

North American Conquest

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. To overcome and take control of a place by armed force is to _____.
Ⓐ conquistador
Ⓑ conquest
Ⓒ conquer
Ⓓ conqueror
2. A treasury contains _____.
Ⓐ riches and glory
Ⓑ gold and riches
Ⓒ gold and conquest
Ⓓ glory and empire
3. What motives did Ferdinand and Isabella have for helping Columbus?

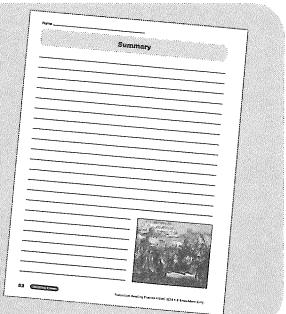
4. Do you think Cortes was wise to burn his ships? Explain why he may have decided to do this.

5. What part did gold play in the history of North America?

Write About the Topic

Use the Writing Form to write about what you read.

Summarize why Hernan Cortes was an important historical figure.



Tsunami

Level 1

Words to Know list, Reading Selection, and Reading Comprehension questions

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|---|--|
| <p>Name _____</p> <p>Powerful Wave</p> <p>Fill in the circle by the correct answer. <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/></p> <p>A. What is a wave?</p> <p>Waves are a disturbance moving through matter. Waves move through solid rock (such as the Earth's crust), air, and liquids (such as ocean water). Waves also move through space. Ocean waves are surface waves that travel across the ocean. Water moves up and down along the water's surface, the water. Most waves are caused by wind blowing across the water's surface.</p> <p>B. What is an earthquake?</p> <p>Earthquakes are not the most violent waves, however. The energy created at the bottom of the Earth's crust—earthquake, for short—is one of the most powerful pushes the waves. Earthquakes can cause more powerful waves than tsunamis. Buildings and coastlines can be damaged or destroyed when waves are too strong. Some waves can be gigantic. They travel across the ocean at the speed of light up the water by about 3 miles per second. Then they slow down and get bigger as they approach land.</p> <p>Scientists study tsunami in order to be able to predict them. They use tools that measure seismic waves to predict when a tsunami will happen. They will hear much stronger and earlier seismic waves on seismographs. These will tell much more about what sort of waves are happening. Scientists can then predict that a tsunami is about to strike under the Indian Ocean. It created a tsunami that caused destruction to 14 different countries.</p> <p>C. Tsunami Safety</p> <p>Tsunamis do not always look very dangerous. You may not even notice them. For your safety, know if where you live is in a tsunami zone. If it is, then you should have an escape plan. You will need to follow, or leave to, a tsunami TV station. A tsunami is an important thing to get to higher ground. You could be killed if you stay put. You could be told you have two hours to get to safety.</p> <p>"Tsunamis are like waves on the beach—just much, much taller," says Dr. John Tappin. "If you're ever caught in a tsunami, run inland as fast as you can. If you're swimming, swim inland. If you're in a boat, never go back to shore. You could drown."</p> <p>When you are swimming, wear a life vest. If you are swimming in the ocean, you should not swim alone. If you are swimming with others, make sure they are not swimming too far from the shore. This is to prevent drowning.</p> <p>Remember, the ocean can go toward the land. If you are swimming near the water's breaking beach, NEVER do that! Go to safety in the highest dry area away from the water.</p> | <p>Part 5.</p> <p>Wave to Know</p> <p>Powerful Wave</p> <p>disturbance energy dilatons tsunami earthquake gigantic seismic waves magnitude destruction dangerous zone instructions inland drownback</p> <p>National Reading Practice - Grade 3</p> |
|---|--|

Level 2 ■ ■

Words to Know list, Reading Selection, and Reading Comprehension questions

Tsunami Wave

Fill in the circle by the correct answer.

Tsunami Wave

Waves are created when energy disturbs the water in the ocean. Most ocean waves are caused when wind moves over the water's surface. This causes ripples that travel across the water like the wavy clothes lines that you have seen.

Tsunami waves are different from normal ocean waves, however. They are not created by wind energy, but by seismic energy. The shaking or energy of an earthquake pushes the ocean water up and down. Seismic waves can travel very far, in deep ocean areas, for thousands of miles. These giant waves move with a speed of 45+ miles per hour. As a tsunami gets closer to land, it slows down.

