

# TABLE OF CONTENTS

KIDS • TAKE • CHARGE

## INTRODUCTION

Letter from Susan Russell-Robinson Natural Disaster Awareness Day Working Group Chair .....	2
Overview of International Decade for Natural Disaster Reduction .....	3

## FAMILY PREPAREDNESS

Family Disaster Plan .....	4
Family Disaster Supplies Kit .....	6
NOAA Weather Radio .....	12
Natural Disaster Awareness Day .....	13
Conduct a Home Hazard Hunt .....	14, 15

## DEALING WITH NATURAL HAZARDS

Hurricanes .....	16
Earthquakes .....	28
Wildfires .....	34
Floods .....	38
Tornadoes .....	40
Winter Storms .....	42

## RESOURCE

Addresses .....	44
Videotapes .....	44, 45
Adventures of the Disaster Dudes .....	45

These materials were prepared by the U. S. Geological Survey

## INTRODUCTION

---

KIDS • TAKE • CHARGE

### Dear Student:

How many times do you check on the weather report before you decide what to wear or what to do during your free time? If the forecast says it will be cold, windy, and rainy all day, you pull out your rain jacket, put on heavy socks and waterproof shoes or boots, and grab your umbrella before you leave your home.

You have taken charge! You are prepared for inclement weather!

Take charge again. Prepare for natural hazards such as hurricanes, floods, earthquakes, wildfires, severe weather including tornadoes and winter storms, landslides, drought, and even insect infestations.

Take the first step. Learn what natural hazards have (and will again) affect where you live, play and, go to school.

Take the next step. Learn what to do for each specific hazard; “DROP, COVER, AND HOLD ON” is the safest thing to do during an earthquake.

Keep going. Make a family disaster plan. Discuss what you’ll do before, during, and after a disaster. Make a family disaster supplies kit so you’ll have everything handy, in one place, ready to go. Conduct a home hazard hunt. Select a place to meet if you all have to evacuate.

Take the most important step. Practice your plan over and over again. Keep your supplies kit well stocked.

There are many important lessons you learn in school. For yourself, for your family and friends, and for your community, learn this lesson well: **KIDS TAKE CHARGE.**  
**You can deal with natural hazards.**



Susan Russell-Robinson  
Chair, Natural Disaster Awareness Day Working Group  
U.S. Geological Survey  
119 National Center  
Reston, VA 22092

### **INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION**

The United Nations estimates that between 1991 and 2000 our planet will experience over 25,000 damaging earthquakes, landslides, tornadoes, and wildfires; at least 100,000 floods; a million thunderstorms; and thousands of cyclones, typhoons and hurricanes, droughts, insect infestations, and volcanic eruptions.

Natural disasters have killed close to 3 million people worldwide, disrupted over 820 million lives, and caused more than \$100 billion in property damage in the last two decades. Continuation of such losses into the 21st century would be tragically unnecessary. Scientific and technical knowledge exists today that can reduce the toll of natural hazards.

To advance and improve the application of scientific and technical knowledge to reduce loss of life, property damage, and social and economic disruption from natural hazards is the main objective of the International Decade For Natural Disaster Reduction. The United Nations, in its first unanimous resolution, endorsed working together on all levels to achieve this objective during the last decade of this century.

The United States is one of the nations most vulnerable to natural hazards. Because of sound building codes, modern emergency and rescue units, state-of-the-art medical facilities, and aggressive preparedness campaigns in the area of fire safety, the United States is a leader in reduction of loss of life. Less than 70 people died in the magnitude 6.4 Northridge Earthquake that struck southern California on January 17, 1994. An earthquake of similar size killed more than 20,000 people in Soviet Armenia in December 1988.

What was the difference? Factors in the United States included better construction of buildings, better preparedness, better application of scientific and technical knowledge. Still more needs to be done throughout the International Decade for Natural Disaster Reduction to better prepare the United States for the natural hazards that affect all Americans.

The United Nations held a world conference on the International Decade for Natural Disaster Reduction from May 23 to 27, 1994. The Honorable Walter F. Mondale, U.S. Ambassador to Japan, lead the United States delegation. With the participating nations, we affirmed that the world community can change the course of events by reducing the suffering from natural disasters. Together we can build a safer world.

You can help build a safer world.

### FAMILY DISASTER PLAN

Families should be prepared for all hazards that could affect their areas. National Oceanic and Atmospheric Administration's (NOAA) National Weather Service, the Federal Emergency Management Agency (FEMA), and the American Red Cross urge every family to develop a family disaster plan.

Where will your family be when disaster strikes? They could be anywhere—at work, at school, or in the car. How will you find each other? Will you know if your children are safe? Disaster may force you to evacuate your neighborhood or confine you to your home. What would you do if basic services—water, gas, electricity, or telephones—were cut off?

