Community Emergency Drill Programs

1

Creating an Annual Event Plan

When holding emergency drills, it is necessary to encourage as many local residents as possible to participate in the event. Creating a plan will make it easy to inform community residents of the dates of drills and preparations can be made in a planned manner.

1. Process for Creating an Annual Event Plan

Implementation of emergency drills should be discussed at meetings of local leaders (from the residents' association, etc.) and meetings conducted by residents. Related government officials should be invited in order to seek assistance from the government.

Information needed to decide on the dates for drills should be obtained before having discussions. Therefore, community event dates including non-disaster prevention related events should be identified.

(1) Put down all events you can think of with the dates for the events.
   (i) Disaster Prevention Related Events
   Emergency drills (fire drills, rescue drills, first aid training, disaster prevention workshops, etc.), patrols, etc.
   (ii) Other Events
   Non-disaster prevention related meetings and events
(2) Arrange the identified events chronologically and create a rough annual schedule for the events.
(3) Discuss on each event in detail in the meetings and create an annual event draft plan which includes related dates (such as dates of preparation meetings for each event and alternative dates set for the events in case of rain, etc.)
(4)Present the draft plan to local residents and decide on an official plan after including opinions from residents.

2. Utilization of the Annual Event Plan

(1)Emergency Drills
Emergency drills require equipment, materials and staff. The following tasks should be conducted using available dates, based on the annual event plan.
   (i) Create a list of things which need to be prepared and check what needs to be done.
   (ii) Prioritize and make arrangements for the things which are crucial for the drills first. Making arrangements "ahead of time" is the key to success.

[Cooperation] Identify in advance where to rent equipment and materials and identify which government organizations can assist with the activities.
(Equipment and materials:)
(Government support:)

* For seamless operation, it is best to aim for completing contacting and making arrangements about a month before the event.

* Details cannot be decided until right before the event date in many cases. Once the details are determined, try to communicate the information orally with community residents promptly and contact government organizations starting from those who can be contacted quickly.

(2) Main Items to Be Planned

(i) Procedure of the drill (the date & time and drill content)
(ii) Personnel (from the community, volunteer fire corps, the fire station, etc.)
(iii) Equipment and materials needed for the drill
(iv) Drill venue
(v) Others (alternative plan in case of rain, etc.)

(3) Others

If the dates for multiple events overlap, the event with a higher priority should be conducted.

[Detailed Method for Creating an Event Plan (Example)]

Step 1: Writing Down All Planned Events by Category

(i) Emergency drill related events

- Drills

1st drill	Around late Jun. (weekend), fire drill
2nd drill	Around mid Oct. (weekday), first aid training
3rd drill	Around Jan. (weekend), whole-community emergency drill

- Fire prevention patrol

1st patrol	Around Aug. * The date needs to be arranged with the fire station, etc.

(ii) Other events

Type	Name	Date	Notes
Meetings	Community representative meeting	Apr. 2 (weekday)	City hall
	Preparation meeting with the government	May 15 (weekday)	City hall
Community events	Sports day	Nov. 5 (weekday)	XX Stadium
	Christmas party	Dec. 22 (weekday)	XX Hall
	Concert	Jan. 15 (weekday)	XX Hall
Lectures, etc.	Lecture on disaster prevention	Around mid Mar. (weekday)	Fire station
Others	Voluntary community cleaning	Oct. 7 (weekday)	XX Park

(STEP2)

Step 2: Arranging Events Chronologically

Date	Name	Notes
Apr. 2 (weekday)	Community representative meeting	City hall
Around late Jun. (weekend)	Drill 1 [fire drill]	*Late Jul. if it rains
Around Aug.	Fire prevention patrol	-
Oct. 7 (weekday)	Voluntary community cleaning	XX Park
Around mid Oct. (weekday)	Drill 2 [first aid training]	*Watch a video on disaster management if it rains
Nov. 5 (weekday)	Sports day	XX Stadium
Dec. 22 (weekday)	Christmas party	XX Hall
Jan. 11 (weekday)	Drill 3 [Whole-community emergency drill]	*The following week if it rains

Put the additional event here.

