HFSC Educational Quiz

A VERBAL QUIZ FOR CHILDREN IN KINDERGARTEN THROUGH GRADE 2

Use these fun and informative educational tools designed by the nonprofit Home Fire Sprinkler Coalition (HFSC) to quiz audiences of every age about the value of home fire sprinkler systems. HFSC also offers free Tips for Improving Home Fire Sprinkler Educational Outreach to Varied Audiences to help you increase the effectiveness of local sprinkler presentation and outreach.

This verbal quiz is suggested to follow a basic home fire safety discussion, where the dangers of fire have already been covered. The purpose is to introduce young children to fire sprinklers. Follow HFSC's guidance for young children and incorporate this verbal quiz into your fire safety outreach.

1. **How many of you have heard of fire sprinklers?**
2. **Who can tell me what a fire sprinkler is?**
   a. Provide a very basic definition, such as: A fire sprinkler keeps you safe if fire breaks out. It does this by putting water on the fire right after it starts. A sprinkler keeps the fire small so you and your family can get outside safely.
3. **Has anyone seen a fire sprinkler (hold up sample residential sprinkler)?**
4. **Where have you seen a fire sprinkler?**
   a. Point out the sprinklers in the building where you are presenting if they are installed. If not, hold up the sample sprinkler again.
   b. Suggest the types of places where the children may have seen sprinklers, such as: Hotel, grocery store, high-rise building.
5. **Has anyone seen a fire sprinkler in a house or apartment?**
6. **Is it OK to play with fire sprinklers?**
   a. Make sure the children understand the answer is "no."
7. **Who can tell me why it isn't OK to play with a fire sprinkler?**
   a. Explain in very simple terms why not, such as: Fire sprinklers are safety tools. They aren't toys. Playing with them or throwing anything at them could cause them to break.
8. **Is it OK to hang anything from a fire sprinkler?**
   a. Make sure the children understand the answer is "no." Provide a simple answer why not, such as: Fire sprinklers are safety tools.
9. **If your home has a fire sprinkler system, should you also have family fire drills?**
   a. Explain that every family should know how to get outside if fire starts. It's best to practice getting out with fire drills.

HFSC Educational Quiz

A QUIZ FOR MIDDLE SCHOOL STUDENTS

Use this fun and informative educational tool designed by the nonprofit Home Fire Sprinkler Coalition (HFSC) to quiz middle school students about the value of home fire sprinkler systems.

1. **Fires kill more people in the U.S. than all natural disasters combined.**
   True
   False

2. **What percent of all fire deaths take place in the home?**
   A: 10%
   B: 30%
   C: 60%
   D: 80%

3. **Who is at greatest risk from a home fire?**
   A: College students
   B: College students and professors
   C: Grade school and high school students
   D: Preschool children and older adults

4. **The majority of fatal home fires happen when?**
   A: After breakfast
   B: During lunch
   C: Before dinner
   D: Late at night

5. **How many minutes does it take for a home fire to become deadly?**
   A: 3
   B: 6
   C: 12
   D: 30

6. **Which of the following will cause a fire sprinkler to operate?**
   A: Thick smoke
   B: Breaking glass
   C: "Override" switch
   D: Heat from a fire

7. **If a fire breaks out in a home, all the sprinklers will operate at once.**
   True
   False

8. **Compared to fire department hoses, home fire sprinklers use how much water?**
   A: Twice as much
   B: About the same
   C: Somewhat less
   D: Only a fraction

9. **Which of the following offers as much protection as fire sprinklers?**
   A: Smoke alarms
   B: Fire extinguishers
   C: Security monitoring
   D: None of the above

HFSC Educational Quiz

A QUIZ FOR MIDDLE SCHOOL STUDENTS

ANSWER KEY

1 **True** – According to NFPA, fires are actually more common than natural disasters – and many times more deadly. Fire departments responded to 1.6 million fires in the United States in 2005.

2 **D** – Research conducted over the years has documented that people tend to feel safest at home, yet homes are where we are at greatest risk from fire.

