

GROW YOUR PALS PROGRAM GUIDE



THE NATIONAL FFA MENTORING PROGRAM

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LESSON 34

Understanding Weather and Severe Storms

Unit:
ENVIRONMENTAL SCIENCE

PRECEPTS

- K. Emotional growth
 - K1. Cope with life's trials

NATIONAL STANDARDS

- NS.K-4.1 Science as Inquiry



Lesson Type:
Small Group

STUDENT LEARNING OBJECTIVES

As a result of this lesson, the student will ...

1. Develop awareness of severe storms.





TIME

Instruction time for this lesson: **25 minutes.**



RESOURCES

None



TOOLS, EQUIPMENT AND SUPPLIES

- ✓ 2-liter plastic bottles with caps (2 needed)
- ✓ $\frac{1}{4}$ -diameter pipe, cut 1 inch long
- ✓ food coloring
- ✓ Eyedropper
- ✓ hole punch or knife
- ✓ duct tape

KEY TERMS



The following term is presented in this lesson and appears in ***bold italics***:
storms

INTEREST APPROACH

*Many of the students have probably seen a story on TV about a tornado devastating a town or a flood destroying homes and crops, and they might have even lived through one of these severe weather events. Tell a story either from personal experience or the example given to set the stage for learning about severe weather, specifically ***tornadoes***.*



Close your eyes. Picture a small town with fields on the outside as far as you can see. Kids are playing outside, families are barbequing in backyards and everyone is simply enjoying the day. Open your eyes.

Probably seems like a normal weekend day in a lot of different places. Now let's change the scenery.

Close your eyes one more time. This time, the town you saw no longer exists. Buildings have been destroyed, fields do not have crops but instead, debris and trash everywhere and no one is playing outside. Open your eyes.

What do you think happened?

Have any of you seen a town like this?

What would you have done if you had been playing outside and suddenly a storm came that could destroy your town?

What a sad thing to think about, but it does happen every year in places all over the United States. **Storms** come and go and lives are changed forever because of the damage they cause.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

OBJECTIVE 1. | Develop an awareness of severe *storms*.



Knowing how **storms** can affect a house, what do you think they could do to our food? Each year millions of pounds of food are lost because of the damage from weather. Picture several grocery stores full of food and everything in them is destroyed. Fields and crops are flooded or torn down from the wind. Each time a severe storm blows through an area, a source of food is lost.

What kind of **storms** do you think can do damage? *Lead the students through a discussion about the different types of storms and the damage they can cause.*

I. **Storms**

- A. A destructive or unpleasant weather condition.
- B. Could have strong wind, heavy rain, snow, sleet, hail and/or lightening.

II. Types of **storms**.

- A. Thunderstorms, cyclones, tornadoes, hurricanes and typhoons
- B. Must have the right combination of elements in the atmosphere before a storm will occur, regardless of type.

*At this point, the students should have a fairly good understanding of **storms**. They should understand the damage they cause to not only homes but our food supply as well. It is important to discuss with them how to cope when something that causes destruction and damage occurs.*



Even when **storms** hit and we go through something really scary, it is important to remember to pull together and help those who are in need. Sometimes keeping one's self busy and helping others can help us better deal with what has happened. There are a lot of ways to handle stress, sadness or fear s or maybe even emotions you can't describe. It always helps to talk about what you are feeling and ask questions. The more you learn about something, sometimes the less scary it becomes.

As frightening as **storms** can be to think about, sometimes knowing a bit more about them makes them not so worrisome after all. We are going to make our own little tornados today using plastic bottles.

With your PALS, construct an experiment to simulate a tornado. Fill one of the two-liter bottles three-fourths full with water. Have your PALS add five drops of food coloring. Make holes in both bottle caps, big enough for the pipe to fit in. Secure the caps on both bottles. Insert the pipe about halfway into the cap of the water-filled bottle. Set the empty bottle upside down on top of it. Position it so the pipe sticks through both caps, with about half of the pipe in each bottle. Secure the bottles' necks together with duct tape.



Flip the taped-together bottles upside down. As the water moves from the top bottle into the bottom bottle, it will flow in a fast, circular motion. This looks the same as a tornado.



REVIEW / SUMMARY

*It is important to remind the students that even though the bottle tornado is not dangerous, real ones are. Review safety procedures for the **storms** your area faces. Share your own experiences and ways to stay safe. To review, ask students to draw three items to have on hand in case of an emergency.*



Let's quickly review some safety steps for natural disasters that could hit our community.

Good deal! Now let's take two minutes to draw three items that we should have on hand in case of an emergency. Then we can take our drawing home and see if our homes contain those three items, so that we can be prepared for a natural disaster.