- Interline spaces should be left between events so that when new events are planned, they can be inserted between the relevant spaces.
- The emergency drill related events should be made clear by underlining or using colored pens.

Ex) Dec. 25-31 Year-end arson prevention patrol

2

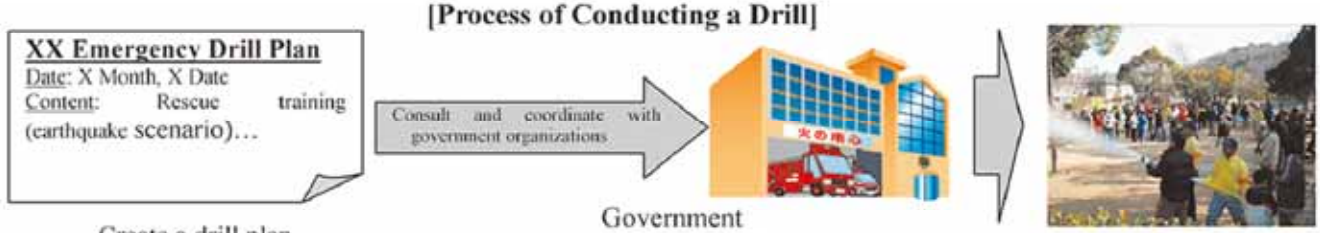
How to Conduct an Emergency Drill

It is difficult to take appropriate action when you suddenly face a disaster. Therefore, it is important to be prepared for disasters by repeating adequate emergency drills regularly.

1. Points to Focus when Planning an Emergency Drill

An emergency drill should focus on the following two points. (1) Is it useful when emergency occurs? (2) Can the participants obtain knowledge and skills for disaster prevention? It is also important to create a Drill Plan and consult with related government organizations beforehand in order to conduct an effective drill within a limited time.

[Process of Conducting a Drill]



2. Points to Note When Creating a Drill Plan

(1) What is the scenario?

Decide whether you will conduct a region-specific drill such as a drill for tsunami, flooding or landslide, or a drill which is useful for any region such as a fire drill.

(2) What kind of drill is it?

Once the scenario for the disaster is decided upon, determine the content of the drill such as a "drill for information gathering and information transmission," a "fire drill," an "evacuation drill," a "rescue drill," a "drill for provision of meals and water," a "disaster imagination game (DIG)," "first aid training," etc.

Example of a Plan (Kobe's Case)

Emergency Drill Implementation Plan	
Organization name	XX Disaster-Safe Welfare Community
Person responsible for the drill	Taro SUZUKI (078 325 8510)
Contact person	Hanako TOYOTA (078 325 8525)
Date	Sun. Jan. 17, 2009 10 : 00-12 : 00
Venue	Playground of the Honda Elementary School 6-5-1 Kano-cho, Chuo-ku
No. of participants	About 300
Support by the fire station	Request: guidance by fire station staff
Content	• Handling of fire extinguishers • Bucket brigade • Spraying water from a fire hydrant • Handling of a small pump • Fire caused by deep-frying oil
Note	Request: display of a fire engine

(3) Decision on a Date

Avoid holding a drill in mid-summer, mid-winter, etc. so that many people can participate in the drill. One way to obtain many participants is to conduct a drill using the opportunity of community cleaning activities or a sports event.

Make the drill hours needed for the drill not too long for participants, although the time required is dependent on the number of participants and the content of the drill.

(4) Number of Participants

Decide on the number of participants by considering the drill hours, the venue, the content of the drill, etc.

(5) Alternative Plan in Case of Rain

Decide in advance on whether the drill will go ahead, be cancelled or postponed in the case of rain. Discuss beforehand an alternative program which can be held if it rains (a video on fire prevention, a lecture on disaster prevention, etc.).

(6) Decision on a Venue

Choose a venue which is appropriate for the content of the drill and the number of participants. A park or the playground of a school is suitable for outdoor drills. Check how to use the facilities in advance because you may need to obtain permission or give notification to an administrator, etc. in order to use the facilities.

