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4-H 234 Fire Safety Education Fire Protection in your Community

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Project 3

Fire Safety Education
Fire Protection In
Your Community

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Leo E. Lucas, Director of Cooperative Extension Service, University of Nebraska. Institute of Agriculture and Natural Resources.

The Cooperative Extension Service provides information and educational programs to all people without regard to race, color, national origin, sex or handicap.
Glossary

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) — An organization that sets rules and procedures for the safe use of fire. They also set rules and procedures for fire fighters and fire equipment.

HALLIGAN TOOL — A tool used to forcibly enter a building. This tool can also be used as a pry bar or ceiling hook.

KELLY TOOL — A forcible entry tool shaped like a can opener. It is used to cut away sheet metal.

GENERATOR — A second source of electrical power, usually gas or battery powered.

VENTILATION — Supplying air to dilute poisonous gases. An opening to allow smoke and heat to escape.

SALVAGE — Refers to saving and protecting household goods from fire or from water damage caused by fire extinguishment.

OVERHAUL — Is done after a fire is extinguished. Refers to a systematic search for additional hot spots or smoldering fires.

PIKE POLE — A forcible entry tool. It has a wedge and is used to remove wall materials.

TURNING RADIUS — The area of space needed to turn a fire truck around.

MUTUAL AID — Neighboring fire companies that help each other fight fires when needed.
How Fire Companies Are Organized

Fire departments are generally made up of people who are either volunteers or are paid. Most rural areas and smaller municipalities have all volunteer organizations, while the larger cities and suburban areas have mostly paid firefighters. In some areas, there may be a few paid officers with the rest volunteers. Check with the fire company that protects your home to see how they are organized.

Volunteer fire companies receive the money necessary to run a fire company from several different sources. Tax money from the protected area, special fund-raising events such as pancake suppers, donations from individuals and businesses, and fire company memberships are some sources of funds. Paid fire companies are usually budgeted money by local community officials from local taxes. Try to determine where your fire company receives its money.

The way a fire department is administratively organized depends largely on whether it is a paid professional department or a volunteer group. Most paid departments are larger and, therefore, have more officers and assistant officers. The fire chief is the top officer and is the man responsible for everything the fire department does. After the chief come assistant chiefs and line officers. These officers have various duties in both firefighting activities and in other services.

Answer the following questions about your fire department.

1. Is your fire company volunteer or paid? ___________
2. How many firefighters, including officers, are in your fire department? ___________
3. How is your fire company funded? ___________
4. Write down the names of your fire company’s officers and what position they hold.

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THINGS TO DO
1. Visit other fire departments from nearby areas and find out if they are paid or volunteer, how they finance their department, and how many firefighters and officers are in their fire company.
2. Ask the fire chief of your fire company to discuss the officer’s ranking system and the chain of command at the scene of a fire.
3. Have your fire company conduct a mock fire, demonstrating the various responsibilities and commands of the officers and firefighters.
4. Have an appropriate authority or community leader speak to your club and explain a few of the details of some of the functions and activities that are named.

Becoming A Firefighter

Whether or not you can join your local fire company depends on many things. A very important consideration is whether the firefighters are a volunteer service or a paid professional group. Paid professional firefighters must meet numerous training and physical qualifications as set forth by the National Fire Protection Association (NFPA).

Volunteer fire departments have more leeway in who they can accept as a member. Volunteer groups also are likely to have more types of memberships. Here are some of these types of membership:

Active firefighter - those who actually fight fires
Supporting members - people who pay membership dues in order to support the fire department
Ladies auxiliaries - usually the wives of firefighters who provide food and drink at fire scenes, or give other types of support
Junior members - for those 14 to 18 years of age. They are legally restricted from actually fighting fires but they help clean equipment, wash trucks, etc.

To be a good firefighter you must receive training in many different fields. Most firefighters undergo training in communications, chemistry and physics of fire, principles of building construction, hazardous substances, explosions, fire tactics, arson detection, and many other areas. There are three different levels of firefighter that both paid and volunteer fighters can strive for; these are Firefighter I, II, and III.

Firefighters receive training in a variety of ways. Some of the most common ways are at state and county fire schools, in special training sessions held by equipment sales representatives, through public service groups like the Extension Service, or by the local chief, training officer, or firefighter’s association. Some training programs can last for a full week, while others may be for just a few hours.
Answer the following questions about becoming a firefighter in your fire company.

1. What types of membership does your fire company have?

2. How many people are in each type of membership group?

3. List some of the personal characteristics and qualifications you think a person should have before joining a fire company.

