



The Minnesota Literacy Council created this curriculum with funding from the MN Department of Education. We invite you to adapt it for your own classrooms.

MASTER **Summer Severe Weather: Week 1 of 1**

Unit Overview:

This is a **one week** unit during which learners will learn about thunderstorms and tornadoes and how to be prepared and cautious in each. Students will also be exposed to weather forecasts and how to understand predictions of severe weather. In addition, vocabulary and ideas for severe weather will be discussed.

Unit Objectives:

After this unit students will...

- understand the potential dangers of thunderstorms and tornadoes and how to protect themselves against these dangers
- know more about weather forecasts, especially those predicting severe weather
- be able to say, write and read basic weather vocabulary associated with thunderstorms and tornadoes
- be able to identify and use some basic vocabulary words for severe weather

Unit Outline:

Monday: Thunderstorm basics
Tuesday: Tornado basics
Wednesday: Being prepared for severe weather
Thursday: Watches, warnings and forecasts

MATERIALS

[Severe Weather Supplemental Packet](#)
<http://tinyurl.com/mlcsevereweather> [Youtube](#) videos

Summer severe weather: Monday, Week 1 of 1

Thunderstorm basics

Lesson Objectives:	Materials
<ul style="list-style-type: none">• Students will discuss the concept of severe weather vocab• Students will do reading comprehension exercises to learn more about thunderstorms• Students will read about and discuss strategies for protecting themselves in a thunderstorm	Thunderstorms Readings, Questions and vocabulary activity (find after this lesson) Weather Words and Pictures (find after this lesson) Pictures or videos of thunderstorms

Activity Ideas:

Severe weather:

- First, lead a class discussion on the word "weather", what it means, some examples, what words we use to talk about it.
- Next, add the word "severe" and take some time to talk about "severe weather". Ask students to give examples of severe weather they know about and/or have experienced. (Examples might be: earthquake, hurricane, storm, tornado, volcano, flood, drought)
- Have students talk in small groups or write about what kinds of severe weather happen in their countries, and what they do to protect themselves. *What do you do when weather is bad?*

Thunderstorms:

- Introduce students to the topic of thunderstorms by finding some pictures or a Youtube video of a severe thunderstorm.
- Do the *Thunderstorms* reading. Here are some steps to go through to help students get the most out of this reading:
 - Before giving out the reading, you read it aloud and have students listen. Afterwards they talk to a partner about what they heard/understood.
 - Give out the reading and give students some time to read it silently. Tell them to circle words they don't know.
 - Read the story aloud again and have them follow along.
 - Allow some time for students to ask questions about words and ideas.
 - Talk through the reading together, line by line. This time you ask them some questions (as a check to see if they've understood). For example, you might ask "What four things does a thunderstorm have?" "What is electricity?" "When are thunderstorms common?"
 - Read the story aloud again, line by line. Have students repeat each line after you.
 - Have students read the story aloud with a partner, alternating line by line.
- Do the *reading comprehension questions* that follow the reading.

Protecting yourself in a thunderstorm:

- Ask students if they know what they should do in a thunderstorm.
- Give out the *vocabulary activity*, don't give out the reading yet! Take some time for students to talk to a partner about the words, and then talk about them together as a class.
- Now give out the *Prepare for a Thunderstorm* Reading.
- Take plenty of time to discuss this information and answer student questions.

Thunderstorms Reading



A thunderstorm has:

- dark sky
- a lot of rain
- thunder
- lightning

What is lightning?

Lightning is strong electricity that goes from cloud to cloud or from a cloud down to the ground.

What is thunder?

Thunder is the noise that lightning makes. If you hear very loud thunder, lightning is close.

When do thunderstorms usually happen?

In Minnesota, thunderstorms are common in May, June, July and August. But they can happen in any month.

In Minnesota, thunderstorms are common in the afternoon and evening. But they can happen anytime of day.

Thunderstorms are dangerous!

Why?

A dark sky is not dangerous. A lot of rain is not dangerous. Thunder is not dangerous.

Thunderstorms are dangerous because lightning is dangerous. Lightning can hurt or kill people and damage buildings. Every year more people die from lightning than from tornadoes.

Comprehension Questions.

Write the correct answer.

1. What is a thunderstorm?
2. What is lightning?
3. What is thunder?
4. What kills more people every year – lightning or tornadoes?
5. Why are thunderstorms dangerous?

Questions to talk about and think about. You DON'T need to write answers.

1. Are there thunderstorms in your country?
2. How do you feel when there is a thunderstorm?
3. Do you remember a bad thunderstorm? What happened? Tell the story.

Vocabulary Activity

Are You Ready for a Thunderstorm?

Do you know these words? Talk to a partner. Ask your teacher to explain any words that you don't know.

thunderstorm

thunder

lightning

shelter

protect

burn

struck by lightning

immediately

Prepare for a Thunderstorm Reading

Prepare yourself and your family for a thunderstorm!

If you think a thunderstorm is coming...

- Look at the sky. Look for dark clouds, flashes of light, or strong wind. Listen for thunder.
- If you hear thunder, the storm is close. Go inside.
- Listen to the radio or television.

When a storm begins...

- Find shelter in a building or car. If you are in a car, keep the windows closed.
- Unplug machines like the microwave and computer.
- Turn off the air conditioner.
- Don't use the telephone if you don't have to.

If you are outside...

