

PERSONAL SAFETY PLAN

Bee Prepared For Chemical Emergencies



Teacher Guide

LEPC

WORKING TOGETHER FOR OUR SAFETY

CITY OF CORPUS CHRISTI / NUECES COUNTY
LOCAL EMERGENCY PLANNING COMMITTEE

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Dear Educator,

Thank you for participating in the LEPC's efforts to educate our youth about emergency situations including chemical emergencies. This is important because all schools and neighborhoods are in close proximity to major highways and the transportation of chemicals. Emergency situations occur without warning. It is important for everyone to have a Personal Safety Plan.

This two-week unit will assist you in teaching children how to create a personal safety plan, how to distinguish if they are in an emergency situation and how to implement their personal safety plan. A pretest and post-test survey will be used to determine the effectiveness of the unit.

The suggested process for the survey is:

1. Instruct the students to complete the pretest.
2. Prepare the summary sheet.
3. Teach the two-week unit.
4. Conduct the post-test
5. Prepare the summary sheet.
6. Complete the evaluation

Fax the summary sheets and evaluations to Joanne Salge at (361) 826-4417. You may contact Ms. Salge at joannes@cctexas.com if you have any questions. You may find more information about the LEPC on line at www.cclepc.org or contact us at 826-3960.

We appreciate your help in this important activity. Your results and input is crucial to a well-prepared community.

Sincerely,

Robert Rocha
LEPC Chairperson

Purpose

The City of Corpus Christi and Nueces County's LEPC has developed this kit to assist teachers in educating children about chemical emergencies. The kit provides educators with the information and materials needed to inform children and their parents about emergency situations and what to do in the event of a chemical emergency.

Objectives

The learner will:

- * build an understanding about emergency situations including chemical emergencies
- * create a personal safety plan for an emergency situation
- * determine whether to “stay or go” in the event of a chemical emergency.

Lesson Timelines

	<i>Lesson Title</i>	<i>Activity</i>	<i>Subject Area</i>	<i>Time Needed</i>
Day 1	Pretest ----- Introduction	List and Discuss Emergencies ----- Pretest ----- KWL Chart ----- Video	Reading ----- Writing ----- Technology	45 minutes
Day 2	Chemicals Are Everywhere	Read Brochure ----- Knowledge Is Power Worksheet ----- Job Search Worksheet	Reading ----- Technology	45 minutes
Day 3	There Are Two Types Of Chemicals In Our Area	Read Brochure ----- Research Chemicals on the Computer ----- Flammable or Corrosive Worksheet	Reading ----- Science	45 minutes
Day 4	You Have A Safety Plan Right?	Read Brochure ----- Review Different Safety Plans ----- Write Letters for Information	Reading ----- Writing	45 minutes

Day 5	Use Your Senses	Read Brochure ----- Add Information to Charts from Lesson 1 ----- Use Your Senses Worksheet	Reading ----- Writing	30 minutes
Day 6	Stay Or Go	Read Brochure ----- Stay or Go Worksheet	Reading ----- Language Arts	30 minutes
Day 7	Emergency Safety Kit	Read Brochure ----- Create an Emergency Safety Kit ----- Chemical Safety Kit Worksheet	Reading ----- Technology ----- Art ----- Math	45 minutes
Day 8	You...Are The Key	Read Brochure ----- Play a Game ----- Create a Chemical Safety Plan	Reading ----- Writing ----- Technology	45 minutes
Day 9	Review	Complete KWL Overhead ----- Watch a Video ----- Safety House	Reading ----- Writing	1 Hour
Day 10	Posttest	Take a posttest	Reading	10 minutes

Correlation of Subject Area Lessons to TEKS

Lesson	English Language Arts	Math	Science	Writing	Technology
1	5.7, 5.10, 5.11, 5.13,			5.15, 5.18, 5.23, 5.24,	4, 5, 6
2	5.7, 5.10, 5.11, 5.13,	5.13*		5.15, 5.24,	4, 5, 6
3	5.7, 5.10, 5.11, 5.13,			5.15, 5.24,	4, 5, 6
4	5.7, 5.10, 5.11, 5.13,		5.11*, 5.12*	5.15, 5.16, 5.17, 5.18, 5.24,	4, 5, 6
5	5.7, 5.10, 5.11,		5.2*	5.15, 5.18,	
6	5.7, 5.10, 5.11,				
7	5.7, 5.10, 5.11, 5.13,	5.7*, 5.11*		5.24,	4, 5, 6
8	5.7, 5.10, 5.11, 5.13,			5.15, 5.18, 5.19, 5.24,	4, 5, 6, 10
9	5.1, 5.7, 5.10, 5.11,			5.15, 5.16, 5.17, 5.18, 5.20, 5.21, 5.23, 5.24,	
10	5.7, 5.10, 5.11,				

- Teachers may wish to consider creating their own lessons for these Texas Essential Knowledge and Skills. Due to time constraints of the unit, these TEKS were not included.

LESSON 1: PRETEST AND INTRODUCTION

Objectives:

- Discuss emergency situations.
- Take a unit pretest.
- Determine what students already know about preparing for chemical emergencies.
- Provide an overview for the Personal Safety Plan unit.

Materials:

- Chalkboard/Overhead
- Pretests
- Summary Report
- KWL Overhead
- TV/VCR
- Internet Connection (optional)
- Butcher Paper
- Parent Letter

Activities:

- *Emergency Situations*
 1. Write the word “emergency” on the board or overhead. Have students define and discuss the word (*1: an unforeseen combination of circumstances or the resulting state that calls for immediate action. 2: an urgent need for assistance or relief <the governor declared a state of emergency after the flood>.*)
 2. Write the words “health safety” on the board or overhead. Have students discuss and define health safety (*health – the general condition of the body and safety - the condition of being safe from undergoing or causing hurt, injury, or loss therefore, health safety would be ensuring that your body is safe from harm or injury.*)
 3. Ask students if they know what types of emergency situations could occur in our area (*hurricanes, tornadoes, flash floods, fires, etc.*).
 4. List the emergency situations generated on the board.
 5. Put students into groups of four or five and assign each group an emergency situation (provide each group with a sheet of butcher paper).
 6. Have them generate ideas about what they need to do to prepare for the emergency situation and what they need to do during the emergency situation (students may use books, encyclopedias, the internet, etc. to assist with this task).
 7. Discuss information generated by each group (*the general idea is that each type of emergency situation has one main objective - an emergency plan should be in place. Keep these sheets of butcher paper for use in upcoming lessons.*)
 8. Introduce “Chemical Emergency” as one type of emergency situation. Explain that chemical emergencies are emergency situations that occur which involve some type of chemical.