4. List some of the areas a firefighter should know.

5. How many levels of firefighters are there in your fire company? Name them.

THINGS TO DO
1. Have your local fire chief explain the procedures used for someone to join the fire company. Have him include all types of memberships.
2. Have someone from each type of membership group explain what their activities are, or what they do.
3. Have a fireman give a presentation on training needs and demonstrate some of the special skills such as pumper truck operator, the use of self-contained breathing apparatus, chemical cleanup operations, etc.
Types of Fire Apparatus

The types of fire trucks used for fighting fires may vary considerably. Large cities will usually have more equipment than small cities or rural areas. However, there are trucks that are fairly common to all fire departments. These basic pieces of equipment are usually named by the function that they perform. The four most common trucks are:

Pumper truck This type of truck has a pump which provides several hundred gallons of water per minute. This type of apparatus also carries fire hoses plus other equipment and tools.

Ladder truck These trucks carry numerous ladders plus tools and equipment. Many have a power operated aerial ladder that goes up from the center of the truck.

Rescue truck Some departments maintain a separate vehicle used only for rescue work. Specialized equipment may include ropes, jacks, stretchers, and cutting tools.

Tanker truck The name of this truck tells you that it is a truck with a large water tank used to haul extra water to the fire scene. These trucks are particularly valuable in rural areas where water may be scarce. Some of these trucks may also have pumps to help with the loading and unloading of water.

Answer the following questions about the fire trucks used by your fire department.

1. Name the types of fire trucks used by your fire company.

2. Find out the cost of each fire truck your department uses.

THINGS TO DO

1. List the major pieces of accessory equipment that are in or on the fire trucks of your fire department.

2. Visit your local fire company. Have fire department personnel explain and demonstrate how the fire trucks operate.
Protective Clothing and Firefighting Equipment

Carpenters, plumbers, doctors, and law enforcement officers all have their own specially designed tools and clothing that they use in the performance of their duties. Firefighters are no exception. They have specific tools, equipment, and clothing that help them extinguish fires.

Firefighters follow seven basic steps when fighting a fire. It is easiest to learn about some of their tools by listing the basic tools that go with the seven steps.

1. Building entry - Axes, wire and bolt cutters, Halligan and Kelly tools, wrecking bars, power saws
2. Rescue - Ropes, ladders, stretchers, blankets, lights, generators
3. Extinguishment - Water hoses, hose couplings and adaptors, portable pumps
4. Ventilation - Power saws, axes, fans, pike poles
5. Salvage - Plastic and canvas tarpaulins, hammers and nails, lumber ladders
6. Overhaul - Axes, ceiling hooks, pike poles
7. Clean-up - Hose rollers, hose washers, turnout gear dryers.

In some respects, people are just like meat and water. We'll roast at 82.2°C (180°F) and boil at 100°C (212°F). Because firefighters have to enter burning buildings which often contain extreme temperatures (1800 to 2000°F), poisonous smoke, and gases, the protective clothing they wear is extremely important. The major pieces of protective clothing and equipment firefighters wear or use are shown in the following illustrations.

- Pry axe
- Pick headed axe
- Kelly tool
- Halligan
- Portable saw
- Ceiling-shepherd hook
Other Emergency Services

Firefighting is the basic service provided by fire companies. When a fire is discovered and reported, at least one or two pieces of equipment roll to the fire and all available firefighters respond. However, firefighting is not the only service provided by many fire companies. Many also provide other emergency type services.

One of these other services is called rescue. A rescue service involves the removal or disentanglement of people from accident scenes such as automobile accidents or farm machinery accidents. Training in the use of specialized tools and equipment is necessary to provide this service. Rescue personnel normally do not provide medical treatment for injured people. Emergency medical treatment for injured or ill persons is provided by Emergency Medical Technicians (EMT’S), which is another service provided by many fire companies. EMT’S have to receive many hours of training in the proper handling of injuries and illnesses from doctors and nurses. The EMT’s function is to stabilize the victim’s injuries or other problems until the victim can be seen by a doctor or taken to a hospital.

Another service provided by some fire companies is the ambulance service. In fact, in many rural areas and small communities the ambulance is kept at the fire hall. Sometimes the ambulance will be driven by a firefighter while at other times it will be driven by specially trained volunteers, or by paid drivers. In many large communities, ambulance service is kept entirely separate from the fire service.

Often, men and women in the local fire company will serve their community in more than one way. For instance, some will be firefighters and rescuers, some will be rescuers and EMT’s, or perhaps an EMT and ambulance driver.

