Section 2.0 Water in its various states affects Earth's landforms and climate.

_____ _____
Student **Class**

2.1 Waves and Tides

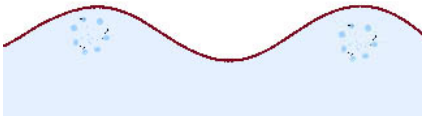
1. **Waves** are movements on the surface of the water. The kinds of waves that boats make as they travel across the surface of the water are called …

A tides
B wash
C ribbon
D dimple

2. Waves moving across the surface of the water have changing patterns. The ripples can travel thousands of kilometers across the surface but the water itself …

A doesn't move at all
B travels to the shore and
C must returns to the source
D can only travel a specific distance

3. Sometimes, in order to understand a concept that is important, ***models*** are used to help us visualize it.



The movement of waves shown here can be modeled by using …

A a rope tied to a door
B a ball bouncing
C a ball rolling down a ramp
D dropping a rock in a pail

4. Most waves are caused by the wind. The stronger the wind, the bigger the wave. The most damage caused by a wave comes from …

A its up and down motion on the high seas
B rising and falling as it approaches boats
C the breaking of the waves just before the shore
D the crashing of the waves onto the shoreline

5. Extremely large waves that can grow to be as high as a 15-storey building are called ***tsunamis***. These waves spread out over a very long distance from their source, which is …

A an earthquake
B a hurricane
C a tornado
D a monsoon

6. A change in the water level in the ocean is referred to as **a tide**. Tides occur 4 times each day, every 6 hours, every day. There are two types of tides, **high tide** and **low tide**. The main reason that tides occur on the Earth is because of the ...

A gravitational force of the Earth on the moon
B gravitational force of the moon on the water
C rotation of the earth and tilt of its axis
D phases of the moon and the changing of the seasons

2.2 Erosion and Deposition

7. **Stream characteristics** help scientists understand where different organisms might live in a river and how they might be affected by human activities. These same stream characteristics are used when dams and bridges are designed and built by …

A technicians
B biologists
C engineers
D environmentalists

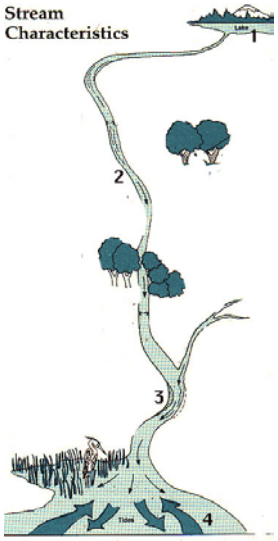
8. A ***stream, or river profile*** is a description of its characteristics. Each stream has a pattern of flow that is shaped by its characteristics. Stream characteristics include the …

A size and distance of flow
B rate of flow and degree of slope
C course and obstacles to overcome
D location and human activity in it

9. ***Hot springs*** are able to dissolve more minerals than ordinary surface water, because as temperature increases the solubility of substances also increases. Once it reaches the surface, the hot springs cannot hold as much solute in the water, so this happens …

A erosion
B striation
C sedimentation
D dissolving

10. Use the illustration of **Stream Characteristics** to help you answer this question.



This is where you will likely find the first signs of sediment being deposited and a meandering motion to the river.

A 1
B 2
C 3
D 4

11. These are two characteristics you will likely see at stage # 2 (in the illustration above)

A slow flow and erosion
B fast flow and erosion
C slow flow and deposition
D fast flow and deposition

12. (From the illustration above) A fan-shaped deposit, called a ***delta***, is formed in ...

A Stage 1
B Stage 2
C Stage 3
D Stage 4

13. A river's ***sediment load*** is the amount of …
A organisms it is able to sustain
B water-borne materials it can carry
C pollution it is able to filter out
D erosion it can make as it flows

14. Major North American watersheds are determined by the **Continental Divide**. This is where you find the highest land and is located in the …

A Appalachian Mountains
B Great Smoky Mountains
C Cascade Mountains
D Rocky Mountains

2.3 Processes That Shape Ocean Basins and Continental Drainage

15. Alfred Wegener proposed that the Earth was divided into huge moving plates. His theory was called the ***Theory of*** …
A Plate Resistance
B Continental Shift
C Plate Tectonics
D Moving Continents

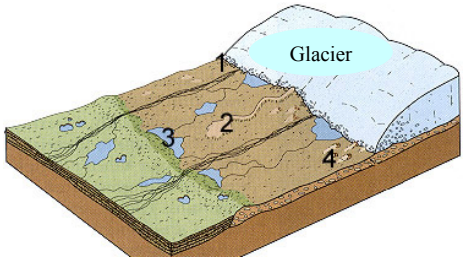
16. Geological features on the ocean floor are a result of the continental plates moving. Where the plates are ***moving away from each other*** you will find …
A volcanoes
B mid-ocean ridges
C trenches
D seamounts

17. Along the ocean floor you can also find these geological features where the continental plates are ***moving toward each other*** …
A volcanoes
B mid-ocean ridges
C trenches
D seamounts

18. ***Continental glaciers***, or ***icecaps*** cover large areas of land, forming the coldest regions on the Earth. Glaciers can also form high up in mountain ranges, where snow and ice build up over long periods of time. These glaciers are known as …
A mountain glaciers
B rocky glaciers
C valley glaciers
D moraine glaciers

19. Glaciers move and change the landscape as they move. A glacier that is melting will leave rocks and debris it has picked up when it was growing. The melting glacier is called …
A a retreating glacier
B an advancing glacier
C a shifting glacier
D an eroding glacier

20. **Glaciers** gouge huge areas of the land and then reshape the land by the materials they collect. Some of the features include large inland lakes, where the glacier has dug a huge hole and filled it with water. These inland lakes are called …



A reservoirs
B kettle lakes
C esker lakes
D bucket lakes

2.4 Water and Climate

21. The term **climate** refers to the average …
A rainfall and hours of sunlight in a certain area
B precipitation and temperature in a specific area
C weather measured over a long period of time
D length of the seasons in a particular area

22. Large bodies of water can affect the climate of a particular area. The main effect that they have is to …
A cause more precipitation to fall
B cause more extreme temperatures
C prevent more precipitation from falling
D prevent extreme temperatures

23. The reason that the eastern side of the Rockies (Lethbridge and Calgary) receives a ***Chinook*** (warm dry wind) is because it is located in a …
A updraft
B downdraft
C rain shadow
D snow shelter

24. Currents can also affect climate. Surface currents can carry warm air or cold air depending on where the current is coming from. Currents coming from the Arctic region like the Labrador current carry cold air, and that is partly what can account for Labrador's cold climate. Scotland gets warm air from the **North Atlantic Current** because it comes from …
A Canada
B The North Pole
C The Equator
D The Hawaiian islands

Bonus Question *– You should be able to use your common sense to answer this one!*

25. **El Niño** and **El Niña** have important consequences for weather all around the globe. **El Niño** and **El Niña** are caused by …
A earthquakes
B volcanoes
C pollution of the ozone
D disruption of the ocean-atmosphere system in the tropical Pacific

Find out more about **El Niño** and **El Niña**: http://www.pmel.noaa.gov/tao/elnino/el-nino-story.html