(7) Coordination with Government Organizations

Ask for support from related government organizations such as fire stations, before conducting a drill. In particular, consult with government organizations beforehand if you need guidance from government staff about a drill, the exhibition of a fire engine, etc. or need to borrow equipment and materials. Include the consultation content in the drill plan.

[*Cooperation with Various Groups*]
Besides government organizations such as city offices and fire stations, there are also other organizations which can cooperate with the activities, including local NPOs, NGOs, the Red Cross (the Red Crescent) and volunteer organizations.
It is recommended that you look for these in your area and ask for help.

(8) Accident Prevention

Take all possible care concerning the participants' safety in order to prevent accidents during a drill.

In particular, ask government organizations such as fire stations to guide and attend dangerous operations such as a fire drill using gasoline. If an accident happens, prioritize dealing with the accident (first aid operation, etc.) and take appropriate measures.

Tips for This Program

- ☆ Maintain close contact with government organizations which can provide help and conduct a drill in the local community.
- ☆ Ask for government help from the drill plan creating stage.
- ☆ Identify what kinds of drill programs can be conducted.
- ☆ Train residents who can be involved in the activities as community leaders so that residents will be able to protect their town themselves in the future.
- ☆ Be prepared for emergencies by deploying disaster prevention equipment and materials using government assistance.

3

Equipment and Materials for Disaster Prevention

- What kinds of equipment and materials are needed? -

Learning lessons from the Great Hanshin-Awaji Earthquake, Kobe City deployed equipment and materials for disaster prevention in communities.
This section explains the main types of equipment and materials for disaster prevention.

1. Main Types of Equipment and Materials

Use	Name	Description	Photograph
Rescue	Portable concrete smashing tool	This tool smashes concrete using the reaction force created by sliding the weight on the handle. Different blades are available for different application.	
Rescue	Fire hook	It is used to break up galvanized iron roofs, wainscots, etc. It is also used to remove board-shaped debris.	
Rescue	Safety harness belt for rescue operations	It is used to ensure safety during operations at heights. An operator wears the belt around his/her waist and attaches the safety rope to a solid part of a building, etc.	
Rescue	Portable winch	It is used in combination with a rope to move things which cannot be moved by people alone, as well as to tighten ropes. The operator needs to be well informed about how to use it in order to use it appropriately.	
Rescue	Chain saw	It is used to cut wood, etc. It is important for this equipment to be maintained regularly or it may not work in an emergency.	
Rescue	Shovel	It is essential for removing earth, etc. It is also useful for making sandbags.	
Rescue	Crowbar	It is used to jimmy open doors and shutters, and to lift objects using the principle of the lever.	

Rescue	**Folding saw**	A folding saw is handy when carried around. It is also useful when operating in narrow spaces because of its flexibility.	
Rescue	**S a w**	It is suitable for cutting larger pieces of wood because it has a longer blade than a portable saw.	
Rescue	**A x e**	The edge of the blade is used to break up planks, etc. and the pointed part at the back is suitable for breaking mortar walls.	
Rescue	**Hammer**	It is suitable for breaking block walls. Care is needed when handling it because it is heavy.	
Rescue	**Portable jack**	It is used to lift heavy objects and to widen openings. It can only be used where the floor is solid (firm).	
Rescue	**Pickaxe**	It is used to dig up firm ground and to make holes in walls, etc.	
Rescue	**Bolt clipper**	It is used to cut reinforcing steel in reinforced concrete and block walls.	
Rescue	**Hydraulic concrete crusher**	It can crush concrete walls, etc. It can crush walls of up to 25 cm thick.	
Transportation	**Folding stretcher**	It is used to carry the injured, etc. It can be folded and put away when it is not being used.	