Answer the following questions about the additional services provided by your fire company.

1. List the services provided by your fire company.
2. List the names of anyone who is providing emergency medical services other than your fire department.

__________________________________________  _______________________________________
__________________________________________  _______________________________________
__________________________________________  _______________________________________

3. List the additional services your fire company provides. After each service, list the names of the people who have been specially trained in these services.

__________________________________________  _______________________________________
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Additional Functions and Activities

When you hear the fire siren in your community it means someone may have lost their life, been injured, or lost some of their property. No matter how many fire trucks and firefighters a company has, they cannot prevent loss after the siren blows. They can only stop it from becoming greater.

But fire companies can do many things to help prevent fire loss before the whistle blows. Many of these things involve working with citizens and community leaders to make them aware of what is necessary for a fire company to do a good job of protecting the community from fire loss. The activities fire companies are sometimes involved with before the siren blows can usually be put into three groups — regulatory programs (preventing fires and fire loss by laws and rules), firefighter education and training (helping firefighters do their job better and keep fire losses low), and public education (making the citizens in your community aware of the ways they can prevent fire loss in their homes or businesses).

Buildings can be built in such a way that they will not burn easily. Smoke detectors and fire sprinklers will help in discovering and extinguishing fire quickly. Safe use of electricity, proper storage of flammable chemicals, and good housekeeping help to prevent fires. Properly educated and trained firefighters will arrive at a fire sooner, work more efficiently, and be better equipped. All of these practices will keep fire loss at a minimum. A well-informed public will be fire conscientious. They will both respect and fear fire. Such persons will install smoke detectors, sprinklers, and extinguishers. They will use fire safety in the operation of their stoves and fireplaces. They will practice good housekeeping habits and will take the time to learn all they can about fires and how to prevent them.

THINGS TO DO

Below is a list of functions and activities that are typical of many fire companies. Not all items are applicable for each department. There also may be some functions and activities that your community fire company does that are not listed below.

Review the list. Check with the appropriate authority. Place a check in the categories that best describes the situation. Add any functions/activities not listed.

<table>
<thead>
<tr>
<th>Function/Activity</th>
<th>Yes</th>
<th>No</th>
<th>Not Applicable</th>
<th>Function Needed</th>
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<tbody>
<tr>
<td>1. Is a dangerous building removal program carried out?</td>
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<td>2. Are streets designed for fire department access, including width, turning radius, and vehicle weight?</td>
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<td>3. Are maps of water, sewer, storm drains, street address, and city boundaries up-to-date?</td>
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<td>4. Are bridges designed and constructed capable of handling fire equipment, including bridges in rural areas?</td>
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<td>5. Are water systems capable of providing enough water to fight fires?</td>
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<td>6. Are fire hydrants routinely flushed?</td>
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<td>7. Does the city coordinate its water activities with rural water districts?</td>
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<td>8. Does the policy department assist at emergencies by providing crowd and traffic control?</td>
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<td>9. Does the police department enforce no-parking ordinances in fire zones (obstructions to fire hydrants, fire department standpipes, and sprinkler connections)?</td>
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<td>10. Is the fire department provided training in fire rescue procedures?</td>
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<td>11. Are police patrol personnel trained in fire rescue procedures?</td>
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<td>12. Are mutual aid agreements or contracts adequate?</td>
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<td>13. Is public education adequate?</td>
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<tr>
<td>Function/Activity</td>
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<td>14. Is coordination between city, county, and state fire agencies adequate?</td>
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<td>15. Does the street/road department notify the fire department of street closures?</td>
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<td>16. Does the street/road department provide heavy equipment for special fire ground needs?</td>
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<td>17. Are fire hydrants and fire zones properly identified with paint markings?</td>
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<td>18. Is basic training of new personnel provided?</td>
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<td>19. Is a library of training aids maintained?</td>
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<td>20. Is a pre-fire planning program provided?</td>
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<td>21. Are fire drills conducted in rest homes, hospitals, and nursing homes?</td>
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<td>22. Are major disaster drills conducted?</td>
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<td>23. Is the 911 emergency telephone system installed and operating properly?</td>
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<td>24. Are records kept on: Direct loss?</td>
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<td>Indirect loss?</td>
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<td>Cost of public fire protection?</td>
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<td>Cost of private fire protection?</td>
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<td>25. Is disaster planning carried on for:</td>
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<td>Tornadoes?</td>
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Community Fire Safety Projects

The projects listed below can be used as a guide for community service activities by your 4-H fire safety club. Many of the projects may need to be altered to make them feasible for your club. Also, you may want to take parts from two or more of the suggestions to come up with a new project. Any project that involves actual fires or the operation of fire extinguishing equipment should be done under the supervision of a firefighter.

