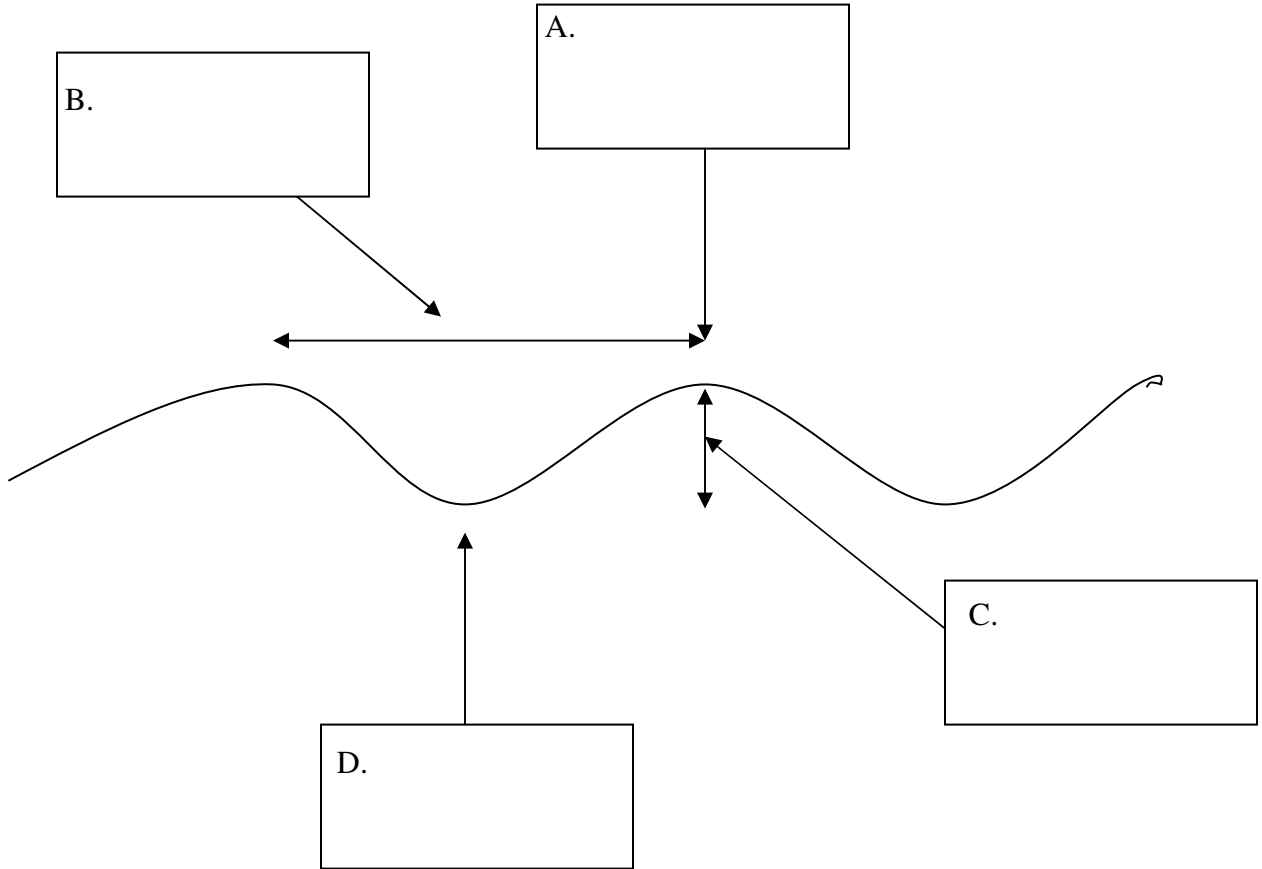


Earth Science Chapter 13: Wave Action

Fill in the diagram below. Then answer the questions.