#### **Follow these basic steps to develop a family disaster plan:**

1. Gather information about hazards. Contact your local National Weather Service office, emergency management office, and American Red Cross chapter. Find out what type of disasters could occur and how you should respond. Learn your community's warning signals and evacuation plans.
2. Meet with your family to create a plan. Discuss the information you have gathered. Pick two places to meet: a spot outside your home for an emergency such as fire and a place away from your neighborhood in case you can't return home. Choose an out-of-state friend as your "family check-in contact" for everyone to call if the family gets separated. Discuss what you would do if advised to evacuate.
3. Implement your plan.
  - a. Post emergency telephone numbers by phones.
  - b. Install safety features such as smoke detectors and fire extinguishers in your house.

## FAMILY PREPAREDNESS

---

KIDS • TAKE • CHARGE

- c. Inspect your home for potential hazards (such as items that can move, fall, break, or catch fire) and correct them.
  - d. Make sure that your family learns basic safety measures, such as CPR and first aid; how to use a fire extinguisher; and how and when to turn off water, gas, and electricity in your home.
  - e. Teach children how and when to call 911 or your local Emergency Medical Services number.
  - f. Keep enough supplies in your home to meet your needs for at least three days. Assemble a disaster supplies kit with items you may need in case of an evacuation. Store these supplies in sturdy, easy-to-carry containers, such as backpacks or duffle bags. Keep important family documents in a waterproof container. Keep a smaller disaster supplies kit in the trunk of your family car.
4. Practice and maintain your plan. Ask questions to make sure your family remembers meeting places, phone numbers, and safety rules. Conduct drills. Test your smoke detectors monthly and change the batteries two times each year. Test and recharge your fire extinguisher(s) according to the manufacturer's instructions. Replace stored water and food every six months. Contact your local National Weather Service office, American Red Cross chapter, or local office of emergency management for a copy of "Your Family Disaster Plan" (L-191/ARC4466).

## FAMILY PREPAREDNESS

KIDS • TAKE • CHARGE

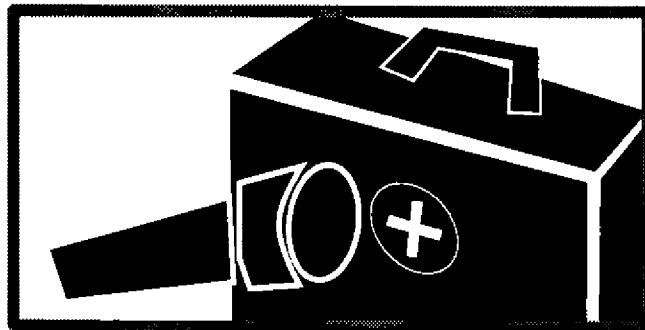
### FAMILY DISASTER SUPPLIES KIT

Disasters happen anytime and anywhere. And when disaster strikes, you may not have much time to respond. A highway spill of hazardous material could mean instant evacuation. A winter storm could confine your family at home. An earthquake, hurricane, flood, tornado, or any other natural hazard could cut off basic services—gas, water, electricity, and telephones—for days.

Take charge. Prepare now.

After a disaster, local officials and relief workers will be on the scene, but they cannot reach everyone immediately. You could get help in hours, or it might take days. Would your family be prepared to cope with the emergency until help could arrive?

Your family will cope best by preparing for a disaster before it strikes. One way to prepare is by assembling a disaster supplies kit. Once a natural hazard threatens or a disaster hits, you won't have time to shop or search for supplies. But if you've gathered supplies in advance, your family can endure an evacuation or a home confinement.



#### To prepare your kit

- Review the checklist included in this section.
- Gather the supplies that are listed. You may need them if your family is confined at home.
- Place the supplies you'd most likely need for evacuation in an easy-to-carry container. These supplies are listed with an asterisk (\*).
- Plan to prepare a kit for your family car and one for your school backpack or bag.

## FAMILY PREPAREDNESS

---

KIDS • TAKE • CHARGE

### Supplies

There are six basics you should stock in your home: water, food, first aid supplies, clothing and bedding, tools and emergency supplies, and special items. Keep the items that you would most likely need during an evacuation in an easy-to-carry container—suggested items are marked with an asterisk (\*). Possible containers include a large, covered trash container, a camping backpack, or a duffle bag.

### Water

Store water in plastic containers such as clean soft drink bottles. Avoid using containers that will decompose or break, such as milk cartons or glass bottles. A normally active person needs to drink at least two quarts of water each day. Hot environments or intense physical activity can double that amount. Children, nursing mothers, and ill people will need more.

Store one gallon of water per person per day (two quarts for drinking, two quarts for food preparation and sanitation)\*

Keep at least a three-day supply of water for each person in your household.

### Food

Store at least a three-day supply of NONPERISHABLE food. Select foods that require no refrigeration, preparation, or cooking and little or no water. If you must heat food, pack a can of sterno. Select food items that are compact and lightweight.

