

# Survival Skills

## Objectives

Student will understand how to prepare for a natural disaster and what to do during an emergency.

## Skills

- Student will demonstrate knowledge of preparedness issues in the event of an earthquake, tsunami, in the wildland-urban interface, and in the community at large.
- Student will demonstrate knowledge of roles of Community Emergency Response Teams

## Introduction

Disasters strike without warning. It is important to prepare for any sudden emergency. An emergency can force you to evacuate your neighborhood or confine you to your home. In Oregon, the disasters likely to happen are home fires, severe weather, earthquakes, flooding and hazardous material spills. This unit helps students learn how to protect themselves and how to prepare. Hazards addressed in the lessons include earthquakes, tsunamis, and fires in the wildland-urban interface.

## Vocabulary

**CERT** - Community Emergency Response Team

**Disaster** - sudden natural or human-caused event bringing great damage, loss, destruction

**Earthquake** - sudden, rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface

**Epicenter** - the point on the earth's surface directly above the focus of the earthquake

**Faults** - a fracture in the earth's crust; fault zones have earthquake potential

**Focus** - the place where earthquake vibrations come from

**Hazards** - any object or situation that represents a threat to the safety of people, animals, or structures

**Mantle** - earth's layer above the central core

**Mitigation** - the elimination or reduction of the threat from hazards

**Nonstructural** - any component of a building that does not actually hold up the building

**Plates** - huge moveable segments into which the earth's crust is divided and which float on and travel over the earth's mantle

**Preparedness** - steps people can take to help minimize hazards, facilitate escape, and promote survival

**Responder** - safety professional, such as a policeman or firefighter, who is trained in emergency response techniques

**Seismic waves** - shock waves resulting from an earthquake

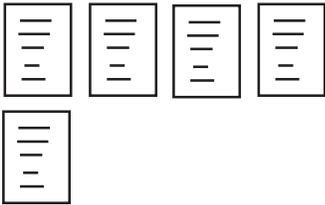
**Structural** - the components of a building that support it



# EARTHQUAKE PREPAREDNESS

## Materials provided:

- *Westhome Siren* special earthquake issue (30 copies)
- *Oregon Fault Zones* work sheet
- *Experiment Design Work Sheet*
- *Mercalli Scale* handout
- *Disaster Supplies Kit* checklist (optional\*)



## Teacher preparation:

- Prepare copies of the *Oregon Fault Zones* work sheet and the *Mercalli Scale* handout
- Assemble supplies for experiments - gravel, small table, sheets of paper, toy building blocks

**\*Note:** Students should have prepared a disaster kit in fifth grade. You may need to review the *Disaster Supplies Kit* list, or if your students did not prepare a disaster kit, you may want to spend additional class time on this topic.

## an experiment activity

### Teacher-led discussion

- Ask students why we should know about earthquakes and have an emergency plan for them. Accept various answers. This might elicit student experiences from being in earthquakes and provide a good introduction to the next item.
- Divide class into 6 groups. Distribute *Westhome Siren* special earthquake issue. Assign one article from the newsletter to each group.
- Groups will read and discuss their article.
- Groups will elect a “reporter” who will summarize what the group learned from the article. Point to be made—earthquakes happen globally and throughout history. Being prepared for any time and place increases your chances of survival.
- Ask students to share what they remember about procedures for school emergency earthquake plans. Review general survival guidelines for earthquakes (see *Teacher Notes*).

### Oregon’s fault zone activity

- Review basic earthquake vocabulary: mantle, plates, earthquake, fault, focus, epicenter.
- Then distribute *Oregon Fault Zones* work sheet.
- Students will manipulate their paper to illustrate the movement of the Pacific and Continental plates. (see *Teacher Notes*)

## EARTHQUAKE PREPAREDNESS (continued)

- The wrinkles on their papers illustrate Oregon's basic fault zones.
- Ask students to describe the general direction of the Oregon fault zones (north to south and diagonally across the state). Ask what geographic locations the fault zone passes through (Portland, Brothers, Steens).

**\*Note:** Earthquake experiments #1 and #2 can be performed as teacher demonstrations or small group experiments. Refer to the *Teacher Notes* for instructions.

### \*Earthquake Experiment #1 (effect of soil surface)

- This experiment poses the question, "Would an earthquake do more damage to a town built on a gravel bar or on solid rock?" (see *Teacher Notes*).
- Record or discuss results of the demonstration.

### \*Earthquake Experiment #2 (effect of building design)

- This experiment poses the question, "What type of building withstands earthquakes best?" (see *Teacher Notes*, (c) shake table demo).
- Record or discuss results of the demonstration.

### Concluding activity

- Distribute copies of the *Mercalli Scale* handout.
- In small groups, have students select one earthquake from the accounts in the *West-home Siren* special earthquake edition and assign a Mercalli Score to it.



# TSUNAMI PREPAREDNESS

## Materials provided:

- *Westhome Siren* special tsunami issue (30 copies)



## Teacher preparation:

- Download and copy enough brochures about tsunami survival for your community (list below of communities for which brochures are available).

The brochures can be downloaded from the DOGAMI Web site—

<http://sarvis.dogami.state.or.us/earthquakes/Coastal/Tsubrochures.htm>

Communities with developed tsunami brochures:

- Bandon
- Brookings
- Charleston
- Coos Bay
- Depoe Bay
- Gearhart
- Gold Beach
- Lincoln City
- Manzanita/Nehalem
- Oceanside/Netarts
- Nestucca
- Newport
- Port Orford
- Rockaway Beach
- Salishan/Gleneden/Lincoln Beach
- Seaside
- Waldport
- Yachats

## a discussion activity

### Teacher-led discussion

Ask students why we should know about tsunamis and have an emergency plan for them.