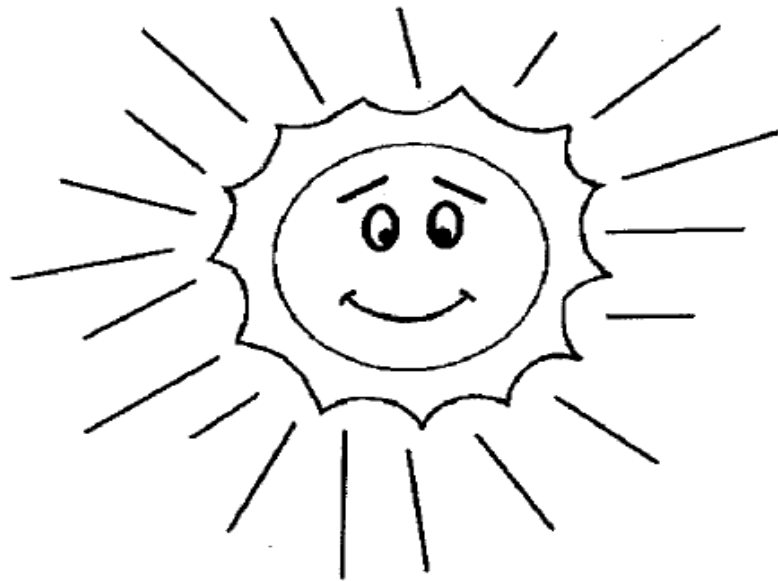
- If you are in an area with trees, take shelter under the shorter trees.
- If you are in a boat or swimming, go to land and find shelter immediately.
- To protect yourself outside, go to a low, open place. Stay away from trees, anything tall, or anything metal.
- Sit down. Place your hands on your knees with your head between them. Don't lie flat on the ground!

If someone is struck by lightning...

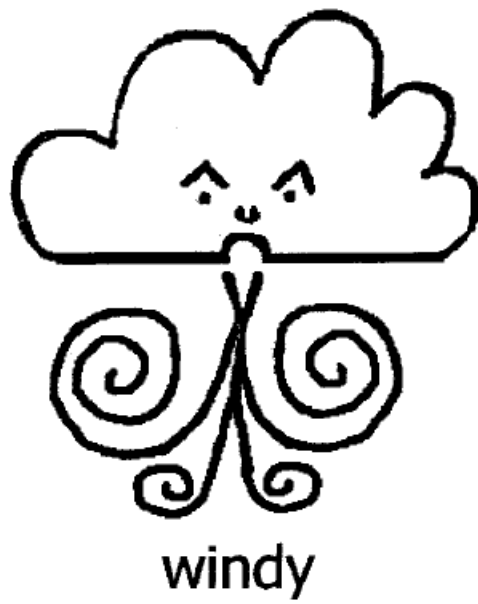
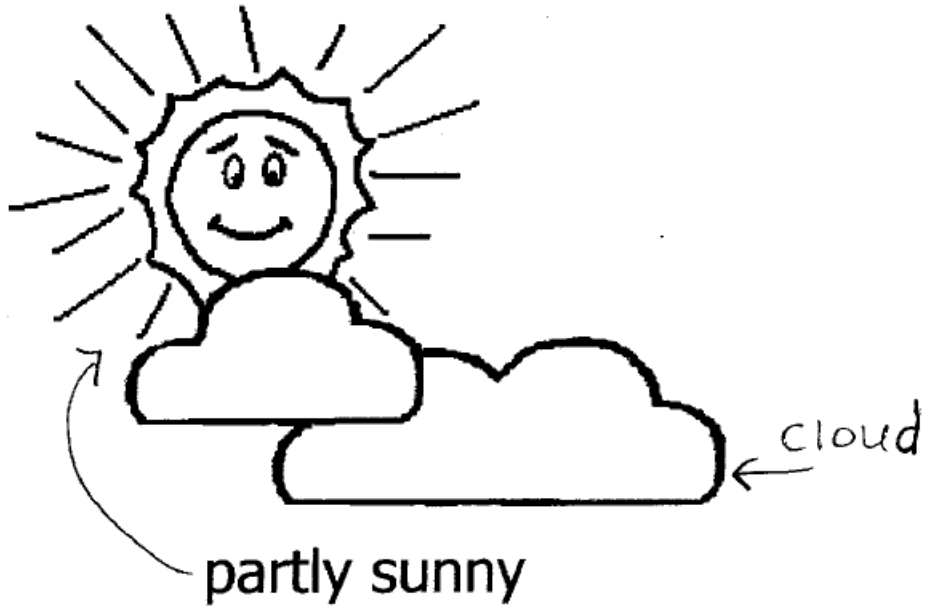
- It is OK to touch a person who has been struck by lightning.
- Call 9-1-1 for help.
- The person can have burns. Check their body for burns.
- Check to see if the person is breathing. If they are not breathing, blow air into their mouth every 5 seconds.
- Check to see if the person's heart is beating. If their heart is not beating, give CPR if you know how, or find someone else who knows.



