

World Tsunami Awareness Day Lesson Plan

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Lesson Title: The Power of the Wave: Understanding Tsunami Safety

Target Audience: Grades 3–7 (Adapt complexity as needed)

Time: 45–60 minutes

Learning Objectives

Students will be able to:

- **Define** what a tsunami is and how it is formed.
 - **Identify** natural warning signs of an approaching tsunami.
 - **Explain** the proper safety steps to take during a tsunami warning.
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Materials

- Whiteboard/Projector
 - Markers/Pens
 - Handout with key vocabulary (optional)
 - **"Tsunami in a Tank"** demonstration materials (clear plastic container, water, small flat object/board)
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1. Engage: What is a Tsunami? (10 minutes)

1. **Start with the Name:** Ask students what they know about the word "tsunami."
 - Explain that "tsunami" is a Japanese word: **"tsu"** means harbor, and **"nami"** means wave.
2. **Formation Analogy:** Use the **"Tsunami in a Tank"** demonstration .
 - Fill a clear container with water. Tell the students the water represents the ocean.
 - Ask a student to quickly push a flat board (representing an **underwater**

earthquake or landslide) just under the surface of the water on one end.

- *Observation:* A wave will travel across the tank, demonstrating how a disturbance on the ocean floor displaces a massive amount of water, creating a wave that spans the entire depth of the ocean.
 - *Key Point:* Stress that a tsunami is **not** a typical surface wave (like those caused by wind) but a series of extremely long waves caused by a sudden shift on the seabed.
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2. Explore: Natural Warning Signs (15 minutes)

1. **Discuss Warnings:** Ask the students: *How would you know if a tsunami was coming if you didn't have a TV or phone?*

2. Introduce the Three Key Natural Signs:

- **Strong, Long Earthquake Shaking:** A tsunami is often generated by an earthquake. If you are near the coast and feel shaking for **20 seconds or more**, move inland immediately.
 - **A Loud Roar:** As a tsunami approaches the shore, the turbulent air and water can create a sound like a **freight train or jet plane**.
 - **The Water Pulls Back:** This is the most famous sign. The ocean may dramatically and rapidly retreat, exposing the seafloor, rocks, and fish. Explain this is the **trough** (lowest point) of the wave arriving before the crest (highest point). **This is NOT a time to explore the beach; it's a critical warning to run!**
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3. Explain: Tsunami Safety Rules (15 minutes)

1. **Safety Rule Discussion:** Create a class list of **Tsunami Safety Rules**.

- *Rule 1: Move Inland or Uphill.* When you feel a long earthquake or see the water retreat, you must immediately go to **high ground**—as far inland and as high up as possible. **Do not wait for an official warning.**
- *Rule 2: Climb High.* If you cannot get inland, the safest place is on the **upper floors of a tall, strong concrete building**.
- *Rule 3: Hear the Alert.* If you hear an official warning siren or see an alert on TV/phone, **follow evacuation orders** immediately.
- *Rule 4: Stay Put.* Tsunami are a **series of waves**. Stress that the first wave is

often not the largest, and you must **stay away from the coast** until officials announce the danger has passed.

4. Extend: "Tsunami Evacuation Map" Activity (5-10 minutes)

1. **Practical Application:** Draw a simple map on the board showing a coastline, a beach, a school, and a nearby tall hill.
2. **Scenario:** Ask students to draw the **safest evacuation route** from the school to the high ground.
3. **Review:** Discuss their routes and reinforce the importance of knowing their local area's tsunami evacuation zones (if applicable).