3 **D** – According to NFPA, Preschool age children and older adults have a home fire death rate that is roughly twice the national average.

4 **D** – The majority of fatal home fires happen at night, when people are typically sleeping.

5 **A** – The National Institute of Standards and Technology (NIST) research shows there are typically three minutes or fewer to escape from a home fire. The intense heat and toxic gases are deadly. If the fire isn't stopped, flashover takes place and everything in the room bursts into flames. No one can survive flashover.

6 **D** – Fire sprinklers are designed to operate when they detect the high temperature resulting from a fire, usually between 135˚-165˚F. Smoke cannot trigger a fire sprinkler; only heat can.

7 **False** – Although Hollywood movies often show inaccurate special effects depicting all the fire sprinklers operating at once, that doesn't happen in real life. Fire sprinklers operate individually and independently.

8 **D** – A fire sprinkler flows 10-26 gallons of water per minute. Fire departments use fire hoses that apply water at 125 gallons per minute.

9 **D** – Fire sprinklers are widely accepted as the ultimate home fire protection technology. Smoke alarms are essential in every home, but they can only detect a fire. Fire sprinklers detect the fire and automatically control it. No other device can do that.

HFSC Educational Quiz

A QUIZ FOR ADULTS

Use this fun and informative educational tool designed by the nonprofit Home Fire Sprinkler Coalition (HFSC) to quiz adults about the value of home fire sprinkler systems.

1. **Fires kill more people in the U.S. than all natural disasters combined.**
   True
   False

2. **What proportion of all fire deaths take place in the home?**
   A: 1 in 10
   B: 3 in 10
   C: 6 in 10
   D: 8 in 10

3. **What is the leading cause of home fires?**
   A: Old construction
   B: Building materials
   C: People's activities
   D: Faulty electrical wiring

4. **Who is at greatest risk from a home fire?**
   A: College students
   B: College students and professors
   C: Grade school and high school students
   D: Preschool children and older adults

5. **The majority of fatal home fires happen when?**
   A: After breakfast
   B: During lunch
   C: Before dinner
   D: Late at night

6. **How many minutes does it take for a home fire to become deadly?**
   A: 3
   B: 6
   C: 12
   D: 30

7. **How long, on average, does it take the fire department to respond after receiving an alarm for a home fire?**
   A: 1-4 minutes
   B: 4-7 minutes
   C: 9-12 minutes
   D: 12-18 minutes

8. **Fire sprinkler technology has been saving lives for how long?**
   A: More than 100 years
   B: More than 125 years
   C: More than 150 years
   D: Less than 100 years

9. **Fire sprinkler technology has been saving lives in residential properties for how long?**
   A: More than 20 years
   B: More than 40 years
   C: More than 50 years
   D: Less than 20 years

10. **Residential fire sprinklers look very similar to commercial fire sprinklers.**
    True
    False

11. **Which of the following will cause a fire sprinkler to operate?**
    A: Thick smoke
    B: Breaking glass
    C: Override switch
    D: Heat from a fire

12. **If a fire breaks out in a home, all the sprinklers will operate at once.**
    True
    False

HFSC Educational Quiz

A QUIZ FOR ADULTS

ANSWER KEY

1 **True** – According to NFPA, fires are actually more common than natural disasters – and many times more deadly. Fire departments responded to 1.6 million fires in the United States in 2005.

2 **D** – Research conducted over the years has documented that people tend to feel safest at home, yet homes are where we are at greatest risk from fire.

3 **C** – The top two causes of home fires are cooking and heating equipment. Improper use or maintenance of the equipment is most often involved in home fires.

4 **D** – According to NFPA, Preschool age children and older adults have a home fire death rate that is roughly twice the national average.

5 **D** – The majority of fatal home fires happen at night, when people are typically sleeping.

6 **A** – The National Institute of Standards and Technology (NIST) research shows there are typically three minutes or fewer to escape from a home fire. The intense heat and toxic gases are deadly. If the fire isn't stopped, flashover takes place and everything in the room bursts into flames. No one can survive flashover.