Forecasting

Forecasting a tsunami will be difficult and an important job. Scientists want to warn people to leave the area before a tsunami is approaching. In order to do this, they must know what causes a tsunami. They must also know about the seismic energy that moves through the Earth. Seismologists study seismic waves all over the world. They can predict where quakes happen. They allow scientists enough time to issue a warning. In 2004, a tsunami was predicted and caused destruction in 14 countries. The Indian Ocean Quake was the largest one ever recorded.

Tsunami Safety

Tsunamis do not hit every ocean, but to be safe, people should know what to do if there is an tsunami. When it happens, a tsunami can arrive in less than ten minutes. People who live near the ocean should know what to do. If you hear a loud noise, like a roar, or if you see a wave that is higher than a two-hour weather limit, get to higher ground. It is important to get to higher ground as soon as you can.

Some people at the beach observe the water going in and out. If there is an tsunami, a tsunami can arrive in less than ten minutes. People who live near the ocean should know what to do. If you hear a loud noise, like a roar, or if you see a wave that is higher than a two-hour weather limit, get to higher ground. It is important to get to higher ground as soon as you can.



Large waves are able to carry people, so try to get to higher ground.

Illustration by Traci Fingerman - © 2002 Scholastic Inc.

Words to Know

tsunami
energy
disturb
ripples
earthquake
forecasting
seismic waves
magnitude
destruction
instructions
inland
dropback

66 Tsunami **W**

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Tsunami **W**

Level 3 ■ ■

Words to Know list, Reading Selection, and Reading Comprehension questions

Tsunami

Fill in the circle by the correct answer.

5 and 5.

Tsunami

Scientists define a wave as a disturbance that moves through matter. Energy creates the disturbance in a wave. Although most waves we see are different, they all follow basic rules. The breaking of an ocean wave is a natural event. Most tsunami waves are man-made. Tsunami waves can be powerful enough to knock down buildings. Tsunami waves can also knock trees. In deep ocean water, tsunami waves are very long and lift up the water. They travel very fast. A wave can travel at speeds of up to 500 miles per hour. As the tsunami waves move toward shore, they grow taller.

Forecasting a Tsunami

Scientists try to forecast when a tsunami will reach land. To do this, they measure ocean waves. Scientists were able to predict where and when waves through the Earth during the 1960 Chilean earthquake. When something causes a large amount of energy to move, it is called an tsunami. If a tsunami is approaching, it is important to know what to do. It is important to stay calm. It would do more harm to be frightened than to be prepared.

Tsunami Safety

Tsunamis can happen very often, but if people are safety, they should know what to do. If there is a tsunami, it is better to go inland. People should listen to a radio or television for instructions. They may be much as two hours away from the ocean. Scientists want to warn people about a tsunami long before it reaches land. Government agencies have a system in place to alert people about a tsunami.

Sometimes, tsunamis can hit at the beach. People with pulling back extremely fast. The water can move very quickly. It can happen before a tsunami even arrives. People who are at the beach when this does not. DO NOT do this. Run in the opposite direction of the wave. Do not stay near the water. To safely

Words to Know

tsunami

seismology

disturbance

energy

earthquakes

forecast

approaching

magnitude

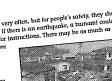
destruction

zone

instructions

inland

drawback



This area was hit by a tsunami after the 2004 Indian Ocean Earthquake.

66 **Tsunami** **Glossary** **Index**

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Tsunami #28

Assemble the Unit

Reproduce and distribute one copy for each student:

- Visual Literacy page: Tsunami: A Closer Look, page 61
 - Level 1, 2, or 3 Reading Selection and Reading Comprehension page and the corresponding Words to Know list
 - Graphic Organizer of your choosing, provided on pages 180–186
 - Writing Form: My Design, page 62

Introduce the Topic

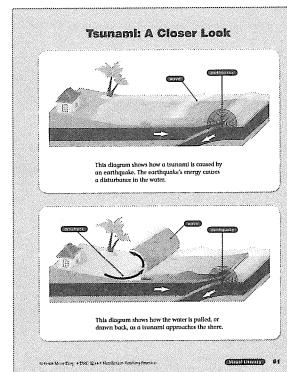
Read aloud and discuss the diagrams on page 61. Explain that diagram 1 shows what causes a tsunami. Diagram 2 shows what happens during a tsunami. Tell students that they will read to learn more.