Firefighting	**Portable power pump**	Water from a natural water supply such as a river or pond as well as fire cisterns can be sprayed using the pump. This can be used in combination with a portable water tank for drills.	
Firefighting	**Powder fire extinguisher for class A, B and C fires**	It is a typical fire extinguisher which can be used for ordinary combustible materials, oils and electrical equipment. It is reusable by refilling the powder after usage.	
Firefighting	**Wet chemical fire extinguisher**	It is a fire extinguisher for domestic use. It does not block the view because it is not powder. Wet chemical can be sprayed several times because it can be turned on and off.	
Firefighting	**Canvas bucket**	It is a water-proof canvas bucket. It can be stored easily and is easy to handle because it is light weight. It is used for bucket brigades, etc.	
Firefighting	**Portable water tank (stand-alone)**	It comes in many sizes. The largest tank can hold 1,000 liters of water. It is used as a water source for bucket brigades, etc.	
Fire drill	**Oil pan for use in fire drills**	It can be used by putting water and gasoline or kerosene into it and setting it on fire in order to practice firefighting. Do not put content exceeding the appropriate amount which is specified for each size of oil pan.	
Fire drill	**Water fire extinguisher for use in fire drills**	It is a fire extinguisher for training which ejects water. It is used to learn how to handle a fire extinguisher. It can be used by putting water and compressed air into it.	

- Kobe City provided equipment and materials for each BOKOMI (community-based disaster prevention organization) after showing the residents a list of the equipment and materials explained above and asking them to choose what they needed, when the organization was established.
  Residents should have an opportunity to discuss among themselves what kinds of equipment and materials they need for their community.

- In Kobe, the equipment and materials are stored in storehouses in local parks, etc.

2. Maintenance

Equipment and materials need to be maintained regularly. Properly maintain them so that they can be used in an emergency.
It is also a good idea to practice the handling of the equipment and materials when conducting their maintenance.

3. Maintenance Methods

(1) Equipment and Materials for Rescue Operations

(i) Axes, hatchets, saws, shovels, crowbars, hammers, bolt clippers, etc.
Remove moisture after usage in order to avoid the rusting of metal parts and the decaying of handles. Sharpen the blades.
Apply lubricant to moving parts.

(2) Firefighting Equipment and Materials

(i) Power pumps, etc.
Open the pump's drain cock to drain water completely before storing. Make sure to rinse inside the pump with fresh water if seawater was used.
Check the fuel and the vacuum pump oil, refill the fuel and the oil to the appropriate levels, and then pull the starter a few times.
Avoid humid places when storing pumps. During the cold season, take measures to prevent freezing after usage.
Note: Conduct a starting test together with the practice at least once a month.

(ii) Canvas hoses, suction pipes, canvas buckets, etc.
Drain the water from hoses and suction pipes before putting them away.
Dry them well before storing after usage.

Tips for This Program

☆ Some portable power pumps, engine generators, etc. use a "blended fuel (mixture of gasoline and oil)." Each model uses a specific blend (such as "25:1"), and so check the instructions carefully. Be sure to use the correct amounts when you mix the fuel by yourself.

☆ Always check the equipment and materials before and after usage. In particular, portable power pumps and engine generators can be kept in good condition by running them. Conduct starting tests on them regularly.

☆ Remove batteries from equipment and store them after usage, if you have equipment which uses batteries.

☆ These equipment and materials for disaster prevention are only useful if they can be used in emergencies. Therefore, it is important to check regularly to see if they are in a usable condition. Practice using them at the same time.

30 min. or longer | Outdoor | 4

Training Using "Water Fire Extinguishers for Use in Fire Drills"

This section explains the training for the handling of fire extinguishers using water fire extinguishers for use in drills. This training can be conducted with children if it is designed in the correct way.

1. Objective

Participants learn how to handle fire extinguishers using water fire extinguishers for use in drills which can be used repeatedly, by operating them in the same way as real fire extinguishers.

2. Necessary Equipment and Materials

(Item)	(Quantity)
Water fire extinguisher for use in drills	10 (depends on the number of participants)
Air compressor	1
Cord reel (extension cord)	1
Water tank (or tap water)	1
Cross-sectional model of a fire extinguisher	1 (if available)
Target for water fire extinguishers	1 set

Tips for This Program

☆ Various objects can be used as targets. People can practice how to use fire extinguishers well while having fun if targets are designed so that all the targets can be hit within one ejection period.

3. Training Using Games for Children

Targets can be designed so that children can experience a firefighting simulation while enjoying the game.

(1) PET Bottles with a Small Amount of Water in Them

The number of bottles which can be hit within one ejection time is 8 or 9.
The participants play a game where they have to hit all the bottles on a desk, etc.