7 **C** – In a typical home fire, 9-12 minutes or longer will have passed from the time the fire starts, is discovered and reported to the time the fire trucks roll up to the scene.

8 **A** – The first U.S. patent for an automatic fire sprinkler system was issued in 1872.

9 **A** – Reduced labor costs and low-profile sprinklers have helped make fire sprinklers affordable for homes.

10 **False** – All residential fire sprinklers are much smaller and lower-profile than the types of sprinklers used in commercial properties. There are several types made for homes; some are for installation on walls and others in ceilings. Some are concealed by a plate.

11 **D** – Fire sprinklers are designed to operate when they detect the high temperature resulting from a fire, usually between 135˚-165˚F. Smoke cannot trigger a fire sprinkler; only heat can.

12 **A** – Although Hollywood movies often show inaccurate special effects depicting all the fire sprinklers operating at once, that doesn't happen in real life. Fire sprinklers operate individually and independently.

HFSC Educational Quiz

BONUS ROUND: Questions For Home Builders, Developers, Realtors® and Others Involved in New Home Construction and Sales

1. **Most fire sprinklers operate off the household water main.**
   True
   False
2. **Fire sprinklers will freeze during winter in cold climates.**
   True
   False
3. **Many communities offer options, or "trade ups," in return for putting in residential fire sprinklers. These trade ups can help a builder or developer save money by which of the following?**
   A: Reducing street width
   B: Permitting tee turnarounds
   C: Increased hydrant spacing
   D: All of the above
4. **Fire sprinklers cost approximately how much per housing unit, after deducting savings from trade ups?**
   A: $2000
   B: $1000
   C: $500
   D: $200
5. **Homeowners typically do not have a favorable opinion of homebuilders who offer sprinklered homes.**
   True
   False
6. **The majority of homeowners believe having a fire sprinkler system increases a home's value.**
   True
   False
7. **Home fire sprinkler systems typically cost more than which of the following?**
   A: Cabinet upgrades
   B: Carpet upgrades
   C: Countertop upgrades
   D: None of the above

Visit HFSC's Web site to download the Built for Life Game for an entertaining and interactive quizzing tool especially suited for home builders, community leaders and other professionals.

HFSC Educational Quiz

BONUS ROUND: Questions For Home Builders, Developers, Realtors® and Others Involved in New Home Construction and Sales

ANSWER KEY

1 **True** – When water pressure is a problem, the system is fed by a storage tank.

2 **False** – The national installation standard provides guidance for proper installation in cold regions and appropriate additional insulation and anti-freeze usage.

3 **D** – Development costs can be greatly reduced by sprinklering residential developments. Traffic lanes can be narrowed, the length of dead-end streets can be increased, steeper grades can be permitted, supply mains can be reduced and hydrant spacing increased. Plus, additional units may be permitted and the use of tee turnarounds can add one additional lot per cul-de-sac.

4 **D** – According to the Reese-Carr Report on Scottsdale, Arizona's experience with a residential fire sprinkler ordinance since 1986, the final cost of fire sprinklers after savings from trade ups is less than $200 per unit.

5 **False** – According to a Harris Interactive® national poll conducted for HFSC in December 2005, homeowners view these homebuilders as being "safety concerned" (70%), "innovative" (52%) and "caring" (51%).

6 **True** – In the Harris Interactive® national poll conducted for HFSC in December 2005, two-thirds (69%) of U.S. homeowners say having a fire sprinkler system increases a home's value. Nearly half (45%) say a sprinklered homes is more desirable; most often (51%) because of added safety provided by the sprinklers.

7 **D** – Actually, sprinklers often cost less than these options. A good rule of thumb estimate is to add 1 to 1.5 % to the cost of new housing. In areas where sprinkler installations are very common, the cost is even lower. For example, in Scottsdale, AZ where sprinklers have been required in new homes for 20 years, the cost is less than $1 per square foot.