Note: If your community is listed in the column to the left, you should consider teaching this lesson in addition to the earthquake lesson.

### Westhome Siren special tsunami issue activity

- Divide class into 6 groups. Distribute *Westhome Siren* special tsunami issue.
- Assign one article from the newsletter to each group.
- Groups will read and discuss their article.
- Groups will elect a “reporter” who will summarize what the group learned from the article.

### Teacher-led discussion

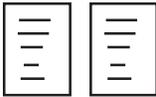
- Ask students to share what they remember about procedures for tsunami evacuation.
- Distribute copies of the tsunami brochure for your community and review general survival guidelines for tsunamis as shown on the tsunami brochure.
- Have students locate and mark the location of their homes on the evacuation map on the brochure. Students should take the brochure home to share with their families.



## WILDLAND-URBAN INTERFACE

### Materials provided (Option 1):

- *Where Growth meets Growth* work sheet
- *Wildland-Urban Interface Activity* answer



### Teacher preparation:

- Prepare copies of *Where Growth Meets Growth* work sheet

### a survey activity (Option 1)

One of the issues surrounding wildland fires involves areas where uncontrolled urban growth meets uncontrolled vegetative growth. People who live in these areas should take extra precautions to limit the effects of any nearby wildland fire that might occur. Review with students some of the types of ecosystems that could be subject to wildland fire under these circumstances. (see *Teacher Notes*)

#### Fire Marshal survey activity\*

- Students will assume the role of Fire Marshal for a house in the wildland-urban interface that requires a safety evaluation.
- Organize students into teams and distribute a copy of the *Where Growth Meets Growth* work sheet.
- Have students identify, number, and provide reasons for areas of increased risk they think should be changed.
- Have students consider changes that may mean adding or taking something away from the property that is not currently featured in the illustration.
- When teams are finished, compile everyone's results on the chalkboard, categorize the measures, and review them.
- What are the benefits of these changes?
- Which changes would students make first and why?

\*This lesson is provided courtesy of PBS. It is a NOVA activity. Further information about the topic of wildland/urban interface may be found on the PBS Web site:  
<http://www.pbs.org/wgbh/nova/teachers/activities>

## WILDLAND-URBAN INTERFACE (continued)

### Materials provided (Option 2):

- *I'm Concerned About Wildfire* video clip (six slides shown)  
(Note: Slides on video are displayed for 30 seconds each. You may wish to stop the tape during the class discussion. Slides on the DVD are advanced by the teacher when ready to do so.)



### Teacher preparation (Option 2):

- Preview *I'm Concerned About Wildfire* movie slides

### a media analysis activity (Option 2)

The six slides in this series were created to be used as PSAs in movie theaters. The slides' messages target arson, campfires, off-road vehicles, fire restrictions and wildland-urban interface. (Note: "OHV" stands for off-highway vehicle).

### Teacher-led discussion

Discuss the effectiveness of the message.

Raise questions such as:

- 1) What message is conveyed by this slide?
- 2) Is the message delivered positively or negatively?
- 3) With only one brief opportunity to present a message, is the message selected the best one to use for the topic?
- 4) Do the combined image and text of the message present a positive behavior?
- 5) Is the image appropriate to the message, or could a more effective image have been selected?



# COMMUNITY DISASTER RESPONSE

## Materials provided:

- *CERT Teams* video clip
- *Disaster Scenario Work Sheet*
- *Disaster Role Information Panels* (in white box)
- *Disaster Scenario Cards* (in white box)



## Teacher preparation:

- Review video clip prior to class
- Review *Disaster Role Information Panels*, and *Disaster Scenario Cards*
- Copy work sheets for group activity

## a problem solving activity

- View *CERT Teams* video clip. (see *Teacher Notes*)
- Divide the class into groups. Give each group a set of information panels about CERT and professional responder roles in various emergency scenarios.
- Give each group a disaster scenario from the *Disaster Scenario Cards*.

(You may wish to pull disaster scenarios that are inappropriate for your geographic location from the card pack prior to the lesson. As an example, a tsunami is unlikely in eastern Oregon.)

The disaster scenarios are not highly detailed. Class groups will need to imagine what effect the disaster they draw from the card pack would have in their particular community. If your class comes up with a good disaster scenario, send it to the Office of State Fire Marshal and we'll post it on our Web site for others to share.

- As a group, using the information provided on the *Disaster Role Information Panels*, they will decide:
  - 1) what actions will be taken by the CERT before professional responders arrive on the scene;
  - 2) which professional responders will respond to the disaster and what their roles will be;
  - 3) and what role the CERT members will play after the arrival of the professional responders.



## DISASTER PREPAREDNESS

People cope with disasters best by planning ahead. It is important for families to work together as a team. Since local officials and relief workers cannot reach everyone right away, knowing what to do is your best protection and your responsibility.

### STEPS TO SAFETY

**Awareness** Know the kinds of disasters that are most likely to happen in your community. Identify both human-caused and natural disasters that can affect the region of the country you live in.

**Information gathering** Find out whether your community has a public warning system. Find out if your community has a Community Emergency Response Team (CERT). Be aware of National Weather Service (NWS) warnings. A NWS warning indicates that severe weather is occurring or imminent.

