

## Tsunami activity 14: **Tsunami quiz**

**Description:** 20 multiple choice or true/false questions on tsunamis. The questions are also available on-line on the tsunami page of the Atlas of Canada.

**Duration:** 45 minutes

### **Teacher instructions and notes:**

1. Have the students complete the accompanying quiz. If a student chooses 'false' on a true/false question, they must add a brief statement explaining why the statement is false.

### **Answer Key:**

1. b) False - A tsunami can be triggered by a landslide, earthquake, submarine landslide, meteorite impact, man-made explosion or even a structure failure such as a dam.
2. a) East Coast
3. b) Harbour Wave
4. b) False - Sometimes a tsunami can be triggered by a man-made explosion or a structure failure such as a dam collapse.
5. c) Landslide
6. a) True
7. b) False - A tsunami is not related to tides. Tides are caused by the gravitational pull from the moon.
8. b) False - The earthquake has to be strong enough to create a vertical movement in the water column.
9. a) True
10. a) True
11. d) Coasts
12. b) False - It is impossible to prevent an earthquake, meteorite impact or submarine landslide from causing a tsunami to form. However, we can mitigate or prevent the damage caused by tsunamis by relocating cities and building structures away from the coast.
13. a) True
14. b) False - The wave is not easily detected at sea. At the coast, a rapid and unexpected recession of water levels below the expected low tide can occur minutes before the shoreline is struck by a tsunami, and can be the only warning sign along coastlines that are located too far from the earthquake epicentre to have felt the shaking.
15. d) All of the Above
16. c) 30
17. b) False - The waves generated close to the epicentre are relatively small as the motion is absorbed through the entire depth of the water column and are not easily detected. In deep water the wavelength is great and amplitude is subdued.
18. a) True
19. b) Tidal Bores
20. a) True

## Tsunami quiz

Complete each question. If you answer false on a true or false question you must explain why the statement is false.

1. A tsunami is always triggered by an earthquake.

- a. True
- b. False

2. Where did Canada's worst tsunami disaster occur?

- a. East Coast
- b. West Coast

3. The word tsunami is Japanese for:

- a. Giant tidal wave
- b. Harbour wave
- c. Small wave
- d. Ocean current

4. A tsunami is always triggered by a natural disturbance.

- a. True
- b. False

5. The 1929 Grand Banks of Newfoundland tsunami was generated by:

- a. An earthquake
- b. Volcano
- c. Landslide
- d. A meteor impact

6. Historically, the most common trigger of tsunamis in Canada has been landslides.

- a. True
- b. False

7. A tsunami is related to tides. That is why it is called a giant tidal wave.

- a. True
- b. False

8. An earthquake in the ocean will automatically trigger a tsunami.

- a. True
- b. False

9. We can find geological evidence of past tsunamis in Canada.

- a. True
- b. False

10. The worst Canadian tsunami disaster occurred off the coast of Newfoundland.

- a. True
- b. False

11. Which part of Canada can be most affected by a tsunami?

- a. Rivers
- b. Streams
- c. Lakes
- d. Coasts

12. A tsunami can be prevented.

- a. True
- b. False

13. It is possible to predict how far inland a tsunami wave will reach.

- a. True
- b. False

14. There are many signs that a tsunami will hit an area when it is approaching a coast.

- a. True
- b. False

15. Tsunamis are triggered by what?

- a. Earthquakes
- b. Volcanic eruptions
- c. Undersea landslides
- d. All of the above

16. Tsunami waves usually reach heights of up to \_\_\_\_\_ metres.

- a. 5
- b. 15
- c. 30
- d. 60

17. Ships far out at sea can detect tsunamis easily and radio ahead with warnings.

- a. True
- b. False

18. Tsunamis travel radially outward from its epicentre.

- a. True
- b. False

19. Quickly advancing front waves of incoming tides, found in shallow estuaries, are called:

- a. Tidal waves
- b. Tidal bores
- c. Sea surges
- d. Seiches

20. The sea tide draining away from shore is a sign of an approaching tsunami.

- a. True
- b. False