(2) Making Balls Drop by Hitting them with Water

The participants play a game where they have to spray a basket ball-sized ball on a stand and make it fall to the ground.

(3) Others

Using targets which spin or fall when being hit by water can make the training fun for adults as well as children.

4. Procedures

(1) Preliminary Explanation

Explain the mechanism of powder fire extinguishers, how to use them, their characteristics, etc. using a cross-sectional model of a fire extinguisher (if available) or a leaflet which shows how to use a fire extinguisher issued by fire stations or other government organizations. Also, explain the difference between a fire extinguisher for use in drills and a real fire extinguisher.

(2) Preparation

★Preparing Water Fire Extinguishers

Prepare the necessary number of water fire extinguishers. If you can obtain one extinguisher for each participant, you can fill them with water in advance, so that you do not need to bring an air compressor to the venue on the training day.

★Preparing Targets

[PET Bottles]

- Prepare empty PET bottles (1.5 L bottles if possible) in advance.
- Fill each bottle about a quarter full and put the lid on.
- Place the necessary number of bottles on a reasonably tall surface.

[Other Targets]

- You can make other interesting targets by yourselves. You can also contact fire stations or other government organizations because they might have targets which can be used for fire drills.

(3) Conducting a Drill

Participants will practice firefighting in turn. Ask for comments from fire station staff about the drill at the end of the drill.

Tips for This Program

☆ In the case of a real fire, if the fire spreads to the ceiling, stop fighting the fire with fire extinguishers (initial firefighting) and instead use an indoor fire hydrant, etc. or quickly evacuate and call the fire service organization.

Points to Include in the Talk to the Participants

☆ Ask the participants to check where in their house and their community the fire extinguishers are installed.

☆ Ask them to check the types of fire extinguishers installed in their house (powder type, wet chemical type, etc.).

30 min. or longer | Outdoor | 5

Fire Drills Using "Powder Fire Extinguishers"

By experiencing more realistic firefighting simulations using real fire and real fire extinguishers (powder fire extinguishers), the participants can learn how to use the equipment for any emergency.

1. Objective

The participants learn how to fight fires in emergencies by practicing firefighting using real fire and powder fire extinguishers.

2. Necessary Number of Staff (In the Case of about 30 Participants)

4-5 staff

Note: Ask for attendance of fire station staff because it is a dangerous operation.
Consult with fire stations, etc. in advance if you wish to ask for their attendance.

3. Necessary Equipment and Materials (In the Case of about 30 Participants)

Note: Fire stations and other government organizations may have some of the equipment.
Borrow anything available from them when conducting a drill.

(Item)	(Quantity)
Powder fire extinguisher	5-6
Oil pan	1
Kerosene	2 L
Gasoline	1 L
Lighter	1
Torch	1
Cross-sectional model of a fire extinguisher (if available)	1

4. Outline

Place an oil pan in the center of a park. Spray the powder fire extinguisher from a position 5-6 meters upwind of the target. Move the spray as if sweeping with a broom to extinguish the fire. Gradually approach the target as the fire gets smaller, then extinguish the fire completely.

5. Procedures

(1) Preliminary Explanation

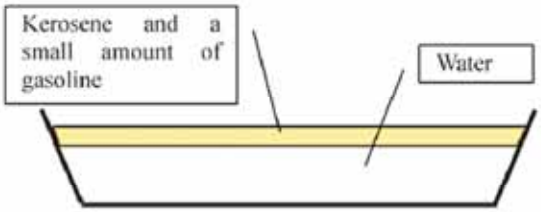
Participants learn about the mechanism and the handling of fire extinguishers by looking at a cross-sectional model of a fire extinguisher or by experiencing the handling of fire extinguishers using water fire extinguishers for use in drills, before practicing using powder fire extinguishers.

Caution!

Make sure to check the exterior appearance of powder fire extinguishers. Ones with rust on their body might explode because of inside pressure when pressing the lever, causing a severe accident. Do not use them if you find rust on their body.