Read and Respond

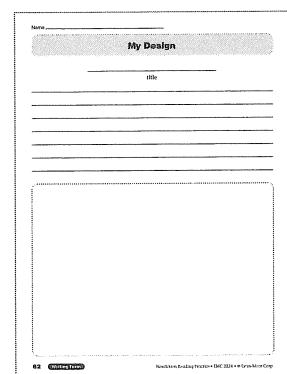
Form leveled groups and review the Words to Know lists with each group of students. Instruct each group to read their selection individually, in pairs, or as a group. Have students complete the Reading Comprehension page for their selection.

Write About the Topic

Read aloud the leveled writing prompt for each group. Tell students to use the Graphic Organizer to plan their writing. Direct students to use their Writing Form to respond to their prompt.

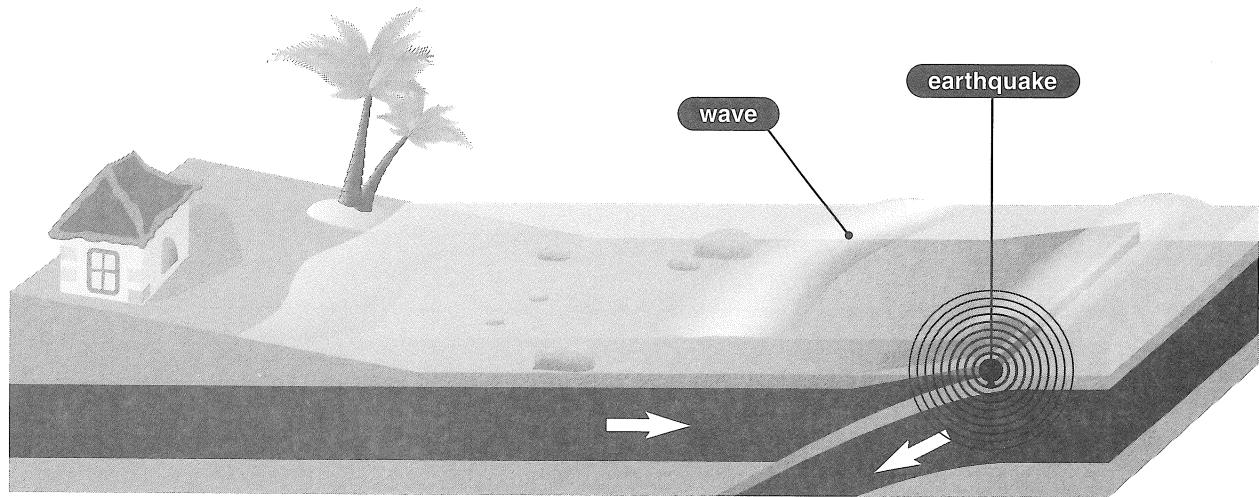


Visual Literacy

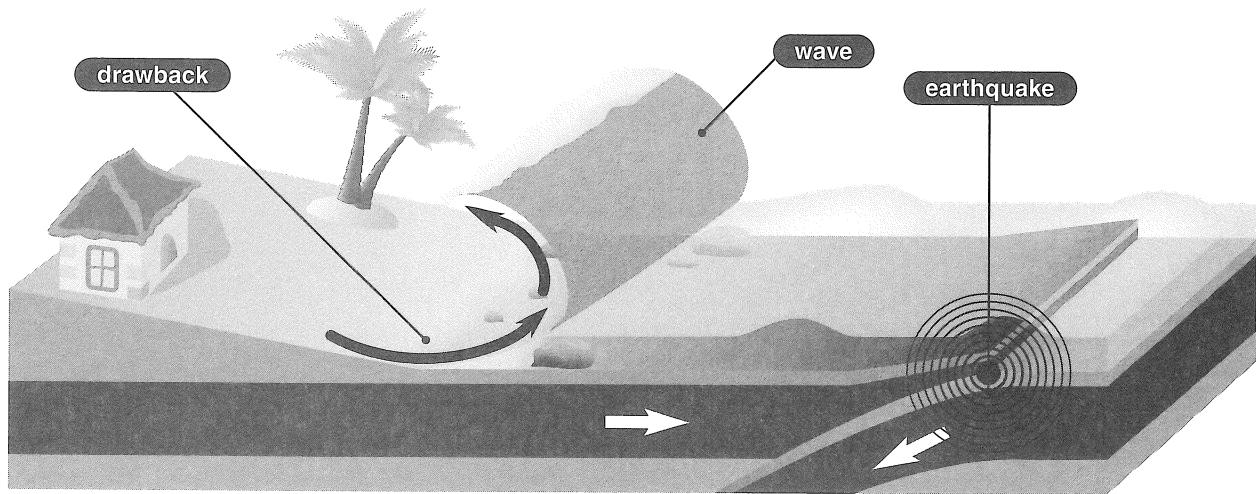


Writing Form

Tsunami: A Closer Look



This diagram shows how a tsunami is caused by an earthquake. The earthquake's energy causes a disturbance in the water.



This diagram shows how the water is pulled, or drawn back, as a tsunami approaches the shore.

Name _____

My Design

title



Words to Know

Powerful Wave

disturbance

energy

disturbs

tsunami

earthquake

gigantic

seismic waves

magnitude

destruction

dangerous

zone

instructions

inland

drawback

Words to Know

Tsunami Wave

tsunami

energy

disturbs

ripples

earthquake

forecasting

seismic waves

magnitude

destruction

instructions

inland

drawback

Words to Know

Tsunami

tsunami

define

disturbance

energy

earthquakes

forecast

approaching

magnitude

destruction

zone

instructions

inland

drawback

Tsunami ■

Tsunami ■ ■

Tsunami ■ ■ ■



Powerful Wave

What is a wave? A wave is a disturbance that moves through matter. Waves move through solids (such as the Earth), gases (such as air), and liquids (such as ocean water). Energy creates the disturbance that makes a wave. A wave carries energy from one place to another. Ocean waves are created when energy disturbs the water. Most water waves are caused by wind blowing across the water's surface.

A Different Kind of Wave

Tsunami waves are not like most water waves, however. The energy that creates a tsunami is a disturbance in the Earth—an earthquake. The shaking energy of an earthquake pushes the water. Tsunami waves can be more powerful than ordinary water waves, too. They can destroy buildings and cause loss of life. Tsunami waves in deep ocean waters can be gigantic. They can be miles long and lift up the water by about 3 feet (1 meter). These waves move with the speed of a jet plane until they approach land. Then they slow down and grow taller.