Word Bank: crest trough wave height wavelength



1. What is a wavelength?

2. What is a wave height?

3. Describe the motion of a wave.

Earth Science Chapter 13: Tides

Circle the correct answer. Answers that cannot be read will be counted as incorrect.

1. What is the daily rise and fall of Earth's waters on its coastlines are called what?
 - a. twilight
 - b. tide
 - c. gravitational pull
 - d. rip current

2. What are tides caused by?
 - a. the movement of the continents
 - b. the time of the day
 - c. the interactions of the earth, moon and sun
 - d. ships traveling on the ocean

3. What do changes in the positions of the earth, moon and sun affect?
 - a. the heights of the tides during a month
 - b. the amount of sand that is found on the beach
 - c. the shape of the continents
 - d. the amount of seaweed that ends up on the beach

4. What is a tide that has a great difference between the heights of high and low tide during to a combined gravitational pull of the sun, moon and earth?
 - a. new moon
 - b. tide tables
 - c. crest
 - d. spring tide

5. In order to know the time and heights of tides, where can you look?
 - a. tide tables
 - b. water tables
 - c. potential energy
 - d. tsunamis

Earth Science Chapter 13: Ocean Water Chemistry

Answer the following questions in complete sentences. Answers that cannot be read will be counted as incorrect.

1. What is salinity? _____

2. What are the effects of salinity? (There are two things that you should mention)

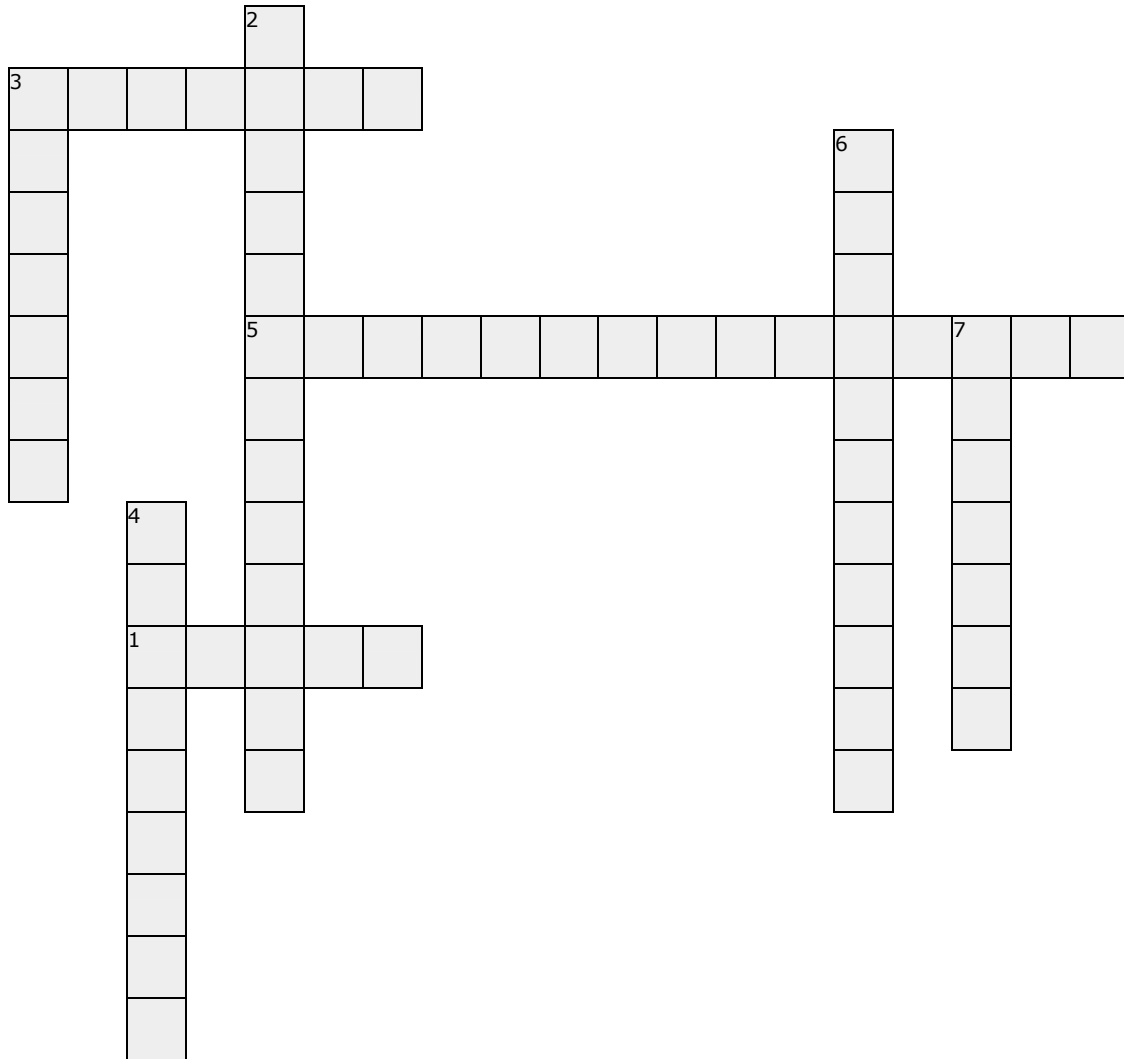
3. How can the temperature of the ocean water vary? _____

