The basic fire theory says that a fire needs four main elements in order to start: **heat, fuel, oxygen, and a chain reaction**. This theory is known as the fire tetrahedron.
Fire prevention stops a fire before it starts. Here are some proactive actions you can take to prevent fires:

- Know the hazards of the chemicals you work with
- Keep fire lanes open and unobstructed
- Know where firefighting equipment is located
- Clean up chemical and oil spills immediately
Fire detection systems are the first line of defense in any fire protection program. Automatic fire detection systems alert you to the presence of heat, smoke, and flames.
Automatic sprinkler systems are one of the most dependable ways to fight a fire. They:

- Detect a fire, sound an alarm, and spray water toward the fire and heat
- Are not necessarily designed to put out fires, but they help keep the flames from spreading and allow workers time to evacuate
Another way you can put out a fire is by using a portable fire extinguisher. Portable fire extinguishers should only be used for the *beginning stage* of a fire.

All extinguishers should be fully charged and visually inspected on a monthly maintenance schedule.
If your company wants you to fight fires in the beginning stage, you must receive fire extinguisher training when you are hired and once a year after that.

You must be trained on how to:
- Figure out how severe a fire is
- Choose the correct type of extinguisher
- Use an extinguisher in an emergency situation
To properly extinguish a fire, you must match the fire class with the correct type of fire extinguisher.
Fire classification is based on the type of fuel used to feed a fire. Knowing the type of fuel that started the fire will help you choose the correct fire extinguisher.
Fire extinguishers are classified using the National Fire Protection Association (NFPA) classification system.

- The letters A, B, C, D, and K indicate the type of extinguisher
| Class A | • Cool materials below their ignition temperature and soak fibers to prevent re-ignition |
| Class B | • Remove oxygen from the fire to stop vapors from reaching the ignition source, stopping the chemical chain reaction |
| Class C | • Use an extinguishing agent that is not capable of conducting electrical currents |
| Class D | • Different metals need different types of extinguishers, although dry sand, sodium chloride, and soda ash are common; these dry powders are not the same as dry chemical extinguishers on other fires |
| Class K | • Apply sodium bicarbonate dry chemical or potassium bicarbonate dry chemical to burning cooking oil |
Extinguishers have a short use period of about 8-15 seconds. To extinguish a small fire, use the **PASS method**:

- Pull the pin to ready the extinguisher for discharge
- Aim low and point the extinguisher at the base of the fire
- Squeeze the lever to discharge the extinguisher
- Sweep back and forth as you move closer to the fire
Keep the fire extinguisher pointed at the base of the fire until the fire appears to be out. Never turn your back on a fire even if it appears to be out.
It is your job to recognize when you should fight a fire and when you should evacuate the area.

- Know your company’s policy on whether or not workers are allowed to attempt to put out fires
- Only attempt to put out a fire if you can do so safely with a portable fire extinguisher
- Do not respond beyond your level of training
**Do not** use an elevator when evacuating. Touch door handles gently with the back of your hand to determine if they are hot.
Your company must develop emergency escape routes for different locations in your facility.

Maps of emergency escape routes should include exits, assembly points, and the locations of equipment that may be needed in an emergency.
Your **main responsibility** during an emergency is self-rescue. Only assist in emergency response if you have received proper training for emergencies.

It is **your job** to know your assigned evacuation route, how to report emergencies, and who to ask for more information.
To **reduce** your chances of being severely burned:

- Wear flame-resistant clothing (FRC)
- Use leather gloves to handle hot materials
- Keep clothing and tools free of flammable materials
- Use cotton rather than nylon or polyester materials
- Be aware of any welding or cutting operations that could create fire hazards
Remember, if you catch on fire, do not run. Running fans flames. Drop to the ground and cover your face with your hands. Keep rolling until you have smothered the flames.
1. The basic fire theory says that a fire needs four main elements in order to start: heat, fuel, oxygen, and _____________.
   A. Hydrogen sulfide  
   B. Carbon dioxide  
   C. A chain reaction  
   D. Benzene

2. Fire detection systems are the ____________ line of defense in any fire protection program.
   A. First  
   B. Second  
   C. Third  
   D. Last

3. ____________ are one of the most dependable ways to fight a fire.
   A. Work permits  
   B. Automatic sprinkler systems  
   C. Fire escapes  
   D. Job safety analyses

4. Portable fire extinguishers should only be used for the ____________ stage of a fire.
   A. Beginning  
   B. End  
   C. Late  
   D. Middle

5. Fire ____________ is based on the type of fuel used to feed a fire.
   A. Detection  
   B. Classification  
   C. Prevention  
   D. Theory

6. Fire extinguishers are classified using the ____________ classification system.
   A. Centers for Disease Control and Prevention (CDC)  
   B. American National Standards Institute (ANSI)  
   C. Occupational Safety and Health Administration (OSHA)  
   D. National Fire Protection Association (NFPA)

7. Fire extinguishers have a short use period of about ____________.
   A. 8-15 seconds  
   B. 1-2 minutes  
   C. 2-3 hours  
   D. 4-5 days

8. To extinguish a small fire, use the ____________ method.
   A. PEC  
   B. OSHA  
   C. PASS  
   D. FRC

9. Your company must develop ____________ routes for different locations in your facility.
   A. Emergency escape  
   B. Elevator  
   C. Vehicle  
   D. Delivery

10. Your main responsibility during an emergency is ____________.
    A. To rescue your coworkers  
    B. To order an evacuation  
    C. Shutting down equipment  
    D. Self-rescue
Instructors: The following key shows the answers for the Fire Safety safety meeting quiz.

1. C
2. A
3. B
4. A
5. B
6. D
7. A
8. C
9. A
10. D
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Student Instructions: Print and sign your name. Also, provide your date of birth or the last four digits of your social security number.