A Few Words About Weather



sunny

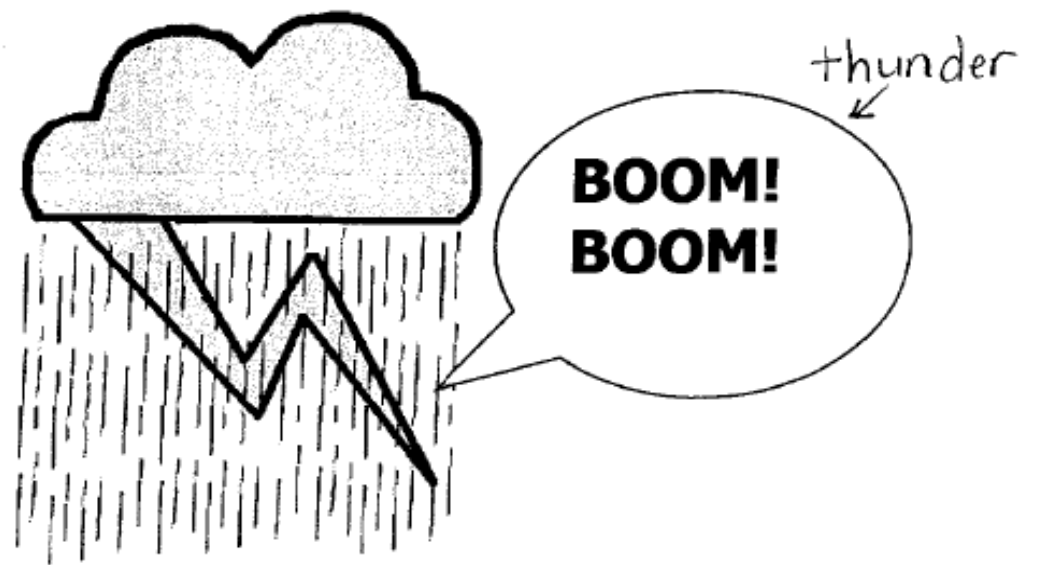




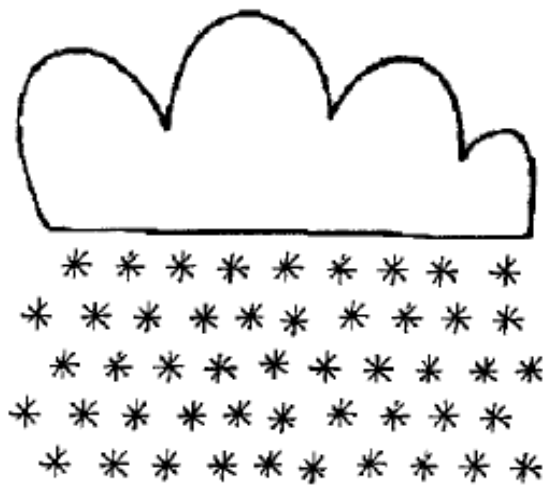
rainy



lightning



thunder storm



snowy



cold



cool



warm



hot

Summer severe weather: Tuesday, Week 1 of 1

Tornado basics

Lesson Objectives:	Materials
<ul style="list-style-type: none">• Students will review vocab about severe weather and thunderstorms• Students will do reading comprehension exercises to learn more about tornadoes• Students will read about and discuss strategies for protecting themselves in a tornado	Tornado Readings, Questions and vocabulary activity (find after this lesson) Tornado Picture Story (find after this lesson)

Activity Ideas:

Severe weather:

- Ask students to recall the term "severe weather" and remember the examples of it that they discussed in yesterday's class. (Check the lesson report for yesterday, but some examples might be: earthquake, hurricane, thunderstorm, tornado, volcano, flood, drought.)
- Have students review and tell you what they learned yesterday about thunderstorms

Tornadoes:

- Introduce students to the topic of tornadoes by finding some pictures or a Youtube video of a tornado.
- Do the *Tornadoes* Reading Here are some steps to go through to help students get the most out of this reading:
 - Before giving out the reading, you read it aloud and have students listen. Afterwards they talk to a partner about what they heard/understood.
 - Give out the reading and give students some time to read it silently. Tell them to circle words they don't know.
 - Read the story aloud again and have them follow along.
 - Allow some time for students to ask questions about words and ideas.
 - Talk through the reading together, line by line. This time you ask them some questions (as a check to see if they've understood). For example, you might ask "What is a tornado?" "How strong are the winds in a tornado?" "What does rotate mean?"
 - Read the story aloud again, line by line. Have students repeat each line after you.
 - Have students read the story aloud with a partner, alternating line by line.
- Do the *Comprehension Questions* that follow the reading.

Protecting yourself in a thunderstorm:

- Ask students if they know what they should do in a tornado.
- Give out the *vocabulary activity* don't give out the reading yet! Take some time for students to talk to a partner about the words, then talk about them together as a class.
- Now give out the *How to Protect Yourself in a Tornado*. Follow some of the steps above for reading through this information.
- Take plenty of time to discuss this information and answer student questions.

Tornadoes Reading



A tornado is a column of air that rotates very quickly. A tornado starts in a cloud and comes down to the earth. Tornadoes usually happen during thunderstorms. Tornadoes can be very dangerous!

Here is some information about tornadoes:

- **Strong tornadoes have wind speeds of about 200 miles per hour.**
- **A tornado can destroy large buildings, break trees and throw cars.**
- **One tornado can damage an area one mile wide and 50 miles long.**

The United States has the most tornadoes of any country in the world - more than 1,000 every year. This is because of three things:

1. cold air coming south from Canada
2. warm air coming north from the Gulf of Mexico
3. dry air coming from the Southwestern states

These three different types of air come together in the middle of the country. This makes thunderstorms and sometimes tornadoes.

Comprehension Questions

Write the correct answer.

