

## PREPAREDNESS ACTIVITY #5

All Grades

### Safe Areas

This activity is one of several in a basic curriculum designed to increase student knowledge about earthquake science and preparedness. The activities can be done at any time in the weeks leading up to the ShakeOut drill. Each activity can be used in classrooms, museums, and other educational settings. They are not sequence-bound, but when used together they provide an overview of earthquake information for children and students of various ages. All activities can be found at [www.shakeout.org/schools/resources/](http://www.shakeout.org/schools/resources/).

Please review the content background (page 3) to gain a full understanding of the material conducted in this activity.

#### OBJECTIVE:

For students to identify dangerous zones and safe areas during earthquakes by analyzing photographs and coloring a worksheet to highlight potential danger zones

#### MATERIALS/RESOURCES NEEDED:

- Obtain a digital projector and download Safe Areas file onto a laptop **OR**
- Use an overhead projector and print the Safe Areas file onto transparencies **OR**
- Print the Safe Areas file onto 8.5"x11" or 11"x17" pieces of paper with one picture per page.
- Copies of the K-W-L chart for each student **or** create the chart on the board and have students copy it on a piece of paper.
- Copies of "Classroom: Safe Areas and Hazard Hunt" for each student.
- Red and green crayons for each student

#### PRIOR KNOWLEDGE:

In order to conduct this activity, students must know how to fill in a K-W-L chart.

#### ACTIVITY:

##### Set-Up (5 minutes)

Organize equipment so that all students can visibly see the pictures.

##### Procedure (45 minutes)

The italicized phrases are spoken suggestions for the instructor and those in parenthesis are possible answers students might provide.

1. Start by asking students about their reactions to an earthquake if it occurred at this moment.  
*What would you do if an earthquake occurred at this moment? Where would you go?*  
Allow students to answer for three to five minutes.

2. Handout the K-W-L chart.  
*This K-W-L chart is about earthquake safety. Under the 'K' write what you KNOW about earthquake safety. When you are finished, under the 'W' write what you WANT to know.*
3. Discuss what items would be potential hazards during an earthquake.  
*Most earthquake-related injuries are from falling and moving objects. Windows are also very dangerous in buildings because they can break and hurt people. Now, what are some other hazards that you know of? Accept answers.  
What are some hazards in this classroom or at home? Accept answers.*
4. Students can analyze the photographs as a class or in groups:
  - a. As a class – *I will show you a picture and I want you to tell me which areas are safe and which areas are dangerous.*  
Show students the image and take comments.  
*Now I will show you an image that has the safe areas in green and the dangerous areas in red.*  
Discuss why these items or spaces are safe (green) or dangerous (red).
  - b. In groups – *I will hand out one/two photos. I want you to look at the image and discuss which items or areas are safe or dangerous.*  
After giving the students some time, project the image.  
*Who has this image? Which areas in this photograph are safe or dangerous?*  
Display the image that has the safe areas in green and dangerous areas in red.  
Discuss why these items or spaces are dangerous. Do so for the rest of the groups.
5. Distribute the classroom worksheet.  
*Look at this worksheet and color areas that are safe in green and hazards in red.*
6. Have students fill in the last section of their K-W-L chart.  
*Now fill in the 'L' section of the K-W-L chart. List everything you have LEARNED.*
7. Discuss the Drop, Cover, and Hold On technique.  
*Who has heard of Drop, Cover, and Hold On? If you have not, they are the steps to follow when an earthquake happens. First is 'Drop', so drop to the ground. Then 'Cover', so let's get underneath a table or desk. Lastly, 'Hold-on' so hold onto the leg of the table or desk. If there is no furniture to hold on to, the most important aspect is to protect your head, for instance by shielding it with your hands.*  
Repeat if necessary.