**Analysis** What could happen at your home, school or public place? How might people react? What could happen if your family becomes separated? What would happen to elderly or disabled persons in a disaster? What could happen to animals?

**Action plan** Have a family meeting to discuss how to prepare.

- Develop an emergency communication plan.
- Establish a meeting place in the event of family separation.
- Be familiar with escape routes.
- Post emergency numbers near the phone. You may not have time to look them up.
- Conduct a home hazard survey.
- Stock emergency supplies and assemble a disaster supply kit.
- Practice and maintain your plan. Be sure family members know what to do.

While these are the major steps, the Red Cross, emergency management agencies and fire departments may suggest additional steps for parents and caregivers.

## EARTHQUAKE PREPAREDNESS

### Before an earthquake

- Develop a disaster plan, including information on how to communicate.
- Identify safe places at school and home under a sturdy desk or table or against an inside wall where nothing can fall on you.
- Practice *Drop, Cover and Hold-on* in each identified safe place.
- Assemble a disaster kit and get first-aid training.

### During an earthquake

- If indoors, move away from windows, mirrors, and things that could fall on you. *Drop, Cover and Hold-on*. Stay indoors until the shaking stops.
- If outside, move to a clear spot away from buildings, trees, streetlights & power lines.

### After an earthquake

- Expect aftershocks. Each time you feel one, *Drop, Cover and Hold-on*.
- Use the phone only to report life-threatening emergencies.
- Avoid downed power lines.
- Open cabinets and closets with care.

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## CONTINENTS - ON THE MOVE

• We think of the ground under our feet as solid, but it is actually quite thin. This solid layer of the earth, called the crust, floats on liquid rock. Continents are the thickest layers of the earth's crust and they move slowly but continuously around on the earth's surface.

From space, the continents resemble pieces of a puzzle.

• As a result of this movement, pressure builds along either side of places known as faults—places where there are fractures in the earth's crust and the sides of the fracture can slide past each other.

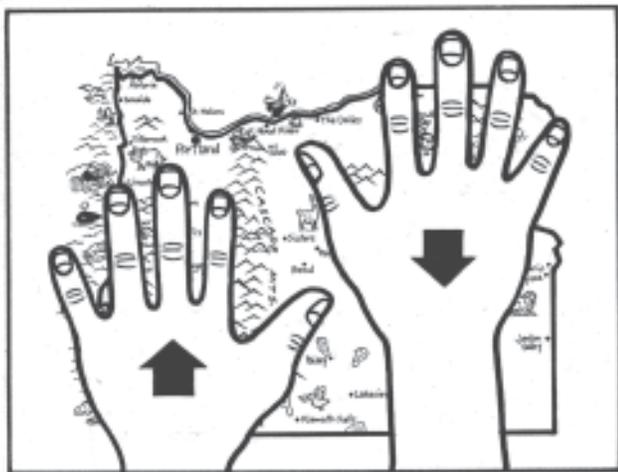
• The pressure finally builds to a point where the earth's crust moves suddenly. This sudden movement causes an earthquake. The focus of an earthquake is its originating point, deep within the earth. The epicenter is the part of the earth's surface directly above the focus.

• Shock waves, known as seismic waves, spread outward over the earth from the epicenter. Seismic waves traveling through the surface layers of the earth do more damage than those deep within. And the closer you are to the epicenter, the greater the damage.

# A TEACHER NOTES

## ABOUT THIS LESSON

- There are three activities within the lesson: Oregon's Fault Zones, Earthquake Experiment #1, and Earthquake Experiment #2.
- Oregon's Fault Zones may be either a class activity or a teacher demonstration. The two earthquake experiments can be done as teacher demonstrations with the whole class involved in working through the *Experiment Design Work Sheet* or, students can perform the experiments in small groups.



## OREGON'S FAULT ZONES

- Use either paper copies of the *Oregon Fault Zones* work sheet (one per student, if the activity will be done as a student experiment) or a transparency of the work sheet if the activity will be done as a teacher demonstration. If your community is not printed on the map, you may wish to write it in.
- Oregon is situated over two plates, the Pacific and the Continental. The Continental Plate underlies the eastern portion of Oregon and is moving slowly southward. The Pacific Plate underlies the western portion of the state and is moving northward at a greater speed.
- To demonstrate the movement of the plates and the effects of that movement, place the left hand on the left side of Oregon and the right hand on the right side, slightly above the left hand.
- Move the left hand upward (north), carrying the paper along. Move the right hand downward (south) carrying the paper along. The wrinkle lines created by these actions are in a pattern going north to south and diagonally across the state. This illustrates Oregon's basic fault zones.

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# A TEACHER NOTES

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## EARTHQUAKE EXPERIMENT #1 (effect of soil surface)

Materials. A small table, gravel to cover a 12 x 12 inch area, and two sheets of paper.

Concept. Earthquakes cause more damage to structures built on a surface such as a gravel bar than to structures built on solid rock.

Determine design of experiment. As a class, using the *Experiment Design Work Sheet*, predict results of this experiment. For example, “A structure built on gravel will experience greater movement during an earthquake than a structure built on a firm surface.”

Process. Spread the gravel (representing a gravel bar) on the table and place one sheet of paper on top of it. Place the second sheet of paper on the table (representing solid rock), but not on the gravel. Raise one end of the table several inches to simulate the action of an earthquake. Repeat this action several times.