- *Pretest*
 1. Inform students they will be learning how to be prepared for chemical emergencies.
 2. Distribute the pretest to students (worksheet A). The pretest will assist in determining what students already know about chemical emergencies.
 3. Students will take the pretest and it will be **scored by the teacher** (list scores on the record log – worksheet B).
 4. Inform students that they will be learning the answers to the pretest questions over the next two weeks.

- *KWL Chart*
 1. Use KWL chart (worksheet C) as an overhead and/or run off for individual students.
 2. Explain to the children that the “K” stands for what they already know about being prepared for a chemical emergency.
 3. Have students brainstorm what they already know and record their responses under the “K” column.
 4. Explain to students that the “W” stands for what they would like to know.
 5. Have students brainstorm what they would like to know about chemical emergencies.
 6. Keep student responses on the chart and set it aside (It will be used again in lesson 9).

- *Video*
 1. Inform students that they will be watching a video. Ask the students to think about ways they can prepare for a chemical emergency as they watch.
 2. Show the video

- *Video Talk*
 1. The following questions can be used for discussion after the video:
 - Where are chemicals located? (*Chemicals are everywhere and used by people in everyday activities*)
 - What can you do to determine if something is a chemical emergency? (*Use your five senses to see, hear, smell, feel, or taste to determine if chemicals may be part of an emergency situation. Watching your TV or listen to the radio will also provide the information you need*)
 - Why do you shelter-in-place? (*To keep out chemicals that may be harmful*)
 - How do you know whether to “Stay or Go?” (*Most of the time it is safer to stay, but sometimes you may be notified or recognize that leaving the area is the only option*).

- *Parent Letter*
 1. Send home the parent letter describing the upcoming two-week unit (letter A).
 2. Inform students to discuss today’s lesson with their parents.

Name: _____

PRETEST

A Chemical Emergency
How to keep safe?



Directions: Please circle the correct answer:

1. Hazardous chemicals are located:
 - a. At refineries
 - b. At chemical plants
 - c. In homes
 - d. All of the above

2. On average, every home has how many gallons of hazardous chemicals on hand?
 - a. 0 – 2 gallons
 - b. 2 – 5 gallons
 - c. 5 – 10 gallons
 - d. None of the above

3. Combustible chemicals are ones that burn and explode.
True False

4. Corrosive chemicals make it hard to breathe.
True False

5. Your five senses can help you assess the dangers of chemical emergencies.
True False

6. One way to be prepared for a chemical emergency is to have a personal safety plan.
True False

7. How much time are you on your own at the beginning of an emergency?
 - a. 0 – 5 minutes
 - b. 10 – 15 minutes
 - c. 30 minutes
 - d. 45 minutes

8. In a chemical emergency, usually it is safest to stay where you are and shelter in place.
True False
9. Which of the following items should not be in an emergency safety kit?
- First aid kit
 - Your pet
 - Small container of water
 - Flashlight
10. To shelter in place does NOT mean?
- Call 911
 - Close windows and doors
 - Go inside and stay inside
 - Turn off the air conditioner or heater
11. In case of a chemical emergency you should:
- Call 911
 - Stay where you are and shelter in place
 - Go and evacuate
 - B or C
12. If asked to evacuate by emergency personnel be sure to:
- Follow directions from officials
 - Take no short cuts
 - Drive straight to your destination
 - All of the above
13. It is okay to drive through a visible vapor cloud to escape from a chemical emergency.
True False
14. To obtain information during a chemical emergency you should:
- Watch television
 - Listen to 89.5 FM Radio
 - Call 826-INFO (4636)
 - All of the above

KWL CHART

<p>K <i>What do you know about chemical emergencies?</i></p>	<p>W <i>What would you like to know about chemical emergencies?</i></p>	<p>L <i>What have you learned about chemical Emergencies?</i></p>



Dear Parents,

For the next two-weeks, your child will be learning about emergency situations and chemical emergencies specifically. This is important because all schools and neighborhoods are in close proximity to major highways and the transportation of chemicals. Emergency situations occur without warning. It is important for everyone to have a Personal Safety Plan.

The two-week unit will assist in teaching your child how to distinguish if they are in an emergency situation, how to create a personal safety plan and how to implement that plan. You can help by asking your child about what they are learning.

You and your family may find more information about chemical emergencies and personal safety plans on line at www.cclepc.org or by contacting us at (361) 826-3960.

Sincerely,

Robert Rocha
LEPC Chairperson

LESSON 2: CHEMICALS ARE EVERYWHERE

Objectives:

- Determine why chemicals are important.
- Recognize that chemicals are everywhere.
- Determine how chemicals affect the local economy and jobs in the area.
- Evaluate the amount of chemicals found in the home.