(2) Preparation

- Prepare several fire extinguishers according to the design of the drill.
- Tell everybody around the site in advance that the exercise is about to start because the powder can disperse around the site when the exercise is conducted.
- Put water in an oil pan up to 2-3 cm from the bottom (to prevent scorching)
- Put kerosene in the oil pan. The appropriate amount is about 100 cc, although it depends on the size of the oil pan.
- Add a small amount of gasoline in order to ignite the fire (add gasoline right before setting the fire).



(3) Conducting a Drill

- The participants practice firefighting in turn.
- After spraying powder several times, ignition becomes difficult because extinguishing agent starts accumulating in the oil pan. Remove the agent from the pan with a net, etc. and add a small amount of gasoline again, so that fire can be ignited easily.

(4) Others

Dispose of the oils used in the drill appropriately.

Take the fire extinguisher close to the fire, and then pull the safety pin with a finger to upright.

Free the hose and aim the nozzle at the fire source.

Hold the lever hard enough to spray (move the spray as if sweeping with a broom to extinguish fire).

Tips for This Program

☆ In general, a degree of fire which can be fought using initial firefighting methods is until a fire spreads to the ceiling. If it happens, do not try risky initial firefighting, evacuate right away and then call the fire service organization for help.

Points to Include in the Talk to the Participants

☆ Wet chemical fire extinguishers are effective when oil fryers catch fire.

☆ It is recommended that domestic fire extinguishers should be installed in the entrances of houses (to prevent rust).

☆ Ask the participants to check where the fire extinguishers are installed in their community.

30 min. or longer | Outdoor | 6

Bucket Brigade Training

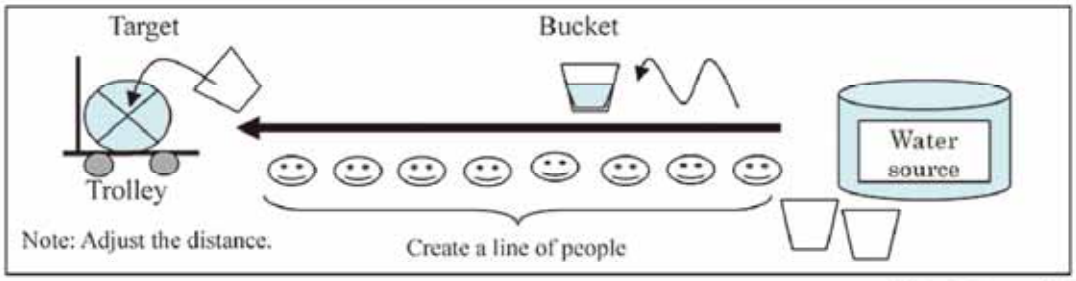
This training is designed to learn firefighting methods which can be conducted by local residents before a fire engine arrives at the site. This section explains bucket brigade methods and line arrangements of people which were used for initial firefighting at many sites during the Great Hanshin-Awaji Earthquake.

1. Objective

The participants learn about bucket brigades as an initial firefighting method in cases where portable power pumps, etc. are not available. Participants can also understand the importance of cooperation in disasters through this program as well as learning about firefighting methods.

2. Necessary Equipment and Materials

(Item)	(Quantity)
Water source (a pool, a collapsible water tank, etc.)	1
Target for bucket brigades	1 set (2 sets when holding competitions)
Trolley to place a target	1 set (2 sets when holding competitions)
Container to carry water in (a bucket, etc.)	Many (10 or more)



[Basic Example]

3. Various Training Methods

(1) Competitions

Two teams conduct bucket brigades simultaneously in a competition. Place two large plastic buckets on the trolleys as shown in the diagram above. The first team to fill the large bucket is the winner.

Watch out for accidents and injuries, because the competition method has a downside, for example participants become careless about what they are doing and they tend to forget about safety management, although it can make the training exciting.

(2) Other Variations

Anything which holds water can be used as a container besides buckets, such as washbowls, trash bins and bags.

In fact, all sorts of things which hold water were used to conduct firefighting during the Great Hanshin-Awaji Earthquake. It is recommended that a variety of things are used so that the participants realize many household products can be used to conduct bucket brigades.