Conclusion. Discuss or record what happened to each sheet of paper. Which one moved the most? Would an earthquake do more damage to a town built on solid rock, or one built on a gravel bar?

## EARTHQUAKE EXPERIMENT #2 (effect of building design)

Materials. Toy bricks and other items that can be used to simulate a variety of building designs.

Concept. Some building designs survive earthquakes better than others.

Determine design of experiment. As a class, using the *Experiment Design Work Sheet*, predict results of this experiment. For example, “A model two stories high on a gravel base will have less damage than a model four stories high on a gravel base.”

Process. Design and build experimental building models (try tall, short, narrow, wide, or some other type of building) on the shake table. As before, produce a simulated earthquake.

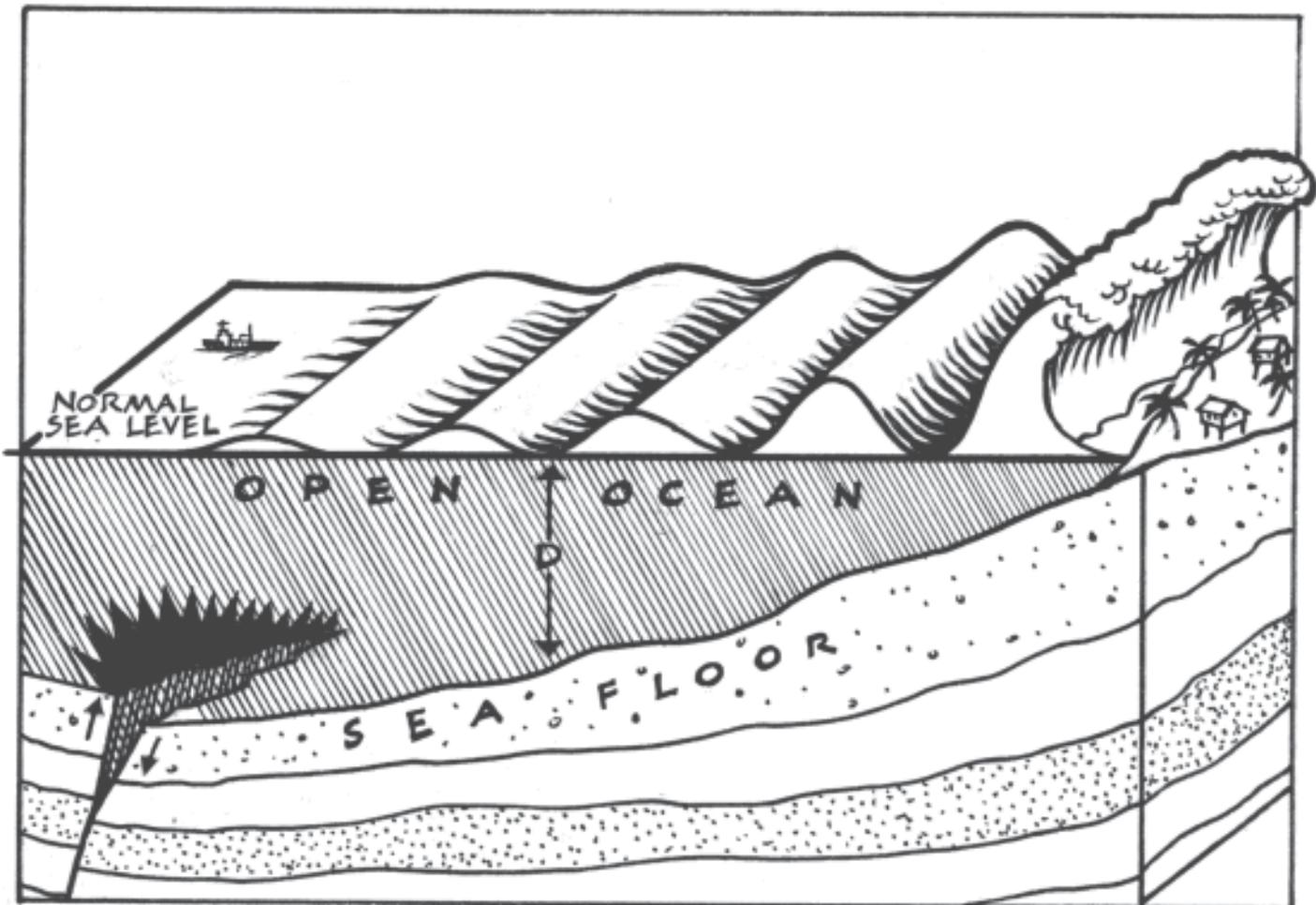
Conclusion. Discuss or record what happened to each of the experimental building models. What type of building experienced the least “earthquake” damage?

## TSUNAMI PREPAREDNESS

Oregon is at risk for a major earthquake and resulting tsunami waves.

If your school is in a coastal community, this lesson should be taught in addition to the earthquake lesson. The lesson's focus is practical: brochures have been developed for specific Oregon coastal communities. The brochures detail areas at-risk from tsunami waves, evacuation routes and instructions for planning. The brochures are available for download from the Web. The communities with available brochures and the Web address are listed within the lesson.

If the class asks how tsunami waves can grow so BIG, the graphic on this page can help explain the phenomenon.



## **B** TEACHER NOTES

### WILDLAND URBAN INTERFACE

The Wildland Urban Interface is the area where structures and other human development meet or intermingle with wildland or vegetative fuels. As more people have moved into wildland interface areas, the number of large wildfires impacting homes has escalated dramatically. Many homes are located in interface areas with little or no structural fire protection. Seventy percent of Oregon's wildland fires result from human activity. The remaining thirty percent result from lightning, occurring most frequently in eastern and southern Oregon. People who live in these areas should take extra precautions to limit the effects of any nearby wildland fire that might occur.