1. What is a tornado?
2. When do tornadoes usually happen?
3. Why are tornadoes dangerous?
4. What can a tornado do to buildings or cars?
5. Why are there more tornadoes in the U.S. than in any other country?

Questions to talk about and think about. You DON'T need to write answers.

1. Are there tornadoes in your country? When? Where?
2. What other dangerous weather is there in your country?
3. Did you ever see a tornado? In person? On TV or in a movie? How did it make you feel?

Vocabulary Activity

Are You Ready for a Tornado?

Do you know these words? Talk to a partner. Ask your teacher to explain any words that you don't know.

tornado

thunderstorm

protect

shelter

immediately

building

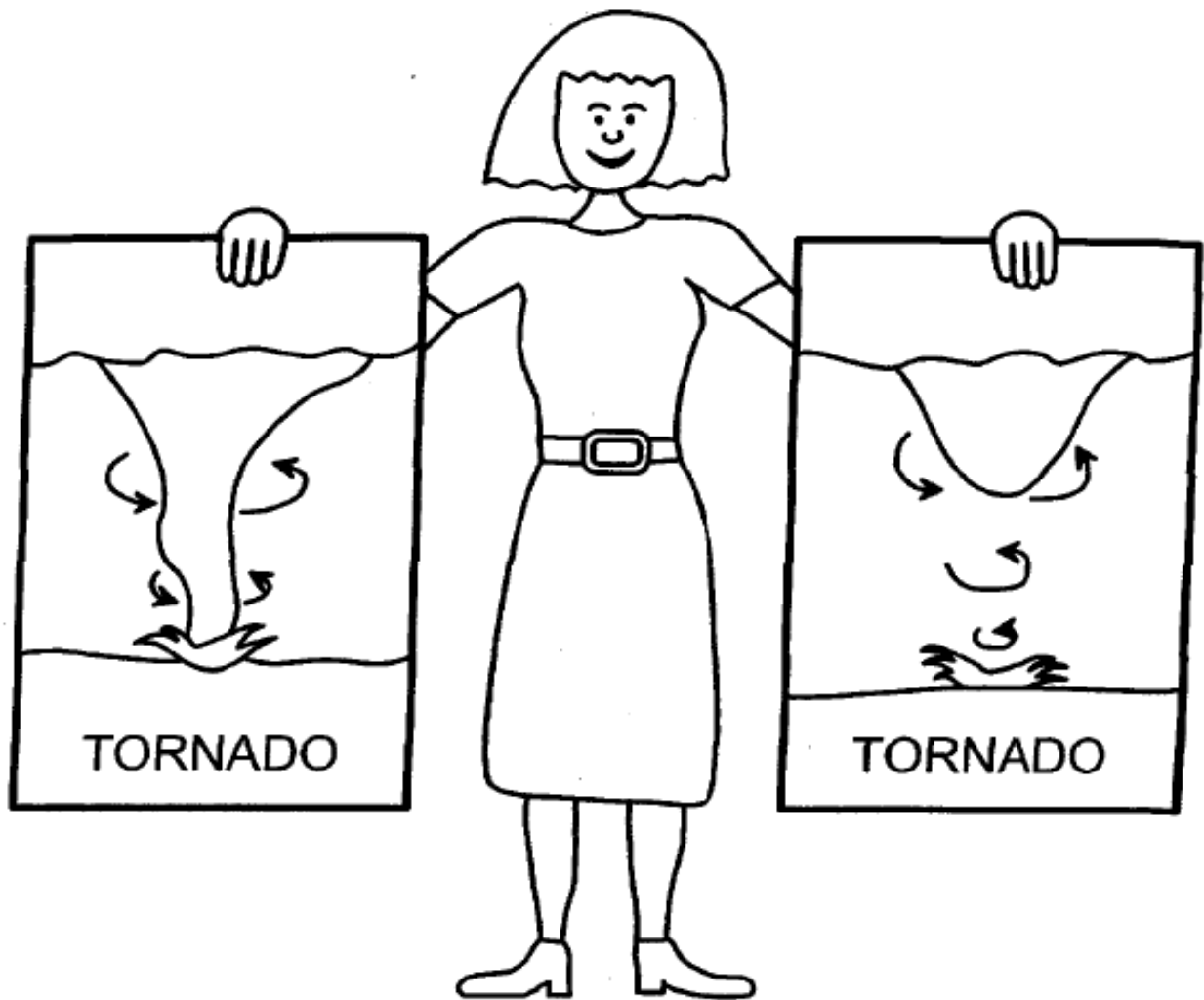
bridge

highway overpass

How to protect yourself in a tornado

- If there is a tornado and you are inside, go to the basement. If your home does not have a basement, go to the lowest floor and take shelter in a hallway, closet or small room. Stay away from windows.
- If you can, go under a heavy table and hold on to it. This will protect you if something falls.
- Stay away from windows. DO NOT open the windows.
- If you are in a car or in a mobile home, go immediately to the basement of a building. DO NOT stay in your car. Tornado winds can pick up large cars and mobile homes.
- If you are in a car and there is no building close to you, go out of your car and lie flat in a low spot. Put your arms over your head. DO NOT go under a bridge or highway overpass because the tornado can make them fall.