Materials:

- Chalkboard/Overhead
- Brochure
- Knowledge is Power Worksheet
- Job Search Worksheet
- Internet Connection (optional)

Activities:

- *Brochure*
 1. On the chalkboard write “Are Chemicals Important.” Discuss why they are important and list the reasons (*Chemicals are ingrained in our lifestyles. They enable us to enjoy the products that contribute to our present standard of living with chilled foods, clean-burning gasoline, and plastic in its many forms*).
 2. Pass out the Personal Safety Plan Brochure to students.
 3. Read information under “Chemicals Are Everywhere” (*Stop at “There are two types of chemicals in our area”*).
 4. Review places where chemicals are located and where they are located (*In Nueces County, chemicals are located everywhere. At home, think of household cleaners, the paint and pain thinners, the sprays, deodorants, and detergents. These all need to be properly used and correctly disposed. At businesses, such as a school, we find inks, toners, solvents, cleaners, and other necessary chemicals. Besides the industrial plants that use or make chemicals, there is an entire transportation industry to haul chemicals – trucks, rail, pipeline, and marine. We each have a responsibility to understand and properly use chemicals at home, and in the community*).
 5. Ask students to think of local businesses and tell what types of chemicals they may have (*Wal-Mart-paints, solvents, auto mechanic supplies; auto parts stores; paint stores*).
 6. Emphasize that each household has 5 to 10 gallons of hazardous chemicals.
- *Checklist* (optional)

Have students take the checklist home (worksheet D) and locate chemicals found in their homes. **For safety reasons, emphasize that students should have parents go through the house with them to locate these items.**

- *Job Search*
 1. Ask students how chemicals affect the local economy and jobs (*In the Coastal bend area, the chemical industries provide 10,000 high paying jobs with a ripple effect of at least 50,000 support jobs*).
 2. Use the classified section of the newspaper (on-line classifieds are available at caller.com) for five days to search for jobs that are directly related to the chemical industries (*Remember, when searching for jobs, they may not only be listed as industry or chemical. Jobs for truck driving, rail, pipeline, paint stores, etc. may be included*). Have students chart this information (worksheet E). Students will then take the information to create a graph. This may be extended to create other bar graphs, circle graphs, and/or a line graphs displaying information about types of jobs, pay scales, and other information you may want to have students look for specifically.

KNOWLEDGE IS POWER

Know Where Dangerous Chemicals Are Located In Your Home!

With a parent, use the checklist below to locate hazardous chemicals in your home. You can often identify them by locating word and phrases on the labels such as: **WARNING, CAUTION** or **DANGEROUS**.

Check Here If This Item Is Located In Your Home	Hazardous Chemical	List The Location Of This Chemical In Your Home
	Ammonia	
	Detergents	
	Drain cleaners	
	Floor wax	
	Furniture polish	
	Metal polish	
	Mothballs	
	Oven cleaners	
	Septic tank cleaners	
	Spot removers	
	Window cleaners	
	Aerosol sprays	
	Nail polish remover	
	Toilet bowl cleaners	
	Tub and tile cleaners	
	Artificial dyes	
	Pool chemicals	
	Stain/varnish remover	
	Thermometers	
	Brake fluid	
	Lighter fluid	
	Motor oil	
	Transmission fluid	
	Fungicides	
	Herbicides	
	Insect repellents	
	Pesticides	
	Paints and stains	
	Household batteries	
	Glues and cements	

JOB SEARCH

Directions: List jobs directly related to the chemical industry for the next five days. Create a bar graph showing the amount of jobs available involving chemicals.

<i>List Jobs-Day 1</i>	<i>List Jobs-Day 2</i>	<i>List Jobs-Day 3</i>	<i>List Jobs-Day 4</i>	<i>List Jobs-Day 5</i>

LESSON 3: THERE ARE TWO TYPES OF CHEMICALS IN OUR AREA

Objectives:

- Recognize flammable and corrosives as two types of chemicals in our area.
- Distinguish between flammable and corrosive chemicals.
- Research flammable and corrosive chemicals.

Materials:

- Brochure
- Flammable and Corrosive Chemicals Worksheet
- Internet Connection (optional)

Activities:

- *Brochure*
 1. Pass out the Personal Safety Plan Brochure to students.
 2. Read information under “There are two types of chemicals in our area”
 3. Discuss the two types of chemicals as being flammable and corrosive.
 4. Have students discuss the risks of chemicals (*chemical emergencies happen quickly, chemical releases may be life threatening, emergency response is always after the fact-you can't predict the event, many different communication tools are needed to reach the community during an emergency*).
 5. Ask students “When will help arrive to assist you in a large chemical emergency?” (*You are on your own up to 15 minutes after an emergency situation has occurred*).
- *Flammable and Corrosive*
 1. Define corrosive as substances may dangerously irritate the nose, eyes, throat and air passages as well as may eat or wear away at many materials. Have student give a couple of examples of corrosive substances (*battery acid, oven cleaners, bleach, drain cleaners*).
 2. Define flammable as substances that easily ignite. Have student give a couple of examples of flammable substances (*lighter fluid, turpentine, oils and gasoline*).
 3. Inform students that there are seven serious chemicals located in our area (*ammonia, chlorine, hydrogen fluoride, hydrogen sulfide, hydrogen chloride, sulfur dioxide, and LP gas*). Let students know that LP gas is the only flammable chemical of the serious seven. The other six are corrosive in nature.
 4. Put students into groups of four or five and provide each group with a worksheet (Worksheet F). Have students distinguish between flammable and corrosive substances.
 5. Have students complete the worksheet. Students can use the different sources to locate information about flammable and corrosive substances. The Internet can provide sites that describe each type of substance in detail.

Flammable and Corrosive Substances

Research flammable and corrosive substances. List each substance under the appropriate column.

FLAMMABLE	CORROSIVE

*Listed below are the “serious seven” chemicals located in our area.
Circle the correct nature of each chemical.*

- | | | | |
|----------------------|-------|-----------|-----------|
| 1. Ammonia | ----- | Corrosive | Flammable |
| 2. Chlorine | ----- | Corrosive | Flammable |
| 3. Hydrogen Fluoride | ----- | Corrosive | Flammable |
| 4. Hydrogen Sulfide | ----- | Corrosive | Flammable |
| 5. Hydrogen Chloride | ----- | Corrosive | Flammable |
| 6. Sulfur Dioxide | ----- | Corrosive | Flammable |
| 7. LP Gas | ----- | Corrosive | Flammable |

LESSON 4: YOU HAVE A SAFETY PLAN RIGHT?

Objectives:

- Discuss safety plans.
- Review different safety plans.