**Wildland fires in Oregon** Wildland fires in Oregon are a common and widespread natural hazard. The state has a long and extensive history of wildfire. Significant portions of Oregon's wildlands and areas adjacent to rural communities, especially in central and eastern Oregon, are dominated by ecosystems dependent upon fire for their health and survival. Over 41 million acres (more than 64,000 square miles) of forest and rangeland in Oregon are susceptible to wildfire. In addition, significant agricultural areas of the Willamette Valley, north and central, and northeastern Oregon grow crops, such as wheat, that are prone to wildfire damage. Communities near these ecosystems are also at risk. According to a listing in the 2001 Federal Register, 367 Oregon communities are at risk of damage from wildfire.

**Wildfire's benefits** Wildfires have been a feature of the Oregon landscape for thousands of years. The early fires resulted from lightning and the practices of Native Americans. The Blue Mountains, in northeastern Oregon, were so named by early immigrants, due to the existence of a perpetual smoke-caused haze that lingered over the region. Between 1840 and 1900, wildland fires burned at least two million acres of forestland in western Oregon. It is believed that settlers caused many of these fires.

Fire is a critical component of forest and rangeland ecosystems found in all portions of the state. Many of these ecosystems are dependent upon the existence of fire, or on a viable substitute, for their continued existence. Even the western Oregon forests, in the "wet"

## **B** TEACHER NOTES

portion of the state, depend upon fire.

New factors are now influencing the occurrence and severity of wildfires. These factors include poor forest health, abnormally high amounts of vegetation arising from a century of aggressive fire exclusion, and long-term changes in weather patterns.

### **Negative effects of wildfires**

- Increased risk of landslides and erosion are secondary hazards associated with wildfires that occur on steep slopes.
- Wildfires can also impact water quality.
- Wildfire smoke may have adverse effects on air quality health standards and visibility.

### **History of wildfire suppression in Oregon**

Following the establishment of the U.S. Forest Service (1905) and the Oregon Department of Forestry (1911), an aggressive and coordinated system of fire prevention and suppression emerged.

In the early 1970s, an increasing number of wildland fires affected or involved homes. Suburban growth continued through the 1980s, and by the early 1990s frequent and destructive wildland interface fires had become a major concern in Oregon. In the 1990s, about 100 structures burned in wildland fires. Thousands

more were threatened, and losses and suppression costs skyrocketed.

In 1997, in response to the increasing number of wildfires in the state, the Legislature passed Senate Bill 360, the Oregon Forestland-Urban Interface Protection Act. The Act recognized that property “owners in the interface have a basic responsibility to share in a complete and coordinated protection system.” Significant efforts have been made to increase voluntary landowner participation through aggressive awareness campaigns, such as FireFree, Project Impact, Firewise, and by locally created and funded programs.

### **Protecting your home from wildfire**

It's up to you!



## **COMMUNITY EMERGENCY RESPONSE TEAM**

### **WHAT IS A CERT?**

A CERT (Community Emergency Response Team) is composed of community volunteers who are trained to assist safety personnel and city staff in the event of a major disaster. CERT members acquire skills that are useful at home, in the neighborhood, at school, in the workplace, and in the community at large.

### **WHAT TRAINING DO CERT MEMBERS RECEIVE?**

CERT volunteers receive classroom training and participate in simulation exercises to prepare them for their roles. They are trained in skills that are critical in the first few hours of a disaster when professional responders may not be immediately available to help—skills such as first aid, light search and rescue and minor fire suppression. The training is usually delivered by the local police or fire department or the emergency management agency.

### **CAN SOMEONE UNDER AGE 18 PARTICIPATE?**

The local CERT decides about the age of CERT participants. A youth under age eighteen should be accompanied by a parent or have their permission to attend. Some communities