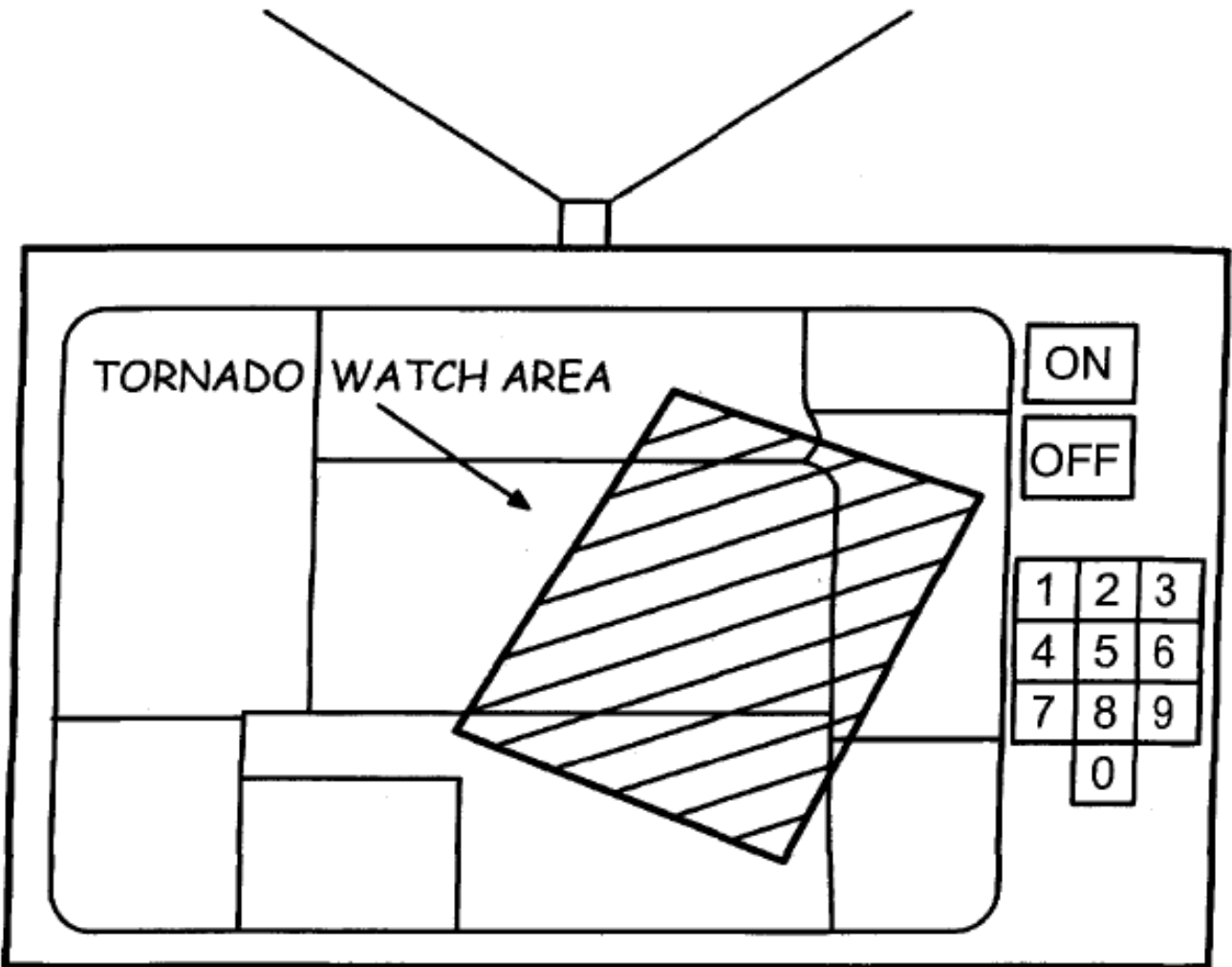
Tornado Picture Story



A tornado is a strong wind.

The wind spins.