1) During winter months, fire hydrants are often covered by shoveled or plowed snow. Clean suitable area around hydrants.

2) In parking lot of mall or other similar public place, have fire extinguishing demonstrations. Must be supervised by firemen. Have children and adults participate by practicing extinguishing fires in a fire pan.

3) Distribute literature on flammable fabrics to families with young children and elderly adults.

4) Develop skits or 15-to 20-minute programs on fire safety for civic groups and school children. Involve as many club members as possible.

5) Set up displays in store windows during National Fire Prevention Week in October.

6) Develop programs to teach specific fire practices to young children. For example; first and second graders can be taught to Stop, Drop, and Roll, should their clothing catch fire. Young children can also be taught the dangers of matches and how to report a fire.

7) Do a community survey to determine how many homes have installed smoke detectors; hand out detector literature.

8) Survey homes to determine those with wood stoves and provide wood stove safety literature. Have your fire department compile a basic four- or five-point inspection checklist. For example, distance from combustibles, how many inches from floor, last time flue was cleaned, etc.

9) Organize “Learn Not to Burn” programs for grade schools. Use local firefighters as resource persons.

10) Have a display at public places of fire escape plans. Utilize equipment such as escape ladders, tying sheets together, etc.

11) Put “TOT Finder” stickers on windows of babies rooms.

12) Put up signs along the major roads of your community with fire safety education slogans or jingles.

13) Locate all farms within your fire department’s jurisdiction on a large map. Develop a card file with important information on the card. For example, specific directions to the farm (from the fire hall), number of buildings and distances between buildings, nearest water supply, type of roads or lanes leading to farm, etc.

14) Develop your own fire hazard checklist and inspect homes and farms. Make it a contest. Teams that inspect the most homes or farms could receive a prize.

15) Sponsor a Fire Safety Education Fair for the entire community. The fair could operate along the same lines as a science or health fair. Give prizes such as smoke detectors, fire extinguishers, etc.

16) Prepare several short radio announcements or newspaper articles on fire prevention. Topics might include information on smoke detectors, fire extinguishers, storage of flammable liquids, housekeeping, etc. Do similar program on local television, if available.

17) Compile a collection of local newspaper clippings documenting the types or costs of fire to the community during the previous year. Design educational programs based on your findings.

18) Prepare a slide presentation on a selected area of fire safety or fire prevention. Present to community groups.

19) Develop a fire safety checklist for Christmas fires. Areas of concern would include open-flame candles, worn or broken Christmas tree light cords, lighting up seldom used fireplaces, etc. Distribute list to shoppers.

20) Have homeowners with wood stoves bring their stovepipes and pre-fabricated chimneys to a certain location and have them cleaned by club members. Members could also go to individual homes, but should not engage in dismantling or assembling pieces.

21) Locate on a map and label all water sources for your fire department (this would be particularly good in rural areas).

22) Raise funds to purchase a needed piece of equipment for your fire company.
Your Community Project Review

1. Will the project you selected benefit a large part of the community? ____________________________________________

2. Can this project be accomplished by an individual, or does it require collective action by the group? ________

3. What committee(s) did you serve on? ________________________________

4. What leadership have you exercised during the project work? ________________________________

5. What alternatives did your group consider in selecting a project? ________________________________

6. How did your group select the best plan of action? ________________________________

7. Was the whole group in agreement with the selection of the project? ________________________________

8. Did you get help from any agencies (Health Dept., insurance companies, etc.) in your work? ________________________________

9. List at least three helpful hints you have learned by working with a group in getting your project accomplished.
   __________________________________________________
   __________________________________________________
   __________________________________________________

10. Were you able to cooperate with interested adults in this work? ________________________________

11. Were you able to involve any more youth that were not originally interested in your work? ________________________________

12. What future plans does your community group have for other development projects? ________________________________

The result was:

My activities within the group were, specifically:

________________________________________________
________________________________________________
________________________________________________
________________________________________________

Project Records

The project given highest priority and selected as the first one to be worked on by my group was: ________________________________

Our goal was to:
   __________________________________________________
   __________________________________________________
   __________________________________________________

Our group's activities were:
   __________________________________________________
   __________________________________________________
   __________________________________________________