

Twirling Tornadoes: A Weather Adventure

Lesson Overview

Target Age: 4 Years Old

Duration: 30 Minutes

Learning Objectives: By the end of this lesson, the learner will be able to:

- Explain that a tornado is spinning air made by warm and cold air meeting.
- Identify the difference between a "Watch" (get ready) and a "Warning" (take cover).
- Demonstrate the "Turtle Tuck" safety position in a designated safe spot.

Materials Needed

- A clear glass jar or plastic bottle with a lid.
- Water.
- Clear dish soap.
- Glitter (optional, to represent "debris").
- One red scarf/cloth (Warm Air) and one blue scarf/cloth (Cold Air).
- A flashlight.
- A "Safe Spot" (a sturdy table to crawl under or a small rug in a hallway).

1. Introduction: The Wiggle Wind (5 Minutes)

The Hook: Ask the student, "Can you make a sound like the wind? Whooooosh!" Have them use their arms to make small circles, then big circles. Tell them, "Today, we are going to learn about the fastest, spinniest wind of all—the tornado!"

The Objective: "We are going to learn how they start, how to tell when one is coming, and how to keep our bodies safe like a turtle in a shell."

2. Body: How Tornadoes Form (10 Minutes)

The "I Do": Explain that a tornado happens when two kinds of air meet. Hold up the **Red Scarf** and say, "This is warm, sunny air." Hold up the **Blue Scarf** and say, "This is cool, rainy air."

The "We Do":

- Hand the student the red scarf and you hold the blue one.
- Run toward each other and gently "crash" the scarves together.
- Say: "When they bump into each other, they start to dance and spin! They go round and round and round!"
- Spin around in circles together until you both "fall down" (sit down).

Experiment (The Visual):

- Fill the jar 3/4 full with water. Add a drop of dish soap and a pinch of glitter.
- Tighten the lid.
- Swirl the jar in a circular motion and stop. Watch the "tornado" form in the center.
- **Success Criteria:** The student can point to the "funnel" and say "Spinning air!"

3. Body: Watch vs. Warning (10 Minutes)

The "I Do": Explain that the weather people on TV use special words to keep us safe.

- **Tornado Watch:** "This means we have all the 'ingredients' for a tornado. It's like having flour, cheese, and sauce on the counter. We *might* make a pizza, but we haven't yet. We just need to keep our ears open."
- **Tornado Warning:** "This means a tornado is actually here! The pizza is cooked and on the table! We need to go to our safe spot right now."

The "You Do" (The Safety Drill):

- Teach the "**Turtle Tuck**": Kneel down, tuck your head between your knees, and cover your neck with your hands.
- **Activity:** Play a game. When you shout "WATCH!", the student stands by the window (looking for clouds) and puts on their "thinking cap." When you shout "WARNING!", the student must quickly crawl to the "Safe Spot" and do the Turtle Tuck.
- Practice this 3 times until the student can reach the safe spot in under 10 seconds.

4. Conclusion: Recap & Safety Kit (5 Minutes)

Summary: Ask the student three questions:

1. "Does a tornado move straight or does it spin?" (Answer: Spin)
2. "Which word means go to the safe spot: Watch or Warning?" (Answer: Warning)
3. "Show me your Turtle Tuck!" (Student demonstrates).

The Takeaway: Give the student the flashlight. Explain that if the power goes out, they are the "Light Helper." This gives the child a sense of agency and reduces fear.

Adaptations & Extensions

- **For Struggling Learners:** Focus purely on the "Turtle Tuck" drill and the visual jar experiment. Use the phrase "Spinning is a warning."
- **For Advanced Learners:** Discuss the "Fujita Scale" (the numbers 0-5) to show how some tornadoes are small and some are very big. Ask them to draw a picture of a "Safe Room" and what they would put in it (snacks, water, a favorite teddy bear).
- **Digital Option:** Show a 30-second clip of a weather reporter talking about a tornado (sound off first to avoid scaring the child) to identify the "Watch" banner on the screen.

Assessment

- **Formative:** Observation during the scarf "crash" to see if they understand the concept of air meeting.
- **Summative:** The final "Warning" drill. Success is defined as the student moving to the safe spot without being told where to go and correctly performing the Turtle Tuck.