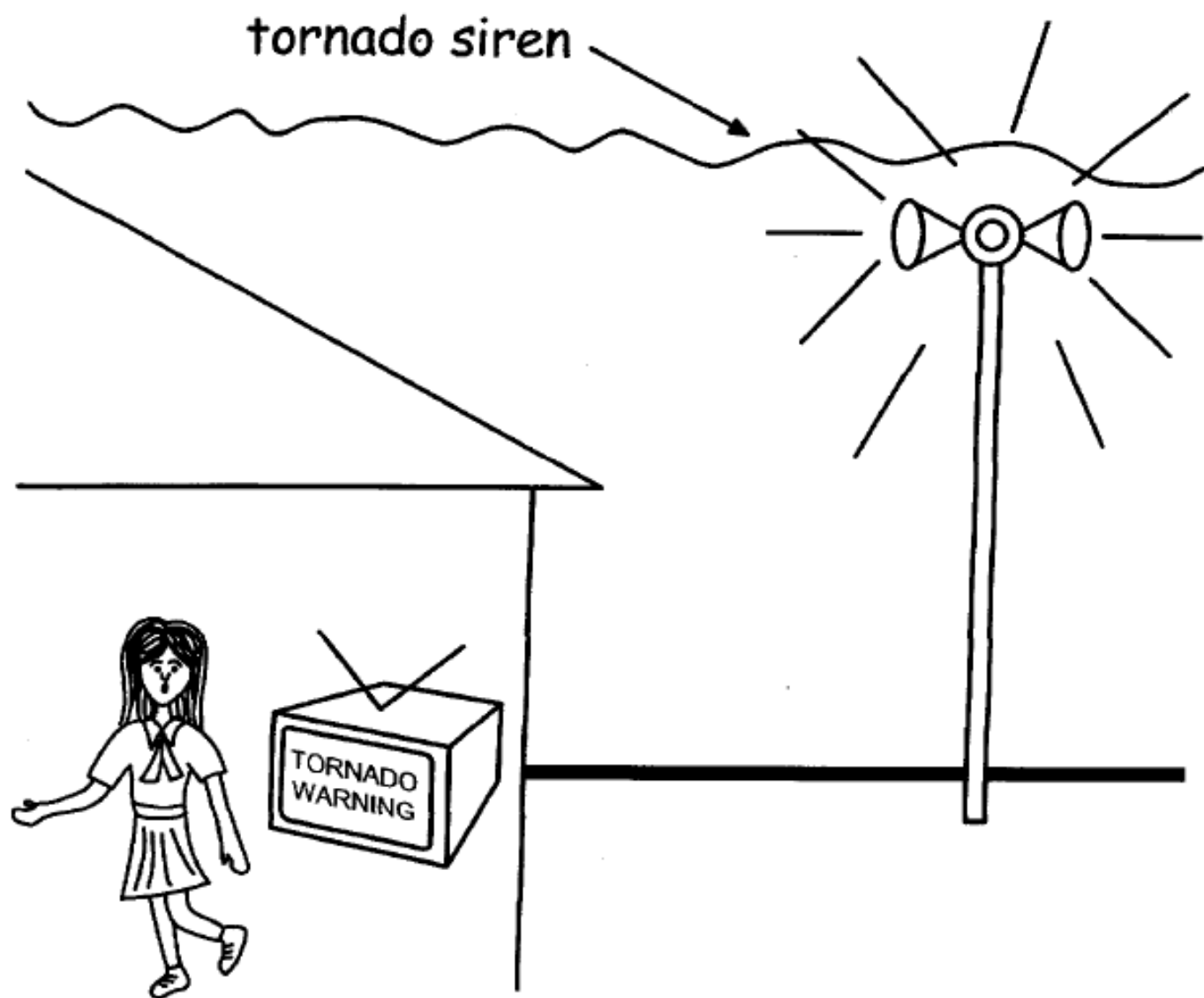
The tornado goes up and down from
the sky.



Turn on the t.v. or radio.

Listen for "tornado watch."

"Tornado watch" means a tornado may come.



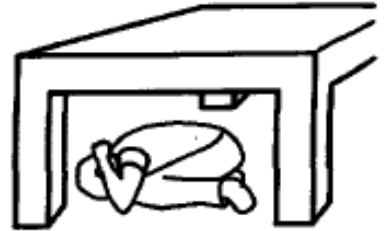
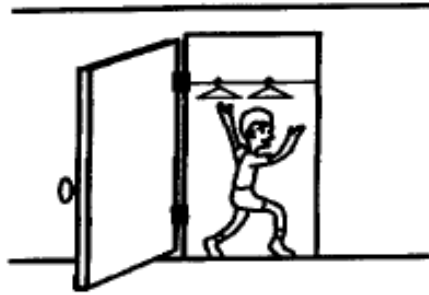
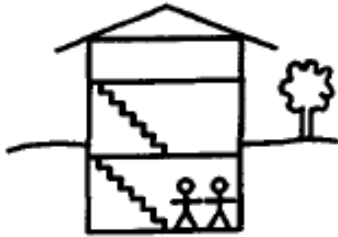
Turn on the t.v. or radio.