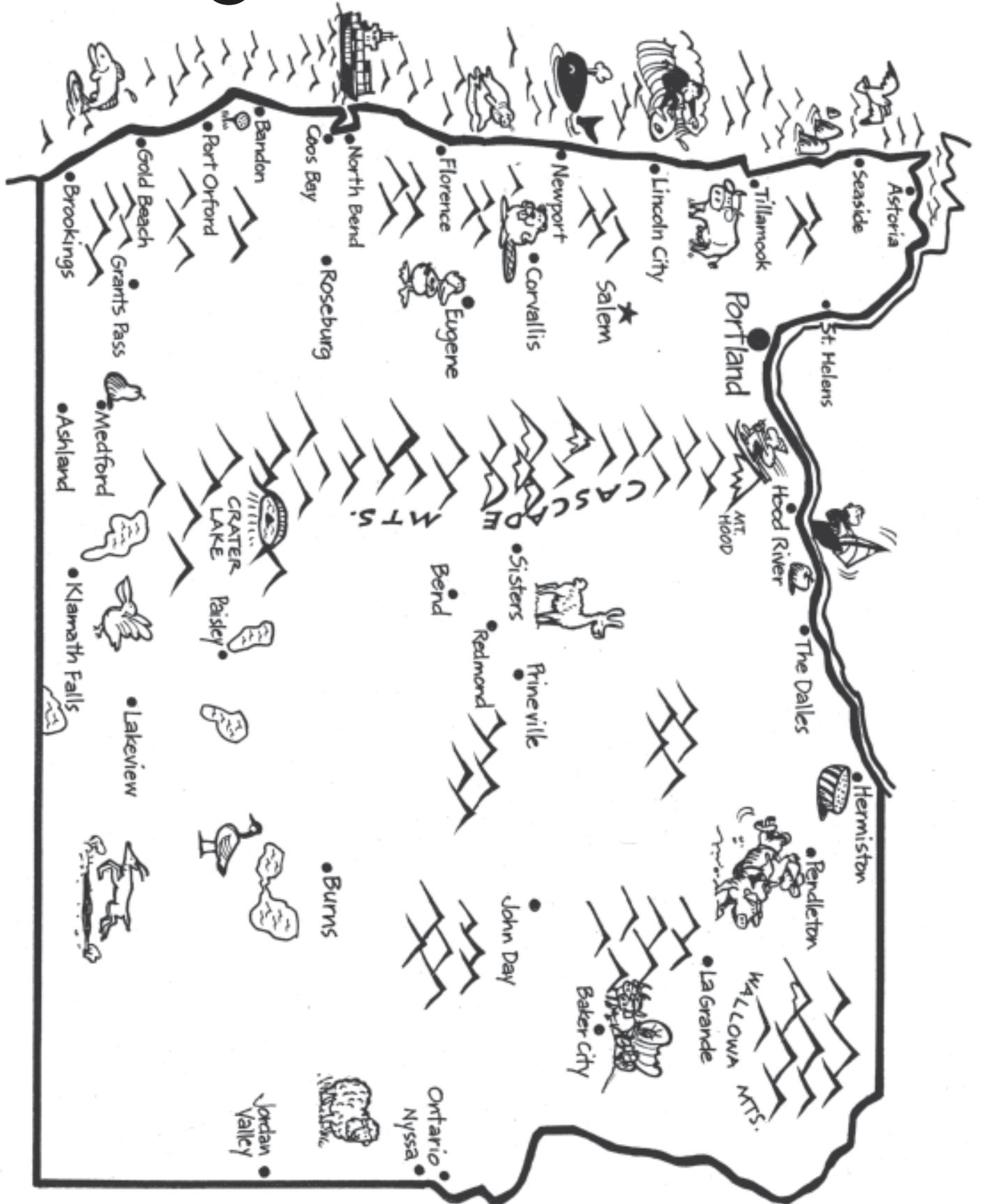
specifically encourage youths to participate and the CERT training relates well to disaster preparedness training given to Girl and Boy Scouts and similar youth organizations.

### **HOW DO CERT VOLUNTEERS BENEFIT THE COMMUNITY?**

The disaster preparedness skills that CERT volunteers receive benefit the entire community. In the event of a disaster that overwhelms professional responder capabilities, the support from CERT members is critical until help arrives. When professional help does arrive, CERT members assist emergency responders and provide information to them. CERT members may also assist with non-emergency projects that improve the safety of the community.

Note: If there is a CERT team in your community, you may wish to have a team member make a class presentation.

# A OREGON FAULT ZONES WORK SHEET







# EXPERIMENT DESIGN WORK SHEET

**Problem:** What factors determine earthquake damage?

**Background:**

**Prediction:**

If I \_\_\_\_\_,

then \_\_\_\_\_.

**Materials:**

**Procedure:**

**Data Table:**

<u>Trial #</u>	<u>type of surface</u>	<u>building design</u>	<u>observations</u>	<u>mercalli score</u>
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**Conclusion or Results:**

1. Summarize your team's results.
2. How did your prediction compare to your results?
3. Answer the problem question.

**Analysis:**

What kind of building would you build and on what type of subsoil to withstand an earthquake?

# **MERCALLI SCALE**

Underground shock waves from an earthquake are measured by seismologists (scientists who study earthquakes) with a device called a seismometer. The results are displayed in the Richter scale. Every whole value on the Richter scale is equal to about 33 times the value below it. For example, an earthquake measured at 6 on the Richter scale is about 33 times more powerful than one at Richter 5. The Mercalli scale rates the effects of an earthquake above ground.

<b>MERCALLI</b>	<b>EFFECTS</b>	<b>RICHTER</b>
1	Detectable only by seismometers.	0 - 2.9
2	Only a few people on upper floors notice.	3 - 3.4
3	Like a heavy truck passing by, hanging lights may swing.	3 - 5.4
4	Windows and dishes rattle. Like a heavy truck crashing into a building.	4 .1 - 4.4
5	Almost everyone notices. Sleepers wake up. Small objects move and drinks spill.	4.5 - 4.8
6	Many people frightened and run outdoors. Heavy furniture moves. Pictures fall off walls.	4.9 - 5.4
7	Walls crack. Tiles and bricks fall from buildings. Difficult to stand up.	5.5 - 6
8	Chimneys and some weaker buildings collapse.	6.1 - 6.5
9	Well-built houses collapse. Underground pipes damaged. Cracks open in ground.	6.6 - 7
10	Landslides. Railroad tracks buckle. Rivers overflow. Many stone buildings collapse.	7.1 - 7.3
11	Most buildings destroyed. Large cracks in ground. Bridges destroyed.	7.4 - 8.1
12	Ground moves in waves. Total destruction.	8.2+