## CONTENT BACKGROUND:

Safe areas and hazards for each image:

Location	Red (Hazard)	Green (Safe)
<b>Kitchen</b>	<ul style="list-style-type: none"> <li>• Cabinets and contents</li> <li>• Stovetop left on</li> <li>• Refrigerator unit</li> </ul>	<ul style="list-style-type: none"> <li>• A clear location</li> <li>• Under sturdy furniture</li> </ul>
<b>Library</b>	<ul style="list-style-type: none"> <li>• Ceiling lights</li> <li>• Unsecured computers/printers</li> <li>• Tall book shelves</li> <li>• Books</li> </ul>	<ul style="list-style-type: none"> <li>• Underneath sturdy tables</li> </ul>
<b>Beach</b>	<ul style="list-style-type: none"> <li>• Anywhere near shore</li> </ul>	<ul style="list-style-type: none"> <li>• Higher ground</li> </ul>
<b>Restaurant</b>	<ul style="list-style-type: none"> <li>• Hanging lamps</li> </ul>	<ul style="list-style-type: none"> <li>• Beneath sturdy tables</li> </ul>
<b>Living room</b>	<ul style="list-style-type: none"> <li>• Unsecured books/vases/china/antiques on shelves</li> <li>• Ceiling fan</li> <li>• Hanging photo frames</li> <li>• Candle holders on mantle</li> <li>• Glass windows</li> </ul>	<ul style="list-style-type: none"> <li>• Pillows for protection if there is no sturdy furniture to get under nearby</li> </ul>
<b>Dining room</b>	<ul style="list-style-type: none"> <li>• Tall standing lamp</li> <li>• Wall decorations</li> <li>• Windows &amp; chandelier</li> <li>• Unsecured objects</li> </ul>	<ul style="list-style-type: none"> <li>• Room to drop, cover and hold on</li> </ul>

Safety information by room/location:

<b>General</b>	<ul style="list-style-type: none"> <li>• Most earthquake injuries are from falling and moving objects. You should secure anything:               <ul style="list-style-type: none"> <li>○ heavy enough to hurt you if it falls on you, and</li> <li>○ fragile or expensive enough to be a significant loss if it falls</li> </ul> </li> </ul>
<b>Kitchen</b>	<ul style="list-style-type: none"> <li>• contain cabinets and their contents with hooks and latches</li> </ul>
<b>Garage</b>	<ul style="list-style-type: none"> <li>• secure shelves, boxes, and water heaters with rope, Velcro, or furniture straps</li> </ul>
<b>Living Room/ Dining Room</b>	<ul style="list-style-type: none"> <li>• move tall bookcases and shelves away from places where people sit</li> <li>• move heavy objects to lower shelves</li> <li>• secure display items with putty or Velcro</li> <li>• secure objects above you, whether they are hanging or along the walls, including tall furniture</li> <li>• use flexible connectors to hold large furniture in place while avoiding the rupture of rigid connections</li> </ul>
<b>Bedroom</b>	<ul style="list-style-type: none"> <li>• move tall bookcases and shelves away from places where people sleep</li> <li>• secure small objects, frames, and memorabilia with putty or Velcro</li> </ul>

Procedures during an earthquake:

<b>General</b>	<ul style="list-style-type: none"><li>• move away from windows, mirrors, hanging objects, fireplaces, bookcases, unsecured cabinets, stoves</li><li>• drop, cover, and hold on under something stable</li></ul>
<b>Indoors</b>	<ul style="list-style-type: none"><li>• drop, cover, and hold on under something stable or by an interior wall away from ceiling lights, shelves, and windows</li></ul>
<b>Outdoors</b>	<ul style="list-style-type: none"><li>• move away from tall objects such as power lines, trees, flagpoles, and fences</li><li>• stay in a clear area nearby</li></ul>
<b>Kitchen</b>	<ul style="list-style-type: none"><li>• if you're cooking, turn off the stove before taking cover</li></ul>
<b>In bed</b>	<ul style="list-style-type: none"><li>• stay where you are</li><li>• protect your head with a pillow or with your arms</li></ul>
<b>In a mall</b>	<ul style="list-style-type: none"><li>• move away from windows</li><li>• do not use elevators</li><li>• move away from shelves that could topple or spill their contents</li></ul>
<b>In a car or bus</b>	<ul style="list-style-type: none"><li>• have the driver pull over away from tall objects, and set the parking brake</li><li>• stay where you are but be alert</li></ul>
<b>At the beach</b>	<ul style="list-style-type: none"><li>• stay in place until the shaking stops</li><li>• if it lasts longer than a few seconds, quickly head away from shore towards higher ground</li></ul>