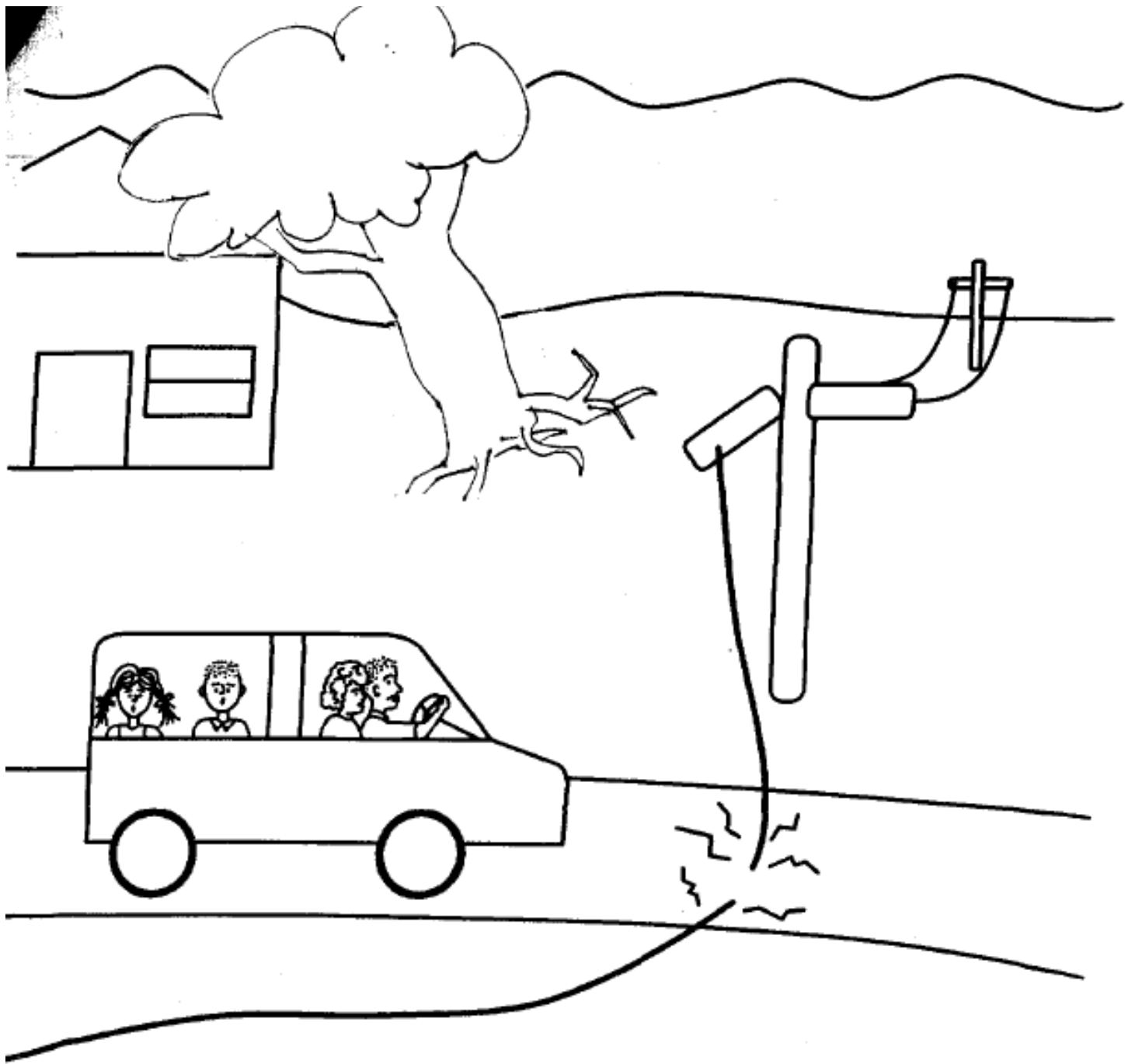
Listen for "tornado warning."

Tornado warning means there is a
tornado.

Listen for siren. Hide!

Take shelter in other places like:





Trees may fall down.
Wires may break.
Danger! Danger!

Summer severe weather: Wednesday, Week 1 of 1

Being prepared for severe weather

Lesson Objectives:	Materials
<ul style="list-style-type: none">• Students will review tornado and thunderstorm vocab• Students will review how to protect themselves in thunderstorms and tornadoes• Students will complete a reading comprehension exercise about signs a tornado is possible	Readings (find after this lesson) Pictures of severe weather

Activity Ideas:

Tornado and thunderstorm vocab:

- Have students tell you what they learned on Monday and Tuesday about thunderstorms and tornadoes.
- Review and practice the vocab students have studied so far these week (look in the online lesson reports) Some vocab review activities could be:
 - Play hangman (you lead a few times, then students do together in small groups).
 - Scramble some words and have students work together to unscramble them.
 - Spell some of the more difficult words out loud and have students write them down as you spell them (without referring to their notes).
 - Hand out slips with definitions or pictures and students have to match them with the words.

Protect yourself in thunderstorms and tornadoes:

- Look the *Prepare for a Thunderstorm* reading. This is a reading they did earlier in the week, with some key words missing.
- First, give it to students and see if they can fill in any of the words. Let them look at their handouts from earlier in the week.
- Next, you read through it out loud and they try to write down the words you say that go in the blanks (you can read from the full version of the reading, look back at Mondays' lesson.)
- Then, go through it together and write all the correct words on the board, so they can see and check spelling.
- Take plenty of time to talk through and review this information.
- Follow the same steps with *How to protect yourself in a tornado* reading (you can read from the full version of the reading, look back at Tuesdays' lesson.)

Signs of a tornado:

- Do the reading *Watch out for tornadoes!* Follow these steps to help students get the most out of the reading:
 - If you can, bring in pictures or Youtube clips of the items listed in this reading.
 - Read it aloud and show the pictures as you read.
 - Give students some time to read it again silently.
 - Allow some time for students to ask questions about words and ideas.
 - Talk through the reading together, line by line. This time you ask them some questions (as a check to see if they've understood). For example, you might ask "What color sky means a tornado is possible?" "What does rotating mean?" "What is hail?"
 - Read the story aloud again, line by line. Have students repeat each line after you.
 - Have students read the story aloud with a partner, alternating line by line.

Prepare for a Thunderstorm Reading

Prepare yourself and your family for a thunderstorm!

If you think a _____ is coming...

- Look at the sky. Look for dark _____, flashes of _____, or strong _____.
Listen for _____.
- If you hear thunder, the storm is close. Go inside.
- Listen to the _____ or television.

When a storm begins...

- Find _____ in a building or car. If you are in a car, keep the windows closed.
- Unplug machines like the microwave and computer.
- Turn off the air conditioner.
- Don't use the _____ if you don't have to.

If you are outside...

- If you are in an area with trees, take _____ under the shorter trees.
- If you are in a boat or swimming, go to land and find shelter _____.
- To protect yourself outside, go to a low, open place. Stay away from trees, anything tall, or anything metal.
- Sit down. Place your hands on your knees with your head between them. Don't lie _____ on the ground!

If someone is struck by _____ ...