Materials:

- Chalkboard/Overhead
- Internet connection (optional)

Activities:

- *Safety Plans*
 1. Ask the students if they know what types of emergency situations need a safety plan (*hurricanes, tornadoes, flash floods, fires, etc.*).
 2. List the emergency situations generated on the board.
 3. Remind students of the activity they did on day one. Put up the sheets of butcher paper that each group of students created showing how they needed to prepare for each emergency situation.
 4. Inform students that everyone should have a safety plan for a chemical emergency as well.
 5. Remind students that in the event of an emergency, help may not arrive for up to 15 minutes.
- *Brochure*
 1. Have students read “You Have A Safety Plan Right.”
 2. Discuss why it is important to have a safety plan (*lives could be lost with out a plan*).
 3. Explain to students that it is their responsibility to plan ahead for chemical emergencies.
- *Plan Ahead*
 1. Have students determine whom they can contact to help make a safety plan (*fire, law enforcement, emergency management, Red Cross, Salvation Army, LEPC, health care professionals, schools and others—you can contact chemical companies or their neighborhood community advisory councils as well*).
 2. Have students write a letter to one of the agencies listed above describing what they have been learning about. Have them request information for making a plan in the event of a chemical emergency (Students will be creating an actual Personal Safety Plan in Lesson 8 after they have learned more about responding to emergencies, but responses from these letters can also assist in creating that plan. If you chose not to write for information, most of this information can be located on-line from these agencies).

LESSON 5: USE YOUR SENSES

Objectives:

- Recognize that your senses can help determine the best plan for you in the event of a chemical emergency.
- Identify how each of the senses can be used.

Materials:

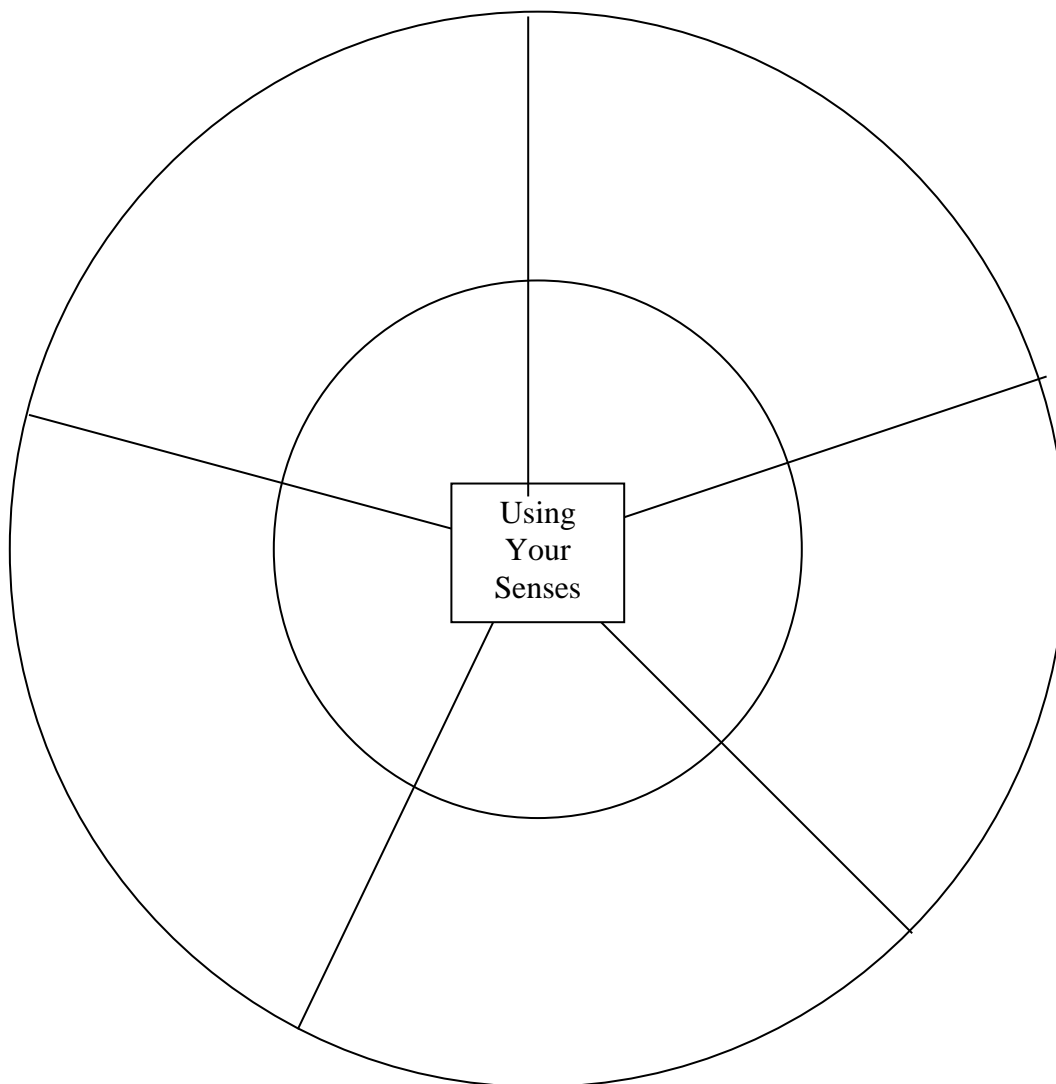
- Chalkboard/Overhead
- Brochure
- Use Your Senses Worksheet

Activities:

- *Use Your Senses*
 1. Have student describe their five senses. List these senses on the chalkboard or overhead.
 2. Have the students describe how your senses could help in any given emergency situation. List these examples on the chalkboard or overhead.
- *Brochure*
 1. Have students read “Use Your Senses” in their brochure.
 2. Review how each of their senses can help them during a chemical emergency make sure that they understand that using their senses and recognizing these signs will not always mean there is a chemical emergency. Information gathered from the radio or television will assist in confirming a chemical emergency. Make sure they understand that seeing and/or hearing the television, radio and/or telephone will be the only way to confirm that a chemical emergency has occurred.
 3. Remind students of the emergency situations they listed in Lesson 1 (you may want to put up the butcher paper the students used to generate information about emergency situations in Lesson 1).
 4. Have students return to the same groups to add how their five senses would be used in each of the emergency situations discussed in their groups (*example: Tornado-see the funnel cloud in the sky, the strong winds and possibly hail, smell the rain, hear the and feel the high winds and taste the sensation of moist air*).
 5. Have students demonstrate their understanding of using their five senses to help in identifying a chemical emergency situation by completing the “Use Your Senses” handout (Worksheet G).