Scientists study tsunamis in order to be able to warn people. They use tools that measure seismic waves. Seismic waves are the shaking energy that moves through the Earth during an earthquake. Seismic waves tell scientists where and when earthquakes are happening under the ocean. They tell how much energy is in an earthquake. In 2004, an earthquake that measured a magnitude 9.0 struck under the Indian Ocean. It created a tsunami that caused destruction in 14 different countries.

Tsunami Safety

Tsunamis do not happen very often, but they can be very dangerous. For your safety, know if where you live or travel is in a tsunami zone. If there is an earthquake, a tsunami could follow, so listen to a radio or watch TV for instructions. The important thing is to get to higher ground and go as far inland as you can. You could be told you have two hours to get to safety, or only minutes.



Be safe when you are traveling. Look for street signs that tell if you are in a tsunami area.

Sometimes, people at the beach observe the water pulling back unusually far from the shore. This is called "drawback," and it can happen before a tsunami hits. People may be curious and go toward the water when they see the water drawing back. NEVER do this! Run to safety in the opposite direction, away from the water.

Powerful Wave

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. Two kinds of energy that cause waves are _____.
Ⓐ long and tall
Ⓑ solids and liquids
Ⓒ depth and speed
Ⓓ wind and earthquakes
2. If you see the water draw back, you should _____.
Ⓐ run inland
Ⓑ go down to the beach
Ⓒ wade into the water
Ⓓ stand and watch
3. Explain three ways in which tsunami waves are different from ordinary ocean waves.

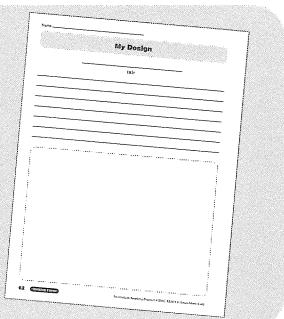
4. Can you explain what scientists can do to protect people from natural hazards such as tsunamis?

5. What is the main idea of paragraph 3?

Write About the Topic

Use the Writing Form to write about what you read.

Design a science fair experiment to demonstrate how an earthquake affects a body of water. Describe what will happen.