- It is OK to touch a person who has been _____ by lightning.
- Call 9-1-1 for help.
- The person can have _____ . Check their body for burns.
- Check to see if the person is _____ . If they are not breathing, blow air into their mouth every 5 seconds.
- Check to see if the person's heart is beating. If their heart is not beating, give CPR if you know how, or find someone else who knows.

How to protect yourself in a tornado

- If there is a tornado and you are inside, go to the _____. If your home does not have a basement, go to the lowest floor and take _____ in a hallway, closet or small room. Stay away from windows.
- If you can, go under a heavy table and hold on to it. This will _____ you if something falls.
- Stay away from windows. DO NOT open the _____.
- If you are in a car or in a mobile home, go _____ to the basement of a _____. DO NOT stay in your car. Tornado winds can pick up large cars and mobile homes.
- If you are in a car and there is no _____ close to you, go out of your car and lie flat in a low spot. Put your arms over your head. DO NOT go under a _____ or highway overpass because the tornado can make them fall.

Watch out for tornadoes!

If you see one or more of these things, a tornado may be coming. Take shelter fast.

- **Dark sky with a green color**

If you see green clouds - a tornado is possible.

- **Wall cloud**

A wall cloud is a large, low, dark cloud during a thunderstorm. If the wall cloud is rotating, this is very dangerous.

- **Large hail**

Tornadoes come from strong thunderstorms. Strong thunderstorms sometimes have large hail.

- **Funnel cloud**

A funnel cloud is a part of a cloud that comes down from the rest of the cloud and is rotating. (A funnel cloud starts in the sky; when it touches the ground it is a tornado.)

- **Loud noise**

The strong winds of a tornado make a noise like a train.

Summer severe weather: Thursday, Week 1 of 1

Watches, warnings and forecasts

Lesson Objectives:	Materials
<ul style="list-style-type: none">• Students will review vocab and information learned in this unit• Students will learn about the difference between thunderstorm and tornado watches and warnings• Students will be exposed to forecasts, specifically forecasts for severe weather	Watches and Warnings Reading (find after this lesson) Youtube

Activity Ideas:

Tornado and thunderstorm vocab:

- Have students tell you what they learned on Monday about thunderstorms
- Have students review and tell you what they learned yesterday about tornadoes
- Review and practice the vocab students have studied so far this week (as found in the packet). Some vocab review activities could be:
 - Play hangman (you lead a few times, then students do together in small groups).
 - Scramble some words and have students work together to unscramble them.
 - Spell some of the more difficult words out loud and have students write them down as you spell them (without referring to their notes).
 - Hand out slips with definitions or pictures and ss have to match them to the words.

Watches and warnings:

- Ask students if they have ever heard the term "severe thunderstorm watch" and what they think it means. See if they have any idea of the difference between a "watch" and a "warning".
- Before doing the reading, make sure you have reviewed the vocab words: severe, thunderstorm, tornado, and shelter. Also introduce the word **SIREN**.
- Read *watches and warnings*. Follow these steps to help students get the most out of the reading:
 - Read it aloud slowly and let students follow along.
 - Give students some time to read it again silently.
 - Allow some time for students to ask questions about words and ideas.
 - Talk through the reading together, line by line. This time you ask them some questions (as a check to see if they've understood). For example, you might ask "What does a severe thunderstorm warning mean?" "What should you do if you hear there is a tornado warning?"
 - Read the story aloud again, line by line. Have students repeat each line after you.
 - Have students read the story aloud with a partner, alternating line by line.

Forecasts:

- Bring in today's forecast from the newspaper or online. Show and discuss with students what a "forecast" is.
- Show some Youtube clips that show forecasts giving watches, warnings or with sirens. Here are some possibilities but you might find others.
 - <http://www.youtube.com/watch?v=X1kFiGmjhcs&feature=related>
 - <http://www.youtube.com/watch?v=5K5155nQL8&feature=related>
 - <http://www.youtube.com/watch?v=3AsU0p65c-0>
 - <http://www.youtube.com/watch?v=nuu2iNisoQc>

Review what to do in thunderstorms and tornadoes

- Discuss as a class the advice ss learned this week about what to do in t-storms and tornadoes.
- Have students put away all their handouts and notes. Then ask them to write down some advice for what to do in a thunderstorm. After a few minutes have them compare with a partner, then with a group. Finally, make a list on the board as a class.
- Do the same step above with what to do in a tornado.

Watches and Warnings

When you listen to the weather forecast on TV or the radio, you can hear these words:

Severe Thunderstorm Watch
Severe Thunderstorm Warning
Tornado Watch
Tornado Warning

Severe Thunderstorm Watch means that a strong thunderstorm can happen. If you are in the area of the watch, listen to the TV or radio and watch the sky.

Severe Thunderstorm Warning means that a strong thunderstorm is happening now or coming soon. If you are in the area of the warning, you should take shelter.

Tornado Watch means that a tornado is possible. If you are in the area of the watch, listen to the TV or radio, watch the sky and listen for the sirens.

Tornado Warning means that a weather person saw a tornado. If you are in the area of the warning, you should take shelter.

Remember: Because tornadoes can start very quickly, it is not always possible to give a tornado warning before a tornado happens. If there is a tornado watch, be prepared to take shelter.

Sirens

Many cities have sirens to warn people about tornadoes. If you hear the siren, go to shelter immediately.

NOTE: Many cities test their sirens sometimes. This test is usually at 1:00 on the first Wednesday of the month. If you hear a siren at 1:00 on Wednesday and the weather is normal, don't worry. It's just a test.