In bucket brigade training, all the participants cooperate to transport water to the target. Therefore, the training program helps the participants to learn about the importance of mutual help and cooperation.

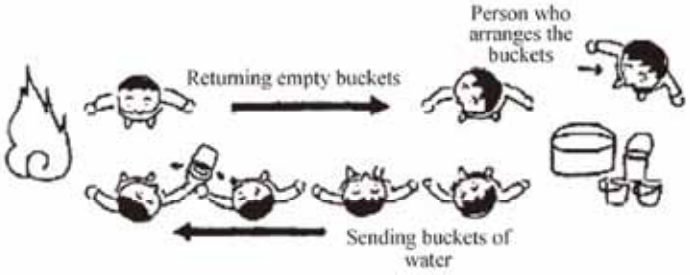
For this reason, it is a good idea to let children participate in the training.

4. Different Line Arrangements

There are different line arrangements, each of which has advantages and disadvantages. Select a suitable arrangement in accordance with the number of participants and the type of participants (such as experienced participants or not).

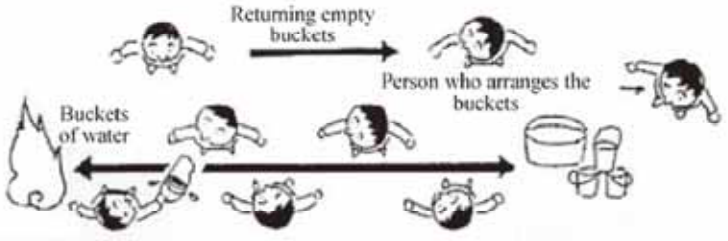
(1) One Line Relay

This is suitable when there are a small number of people.
The participants stand in one line about 1.5 meters apart, and pass buckets of water from the water source to the fire source.
About one fifth of the numbers of people in the line are allocated to take the empty buckets back to the water source.
The downside of this method is that people cannot see what is happening behind them. If necessary, allocate personnel who will watch out for the safety of the participants (for example when a line is made across a road).



(2) Relay in a Line Where People Face Each Other

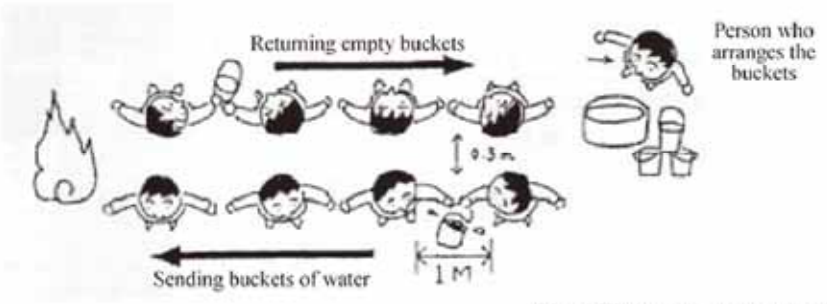
This is a modified version of the one line relay.
People stand in one line. Every odd numbered person turns 180 degrees so that they are facing in the opposite direction to the even numbered people. The odd numbered people take two steps backwards. This makes a set of people who can see between the gaps in the people facing them. They can then check to see if there are any dangers behind the people facing them.
The downside of this system is that it takes longer to arrange people into position.



(3) Relay in Two Lines

This is a suitable method when there are many participants.

The people in one line pass along the buckets of water and the people in the other line pass the empty buckets back to the water source. The two lines stand with their backs to each other, so that they can conduct a bucket brigade while watching out for each other's backs (if they face each other, it will be difficult to check safety because they block each other's view). Suitable spacing is about 1 meter. If there are not enough people, allocate members with about 1 meter spacing on the sending line and allocate the rest to the returning the empty bucket line.



(Note) The spacing is just a rough guide.

Tips for This Program

☆ Bucket brigades succeed only if many people cooperate with each other.

It is a good idea to let the participants try without being given an explanation first, so that they can experience the importance of appropriate arrangements and cooperation through their experience. Being part of a bucket brigade is hard work, and so watch out for injuries and do not let children or the elderly try too hard.

Rescue Drills

30 min. or longer | Outdoor | 7

It is needless to say that rescue operations come first when disasters occur. Some rescue methods are explained in this section.