# A DISASTER SUPPLIES KIT

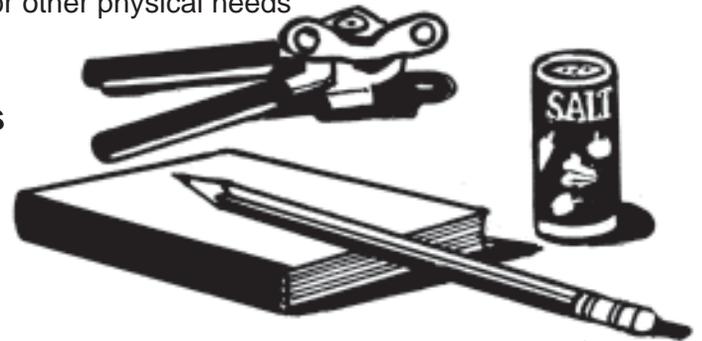
**Basics** These items might be needed at home or for an evacuation. Keep them in an easy-to-carry container in a convenient place known to all family members.

- A portable, battery-powered radio or television, extra batteries
- Supply of prescription medications  
(check kit regularly for expiration dates)
- Flashlight, extra batteries
- First aid kit and first aid manual
- Sturdy shoes and gloves
- Credit card and cash
- Personal identification
- An extra set of car keys
- Matches in a waterproof container
- Map of area (for identifying evacuation routes, shelter locations)
- Special needs, for example, diapers or formula, copies of prescriptions, hearing aid batteries, spare wheelchair battery, spare eyeglasses, or other physical needs
- Pet supplies



## Evacuation and/or Home Supplies

- Disaster Kit Basics (listed above)
- Three gallons of water per person per day
- Three-day supply of nonperishable food
- Kitchen accessories: manual can opener; disposable plates, cups and utensils, and basic food seasonings
- One complete change of clothing/footwear for each person
- Blankets or sleeping bags for each family member
- Sanitation and hygiene items
- Entertainment: books or games
- Tools and other implements: paper, pen or pencil; heavy gloves; pliers, wrench, pry bar; axe, shovel, broom





## **B** Where Growth Meets Growth

The house you are evaluating is situated in an area of uncontrolled urban growth that borders on an area of uncontrolled vegetative growth. People who live in these areas should take extra precautions to limit the effects of any nearby wildland fire that might occur.

As the local Fire Marshal team, you have been called in to evaluate the safety of a house and its property. The owner has left so that you can conduct your inspection.

What will you recommend?

### Procedure

- 1) Identify and number all the areas of increased risk in this house and surrounding property. Be sure to consider changes that may mean adding or taking something away from the property that is not currently pictured.
- 2) In the space below, write down the reasons you believe each numbered area is at risk.

