash, Catalog No. AP3306

Goggles, Chemical Splash, Fog-Free Lens, Catalog No. AP3309

Flinn Visor Goggles, Catalog No. AP1362

*Product suggestions for aprons:*

Apron, Plastic, Medium-Duty, Catalog No. AP7120

Apron, Rubberized, Medium-Duty, Catalog No. AP7125