Include a selection of the following foods in your disaster supplies kit\*:

- Ready-to-eat canned meats, fruits, and vegetables
- Canned juices, milk, soup (if powdered, store extra water)
- Staples—sugar, salt, pepper
- High energy foods—peanut butter, jelly, crackers, granola bars, trail mix
- Vitamins
- Foods for infants, elderly people, or people on special diets
- Comfort or stress foods—cookies, hard candy, sweetened cereals, lollipops, instant coffee, tea bags

## FAMILY PREPAREDNESS

---

KIDS • TAKE • CHARGE

### First-aid kit\*

Assemble a first-aid kit for your home and one for each car. A first-aid kit should include:

- Sterile adhesive bandages in assorted sizes
- 2-inch sterile gauze pads (4-6)
- 4-inch sterile gauze pads (4-6)
- Hypoallergenic adhesive tape
- Triangular bandages (3)
- 2-inch sterile roller bandages (3 rolls)
- 3-inch sterile roller bandages (3 rolls)
- Scissors
- Tweezers
- Needle
- Moistened towelettes
- Antiseptic
- Thermometer
- Tongue blades (2)
- Tube of petroleum jelly or other lubricant
- Assorted sizes of safety pins
- Cleansing agent or soap
- Latex gloves (2 pairs)
- Sunscreen
- Nonprescription drugs
  - Aspirin or nonaspirin pain reliever
  - Antidiarrhea medication
  - Antacid (for stomach upset)

Syrup of Ipecac (use to induce vomiting if so advised by the Poison Control Center) Laxative

Activated charcoal (use if so advised by the Poison Control Center)

Contact our local American Red Cross chapter to obtain a basic first aid manual.

### Tools and supplies

- Mess kits or paper cups, plates, and plastic utensils\*
- Emergency preparedness manual\*
- Battery-operated radio and extra batteries\*
- Flashlight and extra batteries\*
- Cash or traveler's checks and change\*



## FAMILY PREPAREDNESS

---

KIDS • TAKE • CHARGE

Nonelectric can opener and a utility knife\*  
Fire extinguisher—small canister, ABC type  
Tub tent  
Pliers  
Tape  
Compass  
Matches in waterproof container  
Aluminum foil  
Plastic storage containers  
Signal flares  
Paper and pencil  
Needles and thread  
Medicine dropper  
Shut-off wrench to turn off household gas and water  
Whistles  
Plastic sheeting  
Map of the area (for locating shelters)  
Sanitation  
    Toilet paper and towelettes\*  
    Soap and liquid detergent\*  
    Feminine supplies\*  
    Personal hygiene items\*  
    Plastic garbage bags and ties (for personal sanitation uses)  
    Plastic bucket with tight lid  
    Disinfectant  
    Household chlorine bleach

### **Clothing and bedding**

Include at least one complete change of clothing and footwear per person.\*

Sturdy shoes or work boots\*  
Rain gear\*  
Blankets or sleeping bags\*  
Hat and gloves  
Thermal underwear  
Sunglasses

### Special items

Remember family members with special needs, such as infants or elderly or disabled people.

**For Baby\***

- Formula
- Diapers
- Bottles
- Powdered milk
- Medications

**For Adults\***

- Heart and high blood pressure medication
- Insulin
- Prescription drugs
- Denture needs
- Contact lenses and supplies
- Extra eyeglasses

Entertainment—games and books.

Important family documents. (Keep these records in a waterproof, portable container.)

- Will, insurance policies, contracts, deeds, stocks, and bonds
- Passports, social security cards, and immunization records
- Bank account numbers
- Credit card account numbers and companies
- Inventory of valuable household goods and important telephone numbers
- Family records (birth, marriage, and death certificates)

## FAMILY PREPAREDNESS

---

KIDS • TAKE • CHARGE

Store your kit in a convenient place known to all family members. Keep a smaller version of the disasters supplies kit in the trunk of your family car.

Keep items in airtight plastic bags.

Change your stored water supply every six months so it stays fresh.

Rotate your stored food every six months (IDEA: Have a family get-together to use old food. Replace what you eat with fresh supplies.)

Rethink your kit and family needs at least once a year. Replace batteries, update clothes, etc.

Ask your physician or pharmacist about storing prescription medications.

### NOAA WEATHER RADIO

NOAA Weather Radio is a service of the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce. As “the voice of the National Weather Service,” it provides continuous broadcasts of the latest weather information directly from the National Weather Service. Taped messages are repeated every four to six minutes and are routinely revised every one to three hours, or more frequently if needed. Most stations operate 24 hours daily.

NOAA Weather Radio broadcasts continuous weather information 24 hours a day on the following frequencies:

162.400 MHz  
162.425 MHz  
162.450 MHz  
162.475 MHz  
162.500 MHz  
162.525 MHz  
162.550 MHz



Find out which frequency provides service in your area.