USE YOUR SENSES

Use the diagram below to identify and describe five ways to determine if a chemical emergency has occurred. Draw pictures in the outer circles showing how each of your senses can help identify danger. Write a statement about your drawings in the connecting inner circle.



LESSON 6: STAY OR GO

Objectives:

- Recognize when to stay or go during an emergency situation.
- Compose scenarios in which you would shelter-in-place and evacuate an emergency situation.

Materials:

- Brochure
- Stay Or Go Worksheet

Activities:

- *Brochure*
 1. Have students read “Use Your Personal Safety Plan to Determine Whether to Stay or Go” in their brochures.
 2. Use the following questions to discuss when to stay or go during an emergency situation:
 - What are two choices for personal protection planning in an emergency? (*You can evacuate the area or shelter-in-place*)
 - Which of the two choices is most often usually preferred? (*Usually it is safer to stay and shelter-in-place*)
 - How do you shelter-in-place? (*Go inside and stay inside, close all windows and doors and turn off the AC/heater...remember to listen to the radio or TV and stay off the phone..keep 911 clear*)
 - How do you evacuate? (*Follow your own Personal Safety Plan, get your Safety Kit and decide where you are going and go directly there...remember to follow law enforcement direction and stay tuned to your radio for information*)
 - What are the factors that may vary your response? (*Where you are located in reference to the emergency, weather conditions, the condition of your home or vehicle as a shelter*)
- *Stay or Go*
 1. Distribute Worksheet H. Have students work in cooperative groups to discuss each situation, determine a choice and discuss factors that may change that choice.
 2. Have students discuss their answers and other factors they considered (accept all reasonable answers).

STAY OR GO

Read the following emergency situations. Determine if you should stay and shelter-in-place or go and evacuate from the area by placing an X in the appropriate box. In the same space, explain why you made that decision. In the last column, describe what other things might be considered in each situation that could make you change your mind.

Situation	Stay and Shelter-in-Place	Go and Evacuate the Area	What factors might change your choice?
You are at home and have heard a nearby explosion and can see a huge cloud of smoke in the sky nearby.			
You are watching television and hear that a chemical spill has occurred in the area.			
You are driving with your family in the car and a tanker truck behind you has an accident.			
You are at school when you notice a huge cloud of smoke in the sky.			
You are walking home from school and you see a huge explosion nearby.			

Create two situations below. One that would make you shelter-in-place and one that would make you evacuate the area.

1. Shelter-In-Place:

2. Evacuate:

LESSON 7: EMERGENCY SAFETY KIT

Objectives:

- Read about emergency safety kits
- Create an emergency safety kit

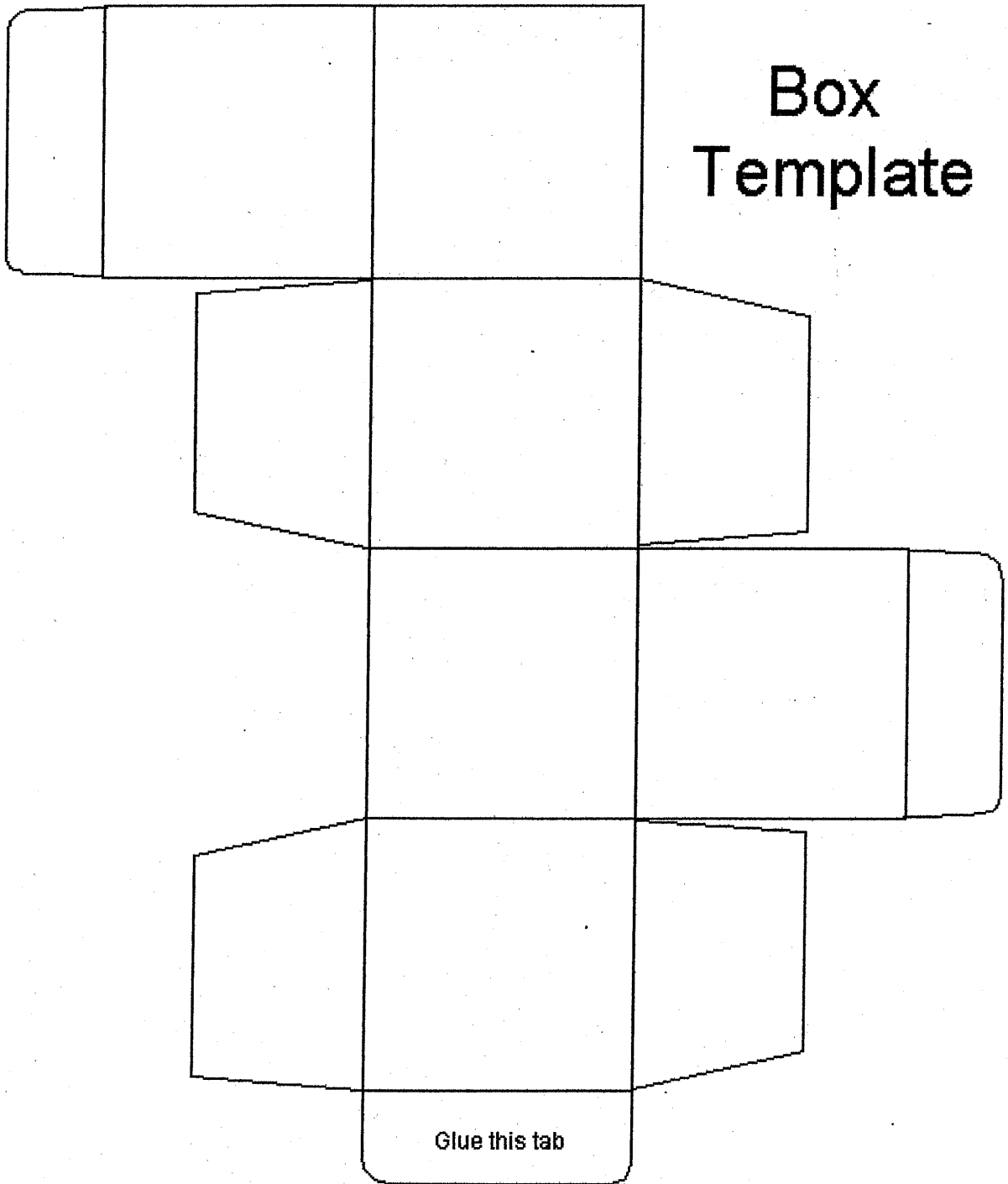
Materials:

- Brochure
- Construction Paper
- Box Worksheet
- Shoeboxes (optional)
- Magazines (optional)
- Emergency Safety Kit Worksheet

Activities:

- *Brochure*
 1. Have students use their brochures to read about “Emergency Safety Kit.”
 2. Discuss with the children why they should have an emergency safety kit ready (*in the event of an emergency, time is important. If you have to take time to put items together that you may need to shelter in place or evacuate, this could put your life in danger.*)
 3. Discuss the items listed for use in the safety kit (*towel-used to cover your nose and mouth in the event that you have to evacuate. You may use the towel under your doors to help keep any dangerous chemicals from seeping through small cracks at the bottom of the door. The use of water on the towel will assist in both of these instances. Other items to consider would be flashlight, batteries, radio, first aid kit, no-perishable food, nose and mouth protection such as a face mask, plastic bags duct tape, maps for evacuation purposes.*)
 4. Have students refer back to the lists they had made for items needed in the event of other emergency situations. Ask if any of those items should be considered when they are creating a safety kit for a chemical emergency.
 5. Students can locate information about making an emergency safety kit on line at <http://ready.gov>
- *Making an Emergency Safety Kit*
 1. Have students make a box out of paper by using the box template found on worksheet I. You may have students bring shoeboxes from home if you prefer.
 2. Have students decorate the boxes to show that it is an Emergency Safety Kit.
 3. Have students put items in the box that would be needed in the event of a chemical emergency. Students can do this by drawing pictures or cutting pictures out of magazines.
 4. Have student use the handout provided to list the items in their boxes and describe how those items would be used in the event of a chemical emergency (worksheet J).
 5. A generic handout is available (worksheet K) if you would like for students to create an emergency kit for other emergency situations.

Box Template



CHEMICAL EMERGENCY SAFETY KIT

List items that would be important to keep in an Emergency Safety Kit in the event of a *chemical emergency*. Next to each item, describe how it would be used.

ITEMS IN A CHEMICAL EMERGENCY SAFETY KIT	HOW THIS ITEM WOULD BE USED

EMERGENCY SAFETY KIT

List items that would be important to keep in an Emergency Safety Kit. Next to each item, describe how it would be used.

ITEMS IN AN EMERGENCY SAFETY KIT	HOW THIS ITEM WOULD BE USED

LESSON 8: YOU...ARE THE KEY

Objectives:

- Read about the keys to an effective safety process.
- Play a game that demonstrates the key factors that need to be known in the event of a chemical emergency.
- Develop a Chemical Safety Plan.
- Design a poster that describes a Chemical Safety Plan.

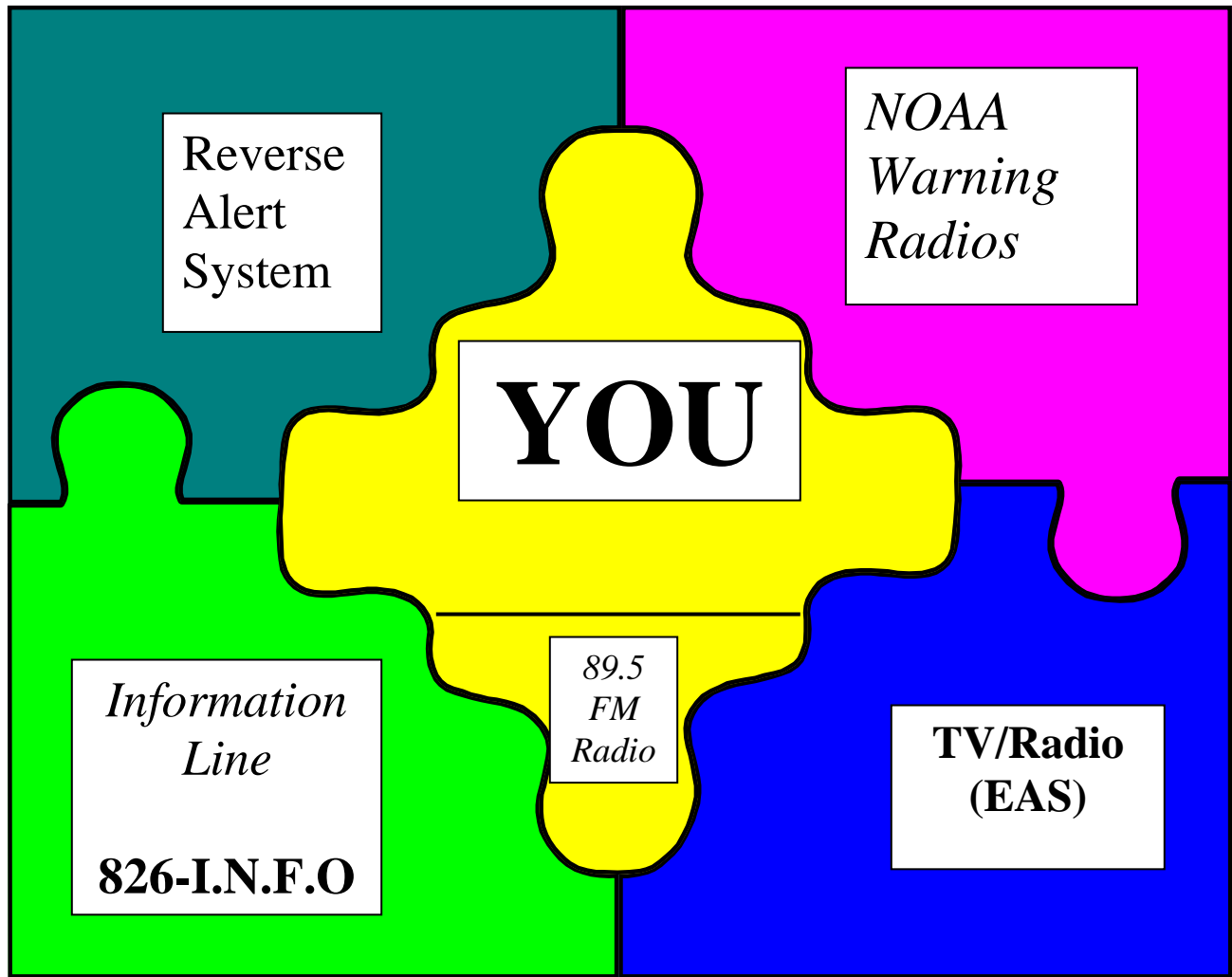
Materials:

- Chalkboard/Overhead
- Brochures
- Activity Worksheet
- Internet Connection (optional)
- Poster Board/Butcher Paper

Activities:

- *Brochures*
 1. Ask students to read in their brochures “You...Are the Key.”
 2. Inform students that information is available to us when an emergency situation has occurred.
 3. Discuss each of the puzzle pieces in detail. (*Phone Ring-Down System*-automatically calls homes in the event of an emergency. It may take a while to call everyone in the area. Stay off the phone., *Information Line 826-I.N.F.O.*-This number can be called to give or receive information. Do not call 911., *School Warning Radios*-All area schools have these radios to notify your campus of any emergency. This will ensure your safety at school., *TV/Radio (EAS)*-In the event of an emergency, most TV and radio stations will provide ongoing information., *89.5 FM Radio*-Turn on this radio station for information.).
 4. Let students know that any emergency needs them in order to ensure safety. Without them working together with the proper authorities, lives can be in danger.
- *Play a Game*
 1. Run off worksheet L on construction paper or tag board. You will need one set for every six students.
 2. Ahead of time you will need to cut out all of the puzzle pieces and glue the appropriate description to the back of each piece (example: *You*-without you the safety process will not work., *Phone Ring-Down System*-automatically calls homes in the event of an emergency. It may take a while to call everyone in the area. Stay off the phone., *Information Line 826-I.N.F.O.*-This number can be called to give or receive information. Do not call 911., *School Warning Radios*-All area schools have these radios to notify your campus of any emergency. This will ensure your safety at school., *TV/Radio (EAS)*-In the event of an emergency, most TV and radio stations will provide ongoing information., *89.5 FM Radio*-Turn on this radio station for information.). These pieces can be laminated.

3. Give children a puzzle piece and have them get together with other students that have the same piece. Together they are to discuss the piece and gain an understanding of what it is and how it is important.
 4. Have the children now move around the room to find the five other students that complete their puzzle.
 5. When they have created a complete puzzle, have each student read and discuss their pieces with everyone in their group.
 6. Have one group present the puzzle and describe each of the pieces and their meaning for the class. This will allow for you to elaborate on any area or correct any misunderstanding.
- *Develop a Chemical Safety Plan*
1. Tell the children they are going to create a Chemical Safety Plan using all of the information they have learned up to this point.
 2. Let the children know the plan should include what to do if they are at home, outside playing or in a vehicle. Each of these situations must be considered for the plan to be an effective one.
 3. Information located on-line at <http://ready.gov> can be useful in making a plan for personal safety.
 4. Have students use the handout to describe how they have developed their Personal Chemical Safety Plan (worksheet M).
 5. Have each child create a Personal Chemical Safety Plan on a poster board or butcher paper. You can have students work in groups.



Turn on this radio station for news.

This number can be called to give or receive information. Do not call 911.

This system automatically calls homes in the event of an emergency. This may take a while to call everyone in the area. Stay off the phone.

Without you, the safety process will not work

All area schools have these radios to notify your campus of any emergency. This will ensure your safety at school

In the event of an emergency, most TV and radio stations will provide ongoing information

MY PERSONAL CHEMICAL SAFETY PLAN

You have been asked to present information about creating a personal safety plan in the event of a chemical emergency to another classroom. You have decided to use the following information to help you organize your thoughts. Respond to the following and then create a poster to help you present your Personal Chemical Safety Plan. You will want to use a graphic organizer for your poster.

You are outside playing and have just heard a huge describe what they first step to determining an emergency situation by describing how to use your five senses.

- 1.
- 2.
- 3.
- 4.
- 5.

Once you have determined the situation could potentially be dangerous, you now must decide if you should stay or go. Describe what factors you would consider to determine if you were to stay or go.

TO STAY:

TO GO:

You will need an emergency safety kit if you stay or go. Describe what you have in your emergency safety kit and why you will need these items.

Describe the different types of safety information tools that you can use to get more information about an emergency situation.

- 1.
- 2.
- 3.
- 4.
- 5.

Who is the key to an Effective Safety Plan?

Use this space to develop your graphic organizer.

LESSON 9: REVIEW

Objectives:

- Complete the KWL overhead.
- Review key concepts from the two-week unit with the brochure.
- Watch a video.
- Participate in a hands-on demonstration of a chemical emergency.