1. Objective

At the site of a major disaster such as an earthquake, swift rescue operations are required. Therefore, the participants will learn how to handle equipment and how to conduct rescue operations in order to be prepared for an emergency.

2. Necessary Number of Staff (In the Case of about 30 Participants)

4-5 staff

3. Necessary Equipment and Materials (In the Case of about 30 Participants)

(Item)	(Quantity)
Saw	5
Crowbar	5
Jack	5
Bolt clipper	5
Hammer	5
Square timber (at least 10 cm thick)	5

4. Outline

With the scenario that a person has been trapped in or caught under a collapsed house, etc., a rescue drill is conducted using rescue equipment such as saws and crowbars.

5. Procedures

(1) Preliminary Explanation

Give the name of each equipment and material and explain its usage and how to handle it.

(2) Preparation

- Prepare the necessary quantities of equipment and materials to be used in the drill.
- Place a dummy, etc. to be rescued under pieces of timber.

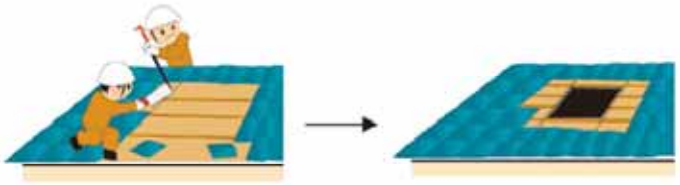
(3) Conducting a Drill

It is difficult to prepare and conduct a full-scale rescue drill. Therefore, the exercise can be limited to lifting and cutting square timber, etc. using equipment and materials, after giving an explanation of rescue operation.

(i) Explaining how to make an opening in a roof.

(How to Make an Opening in the Roof)

- In the case of a wooden-frame house, an opening is made by removing tiles and cutting or breaking roof boards along the rafters.



- In the case of a house with a galvanized iron roof, galvanized iron sheets are pulled off by inserting a crowbar into the joints of the galvanized iron sheets. Then, the roof boards are cut or broken along the rafters.
- In the case of a slate-roofed house, the slates are removed by smashing them with a hammer, etc. and then the roof boards are cut or broken along the rafters.

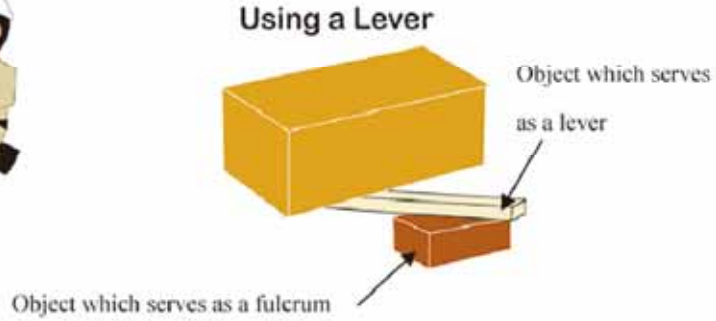
[*Points to Note for the Operation*]

☆When operating on a roof, allocate safety personnel on the other side of the roof and secure your safety using ropes, etc. Check the firmness of the footing to make sure that the roof will not collapse under your feet. Check your footing to make sure you do not fall.

☆Make a loud warning and check that nobody is below before throwing debris down to the ground.

☆During a drill, watch out for injuries such as cuts to the hands and feet.

(ii) Explaining how to rescue a person.



(Rescue Method)

- Talk to the person trapped in the house in order to reassure him/her and obtain information from him/her about the conditions inside the house.
- Use a jack or a lever to lift debris which is trapping the person.
- Support the lifted debris by inserting square timber, etc. in the space created.
- Remove or break debris, starting with the easiest part to work on.

[*Points to Note for the Operation*]

☆When removing or breaking debris, work carefully in order to prevent nearby debris from collapsing.

☆When using square timber, etc. as a support or a lever, choose the thickest piece available which has no cracks. etc.

Points to Include in the Talk to the Participants

☆Ask the participants to check if there are goods in the house which can be used for relief operations, etc.

☆Carpentry tools and jacks inside cars may be useful.