4. What are the three temperature zones of the ocean and what are their temperatures?

5. What does submersible mean? _____

Earth Science Chapter 13: Currents and Climates

Complete the following crossword puzzle. Answers that cannot be read will be counted as incorrect.



Across:

1. what drives surface currents
3. a large stream of moving water that flows from one place to another
5. the effect of Earth's rotation on the direction of winds and currents

Down:

2. caused by differences in the density of ocean water; carry cold water to the equator from the poles
4. the movement of cold water upward from the deep ocean
3. the pattern of temperature and precipitation typical of an area over a long period of time
6. largest and most powerful surface current in the North Atlantic Ocean
7. an abnormal climate event that occurs every two to seven years in the Pacific Ocean

Earth Science Chapter 13: Study Guide

Section 1

- Vocabulary

Wave

Wave height

Rip current

Wavelength

Tsunami

Groin

Frequency

Longshore drift

- Know how waves are created and what affects its size
- Know how energy and particles move in the wave and be able to show it on a diagram
- Know the structure of a wave including crest and trough
- Know what “breakers” are, what they are called in deep water, and how they are created
- Know what happens to wavelength and height as it reaches the shore
- Know what causes tsunamis and what they can do
- Know what longshore drifts and rip currents are and their effects
- Know how waves can shape a beach
- Know the differences between barrier beaches, sand dunes and groins as well as their purposes

Section 2

- Vocabulary

Tides

Spring tide

Neap tide

- Know what tides are and how they are caused
- Know what a tidal bulge is and how it is created
- Know what factors affect the height of a tide
- Know what factors affect a tide during a month
- Know the differences between neap tides and spring tides and how they were created
- Know what tide tables are and what uses they may have
- Know what potential energy is and how we can capture some of this energy for our use
- Know when it is practical to harness tidal power

Section 3

- Vocabulary

Salinity

Submersible

- Know which parts of the ocean are the saltiest
- Know the effects of salinity
- Know how surface temperature of the ocean can vary from one location to another
- Know what gases are found in the ocean and their importance
- Know how temperature and pressure change with depth
- Know the three temperature zones in the water column
- Know Figure 16 on page 452

Section 4

- Vocabulary

Current

Climate

Upwelling

Coriolis effect

El Niño

- Know what causes surface currents
- Know what the Coriolis effect is and what it does
- Know what the Gulf Stream is
- Know how currents can affect climate
- Know what El Niño is, why it occurs, and what happens when it arrives
- Know what deep currents are and their importance
- Know what upwelling is and its importance