### **Risk Assessment Form**

**Date:** \_\_\_\_\_

**Areas of Increased Risk:**

**Submitted by the  
following Fire Marshal team:**

**B** Where Growth Meets Growth

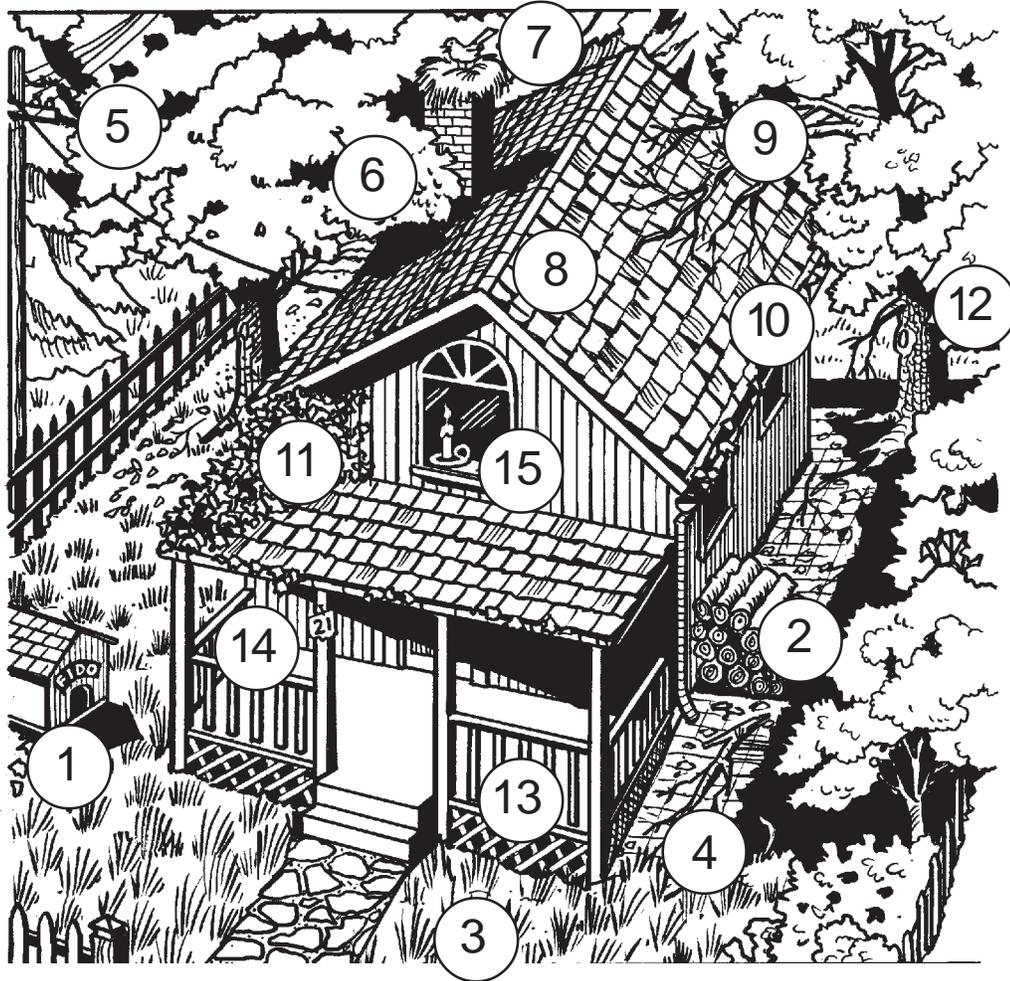


**Description:** This cabin is located on a lot filled with trees, shrubs, and tall grasses. The wood-shingled roof is complemented by wood lattice-work below and a quaint wooden fence surrounding the property. The gutters are aluminum, the chimney is brick, and all interior appliances and outlets meet current electrical code requirements.



## **B** Wildland-Urban Interface Activity Answer

The following are some measures that can be taken to protect a house from wildland fire.



1. Remove leaves and rubbish under doghouse and any other structures.
2. Stack firewood at least 100 feet away and uphill from the house.
3. Water and mow grass regularly to keep it green and less flammable.
4. Rake flammable vegetation such as dead leaves, limbs, branches, twigs and grass clippings.
5. Have power company clear branches from lines.
6. Prune tree branches within 15 feet of a chimney outlet.
7. Clean chimneys at least once a year.

8. Make sure roof uses fire-resistant materials such as asphalt, fiberglass, concrete tile, clay tile or metal.
9. Remove dead branches that extend over the rooftop.
10. Clean gutters regularly.
11. Remove vines from exterior walls.
12. Arrange trees so that there are gaps in the canopy.
13. Any part of property that includes wood, such as fence, latticework, or facing should be changed. Alternatives include a stone fence, brick or concrete as porch front and, concrete or clay tiles on the house dormer.
14. Address should be clearly posted for firefighters to see.
15. Never leave a flame burning unattended.

**Additional measures**

- a) Situate the house on flat land; the steeper the slope, the faster the fire will move up it.
- b) Make sure there is open access for firefighters to reach the property.
- c) Plant fire-resistant shrubs and vegetation.
- d) Add an independent water supply.
- e) Add a swimming pool.

# Disaster Scenario Work Sheet

**Introduction.** A disaster has occurred in your community. You are trained members of the local CERT team. Simulating a disastrous situation will prepare you to respond appropriately in the event of an emergency.

**What situation is confronting your CERT?**

**What actions will be taken by the CERT before professional responders arrive on the scene?**

**Which professional responders will respond to the emergency and what will their roles be?**

**What role will the CERT play after the professional responders arrive?**

# DISASTER ROLE INFORMATION PANELS

## LAW ENFORCEMENT - Sheriff's Office

- Maintenance of law and order
- Security
  - Crowd control
  - Traffic control
  - Maintaining security of restricted areas
- Evacuation
- Search & Rescue

## MEDICAL / HEALTH SERVICES

- Identify health hazards
- Coordinate to provide food and water
- Inspect emergency shelters and feeding areas
- Coordinate among hospitals/health care facilities to ensure continuity of care
- Coordinate with Medical Examiner and Funeral Director to identify and dispose of the deceased
- Provide emergency counseling

## EMERGENCY OPERATION CENTER

- Identify system of communication capable of reaching all areas to ensure clear communication
- Develop and maintain emergency alert system
- Receive and disseminate emergency and warning information

## FIRE DEPARTMENT

- Fire suppression
- Rescue operations including urban search and rescue
- First responders to incidents involving hazardous material
- First responders to initiate medical field treatment
- Inspect all areas for fire hazards

## COUNTY PUBLIC WORKS

- Inspect bridges
- Clear debris
- Support police and fire rescue efforts and traffic control measures
- Coordinate transportation resources
- Restore public facilities, roads and bridges
- Barricading of hazardous areas

## RED CROSS

- Provide food, shelter and first aid
- Reunite families

COMMUNITY EMERGENCY RESPONSE TEAM  
(CERT)

- Disaster preparedness
  - o Home, school and workplace disaster preparedness
- Fire suppression

Fight a fire with a fire extinguisher ONLY when the following conditions are met:

  - The fire department has been called
  - People have left/are leaving the building
  - The fire is small and confined
  - The extinguisher is the correct type for the fire and is in working order
  - A safe escape route is behind you as you fight the fire
  - You are trained to use the extinguisher and confident that you can do so
- First aid, medical treatment
  - o Treatment of burns, lacerations, fractures, sprains
  - o Bleeding control
  - o Wound care
  - o Splinting and bandaging
- Search & Rescue
- Public utility control
  - o Shut off of gas, electric and water
- Recognition of hazardous materials
- Identify fire hazards
- Establish patient treatment areas
- Identify construction related hazards
- Disaster psychology

# DISASTER SCENARIO CARDS

**DISASTER**

- TSUNAMI

**DISASTER**

- VOLCANIC ERUPTION

**DISASTER**

- ICE/SNOW STORM

**DISASTER**

- LARGE HAZARDOUS MATERIAL SPILL

**DISASTER**

- EARTHQUAKE

**DISASTER**

- ACT OF TERRORISM

**DISASTER**

- FIRE

**DISASTER**

- HIGH WINDS

**DISASTER**

- FLOODS – NATURAL

**DISASTER**

- BIOLOGICAL HAZARD