During severe weather, National Weather Service forecasters can interrupt the routine weather broadcasts and substitute special warning messages. Forecasters can also activate specially designed warning receivers. Such receivers either sound an alarm indicating that an emergency exists and alerting the listener to turn the receiver up to an audible volume or, when operated in muted mode, are automatically turned on so that the warning message is heard. “Warning alarm” receivers are especially valuable for schools, hospitals, public safety agencies, and news media offices.

- NOAA Weather Radio broadcasts from over 80 locations throughout United States on seven VHF/FM frequencies.
- NOAA Weather Radio broadcasts local weather warnings with alert tones, current local and distant forecasts and readings, and marine, agriculture, and hydrologic information.
- Listen to NOAA Weather Radio on your battery-powered NOAA Weather Radio during watches and warnings, when electrical appliances should be disconnected.
- To buy receivers, contact your local radio and TV electronics shop or the National Weather Service office.

### NATURAL DISASTER AWARENESS DAY

On the second Wednesday of October, nations throughout the world conduct programs focusing on the goals of the International Decade for Natural Disaster Reduction. These goals are: know what natural hazards occur in your area; take steps to be prepared and work on a local level to protect homes, schools, hospitals, and resources of your community.

The United Nations issued a report on the activities of 58 nations on October 1, 1993. Here's a sampling:

- In Armenia, emergency managers telecast a one-hour program on disaster issues.
- In Botswana, the Minister of Presidential Affairs gave a nationwide radio address.
- A large-scale modern dancing drama entitled "Big Earthquake" was presented to the public in Beijing, China.
- Jamaican students participated in a geography quiz with questions on natural disasters.
- The Mexican Postal Service released a special stamp collection.
- In New Zealand, 28 newspapers covered events that occurred on National Disaster Awareness Day and in the weeks leading up to that day.
- In South America, school children participated in evacuation drills.
- The Minister of the Interior of Tunisia hosted a national education program on safety measures for earthquakes.

In the United States, students watched a broadcast of the "Adventures of the Disaster Dudes." Two thousand school teachers used natural hazards posters for presentations on disaster preparedness. There were exhibits at the Department of the Interior Museum in Washington, D.C., and at the U. S. Geological Survey National Center in Reston, Virginia.

What could you do at your school or in your community for Natural Disaster Awareness Day in 1995?

Let us know your ideas. Send your ideas to:

Natural Disaster Awareness Day Working Group  
USGS-119 National Center  
Reston, VA 22092

### CONDUCT A HOME HAZARD HUNT

Identify the potential hazards inside and outside your home, and make changes to reduce potential hazards.

Most deaths and injuries are caused by falling debris from damaged buildings. Many of these items can be anchored, moved, changed, or eliminated to prevent them from turning over, falling, or flying.

#### Checklist

- ✓ Place beds so they are not next to large windows, right below hanging lights, right below heavy mirrors, right below framed pictures, or right below shelves containing lots of things that can fall.
- ✓ Replace heavy lamps on bed tables with light, nonbreakable lamps.
- ✓ Change hanging plants from heavy pots to lighter pots. Use closed hooks on hanging plants, lamps, etc.
- ✓ Make sure hooks for hanging plants, lamps, etc. are attached to studs.
- ✓ Remove all heavy objects from high shelves.
- ✓ Remove all breakable things from high shelves.
- ✓ Replace all latches (such as magnetic touch latches on cabinets) with latches that will hold during an earthquake.
- ✓ Take glass bottles out of medicine cabinets and put on lower shelves. (NOTE: If there are small children around, make sure you use childproof latches on lower shelves that hold medicines.)
- ✓ Remove glass containers that are around bathtub.
- ✓ Move materials that can easily catch fire so they are not close to heat sources.
- ✓ Attach water heater to the studs of the nearest wall.
- ✓ Move heavy objects away from exit routes in your house.
- ✓ Block wheeled objects so they cannot roll.

## FAMILY PREPAREDNESS

---

KIDS • TAKE • CHARGE

- ✓ Attach tall heavy furniture such as bookshelves to studs in wall.
- ✓ Use flexible connectors where gas lines meet appliances such as stoves, water heaters, and dryers.
- ✓ Attach heavy appliances such as refrigerators to studs in wall.
- ✓ Nail plywood to ceiling joists to protect people from chimney bricks that could fall through the ceiling.
- ✓ Make sure heavy mirrors are well fastened to walls.
- ✓ Make sure heavy pictures are well fastened to walls.
- ✓ Make sure air conditioners are well braced.
- ✓ Make sure all roof tiles are secure.
- ✓ Brace outside chimney.
- ✓ Bolt house to foundation.
- ✓ Remove dead or diseased tree limbs that could fall on house.