Tsunami Wave

Waves are created when energy disturbs the water in the ocean. Most ocean waves are caused by wind blowing across the water's surface. This causes ripples that grow into waves when the wind catches them.

Tsunami waves are different than most waves, however. They are not created by wind energy, but by earthquake energy. The shaking energy of an earthquake pushes the water. Tsunami waves can be more powerful than ordinary water waves, too. They can destroy buildings and take many lives. In deep ocean water, tsunami waves can be miles long. These giant waves move with the speed of a jet plane. As a tsunami gets nearer to land, it slows down and grows taller.

Forecasting a Tsunami

Forecasting when a tsunami will reach land is an important job. Scientists want to warn people to leave the area if a tsunami is approaching. In order to do this, they use tools that measure seismic waves. Seismic waves are the shaking energy that moves through the Earth during an earthquake. Seismic waves tell scientists where and when earthquakes happen. They allow scientists to measure the energy of the earthquake. In 2004, a magnitude 9.0 earthquake struck under the Indian Ocean. It created a tsunami that caused destruction in 14 countries.

Tsunami Safety

Tsunamis do not happen very often, but to be safe, people should know if they are in a tsunami area. If there is an earthquake, a tsunami could follow. Listen to a radio or watch TV for instructions. There may be as much as a two-hour warning or only minutes before a tsunami hits land. It is important to get to higher ground and to go as far inland as you can.

Sometimes, people at the beach observe the water pulling back unusually far. This is called "drawback," and it can happen before a tsunami hits land. Sometimes people go toward the water to have a look. DO NOT do this! Run in the opposite direction, away from the water, to safety.



Some tsunami waves are able to reach rooftops, so go to higher ground for safety.

Tsunami Wave

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. Seismic waves are _____.
Ⓐ a warning to go inland
Ⓑ the same thing as tsunami waves
Ⓒ energy from an earthquake
Ⓓ energy from the ocean

2. Water drawing back from shore _____.
Ⓐ creates ocean waves
Ⓑ forecasts an earthquake
Ⓒ is caused by wind
Ⓓ is a warning sign

3. Can you explain why normal ocean waves do not become tsunamis?

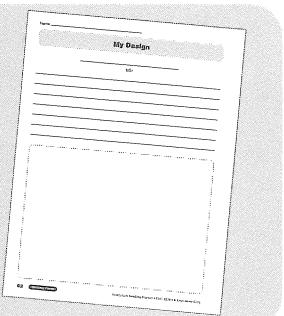
4. What was the author's purpose in writing this text?

5. List several actions people can take to stay safe from tsunamis.

Write About the Topic

Use the Writing Form to write about what you read.

Design a science display that shows how wind and earthquakes make different kinds of waves. Describe the parts of the display.



Tsunami

Scientists define a wave as a disturbance that moves through matter. Energy creates the disturbance that makes a wave. Although most ocean waves are caused by wind blowing across the water's surface, tsunami waves are different. Most tsunami waves are caused by earthquakes. The shaking energy of an earthquake pushes the ocean water. Tsunami waves can also be more powerful than ordinary water waves. They destroy buildings and take lives. In deep ocean water, tsunami waves can be miles long and lift up the water by about 3 feet (1 meter). These giant waves move at the speed of a jet plane. As the tsunami gets nearer to land, it slows down and grows taller.

Forecasting a Tsunami

Scientists try to forecast when a tsunami will reach land. To do this, they use tools that measure seismic waves. Seismic waves are the shaking energy that moves through the Earth during an earthquake. They tell scientists where and when earthquakes happen under the ocean. Scientists want to warn people to leave the area if a tsunami is approaching. In 2004, a tsunami was caused by a magnitude 9.0 earthquake under the Indian Ocean. It caused destruction and loss of life in 14 countries.

Tsunami Safety

Tsunamis do not happen very often, but for people's safety, they should know if they are in a tsunami zone. If there is an earthquake, a tsunami could follow, so listen to a radio or watch TV for instructions. There may be as much as a two-hour warning or only minutes before a tsunami hits land. Get to higher ground and go as far inland as you can.

Sometimes, people at the beach observe the water pulling back unusually far. This is called "drawback," and it can happen before a tsunami hits land. People go toward the water to have a look. DO NOT do this! Run in the opposite direction, away from the water, to safety.



This area was hit by a powerful tsunami after an earthquake.