Materials:

- KWL Overhead
- Video
- Safety House Schedule Worksheet

Activities:

- *KWL Chart*
 1. Use worksheet A (put up overhead and/or have students take out their run off individual sheets).
 2. Remind the children that the “K” stood for what they already knew about being prepared for a chemical emergency. Review the items that were recorded.
 3. Remind the students that the “W” stood for what they wanted to know. Review the items recorded.
 4. Inform the students that the “L” stands for what they learned.
 5. Brainstorm key concepts that students learned over the last two weeks. List items on the KWL Chart.
- *Review Concepts*
 1. Have student read their brochure in groups.
 2. Have groups discuss important concepts.
- *Video*
 1. Inform students that they will again be watching the video shown on the first day of the unit. Ask the students to think again about ways they can prepare for a chemical emergency as they watch.
 2. Show the video.
- *Video Talk*
 1. The following questions can again be used for discussion after the video:
 - Where are chemicals located? (*Chemicals are everywhere and used by people in everyday activities*)
 - What can you do to determine if something is a chemical emergency? (*Use your five senses to see, hear, smell, feel, or taste to determine if chemicals may be part of an emergency situation. Watching your TV or listen to the radio will also provide the information you need*)
 - Why do you shelter-in-place? (*To keep out chemicals that may be harmful*)

- How do you know whether to “Stay or Go?” (*Most of the time it is safer to stay, but sometimes you may be notified or recognize that leaving the area is the only option*).
- *Safety House*
 1. The Safety House is an excellent tool to provide students with hands on experience on what to do in the event of a chemical emergency.
 2. To schedule the Safety House at your campus, contact Joanne Salge at 826-3960. The house is available for half-day demonstrations (full day demonstrations may be scheduled depending on the number of classes participating).
 3. Use worksheet N for scheduling purposes. Each demonstration takes 15 minutes. Two minutes of travel time is included in the schedule so please inform classes to be prompt.
 4. Have students write “Thank You” notes to the LEPC. These letters may be sent to the LEPC office at 2406 Leopard, Corpus Christi, TX 78408.



Safety House Schedule

Time	Teacher	Grade Level
8:15-8:30		
8:32-8:47		
8:49-9:04		
9:06-9:21		
9:23-9:38		
9:40-9:55		
9:57-10:12		
10:14-10:29		
10:31-10:46		
10:48-11:03		
11:05-11:20		
11:22-11:37		
11:39-11:54		

- No more than 25 students per group

Fax schedule to Joanne Salge at (361) 826-4417.

LESSON 10: POST-TEST

Objectives:

- Take a unit post-test.

Materials:

- Post-tests
- Record Log
- Evaluation Form

Activities:

- *Post test*
 1. Remind students they have been learning how to be prepared for chemical emergencies.
 2. Distribute the posttest to students (worksheet O). The post-test will determine what students have learned chemical emergencies.
 3. Students will take the post-test and it will be **scored by the teacher** (list scores on the record log – worksheet P).
 4. Complete the Teacher Evaluation Form (worksheet Q).
 5. Fax the Record Logs and Evaluation form (worksheets A, P and Q) to Joanne Salge @ 361.826.4417.
- *Review Post-Test*
 1. Review post-test answers with the students.
 - Hazardous chemicals are located: (*d. all of the above- at refineries, at chemical plants, in homes*)
 - On average, every home has how many gallons of hazardous chemicals on hand? (*c. 5 –10 gallons*)
 - Combustible chemicals are ones that burn and explode? (*True*)
 - Corrosive chemicals make it hard to breathe? (*True*)
 - Your five senses can help you assess the dangers of chemical emergencies. (*True*)
 - One way to be prepared for a chemical emergency is to have a personal safety plan. (*True*)
 - How much time are you on your own at the beginning of an emergency? (*b. 10 – 15 minutes*)
 - In a chemical emergency, usually it is safest to stay where you are and shelter in place. (*True*)
 - Which of the following items should not be in an emergency safety kit? (*b. your pet*)
 - To shelter in place does NOT mean? (*a. call 911*)
 - In case of a chemical emergency you should: (*d. b or c-stay where you are and shelter in place or go and evacuate*)
 - If asked to evacuate by emergency personnel, be sure to: (*d. all of the above-follow directions from officials, take no short cuts, and drive straight to your destination*)
 - It is okay to drive through a visible vapor cloud to escape from a chemical emergency? (*False*)
 - To obtain information during a chemical emergency, you should: (*d. all of the above-watch television, listen to 89.5 FM radio, call 826-INFO*)

Name: _____

POST-TEST

**A Chemical Emergency
How to keep safe?**

Directions: Please circle the correct answer:

- Hazardous chemicals are located:
 - At refineries
 - At chemical plants
 - In homes
 - All of the above
- On average, every home has how many gallons of hazardous chemicals on hand?
 - 0 – 2 gallons
 - 2 – 5 gallons
 - 5 – 10 gallons
 - None of the above
- Combustible chemicals are ones that burn and explode.
True False
- Corrosive chemicals make it hard to breathe.
True False
- Your five senses can help you assess the dangers of chemical emergencies.
True False
- One way to be prepared for a chemical emergency is to have a personal safety plan.
True False
- How much time are you on your own at the beginning of an emergency?
 - 0 – 5 minutes
 - 10 – 15 minutes
 - 30 minutes
 - 45 minutes



**SUMMARY REPORT FOR POST-TEST SURVEY OF 5TH GRADE STUDENTS
PERSONAL SAFETY PLAN DURING A CHEMICAL EMERGENCY**

SCHOOL: _____

TEACHER: _____

Please identify the questions each student missed by placing an X in the appropriate boxes.

Student Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total Percent Correct

BEE PREPARED FOR CHEMICAL EMERGENCIES

Educational Kit

Evaluation Form

1. Please evaluate each of the lessons by placing an X in the box that best describes that particular lesson and its activities:

Lesson	Poor	Fair	Natural	Good	Excellent	Comments
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

2. What part of the kit was most useful to you in teaching about chemical emergencies?
3. What information or concepts were difficult to teach?
4. What would you like to see in this kit?