**Science 8 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hr: \_\_\_**

**Unit 1 Review: Water Systems on Earth**

**Chapter 1: The water cycle plays a vital role on earth**

1. Draw a diagram of the water cycle. Your diagram should include the following;

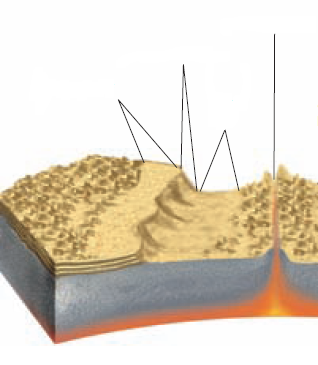
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* 1. The source of energy for the water cycle
  2. The 4 water sources
  3. 2 changes of state
  4. Run-off
  5. Precipitation
  6. The lithosphere
  7. Atmosphere and hydrosphere

1. Complete the table comparing fresh and salt water.

|  |  |  |
| --- | --- | --- |
|  | Fresh Water | Salt Water |
| Percent of water on earth |  |  |
| Freezing point |  |  |
| Density |  |  |
| Salinity |  |  |

1. Use the diagram to answer these questions
   1. This diagram shows an example of one of the terms from this chapter. What is this term?
   2. Add labels on the diagram to indicate a stream, a river and an ocean.
   3. Based on the drawing what do you think happens between drainage basins?
   4. Give two reasons why pollution from a factory can affect the ocean.
   5. How can a farm be a source of pollution to a river?
2. Why will too much turbidity cause a lack of oxygen in the water of a river?
3. What is the effect of temperature on dissolved oxygen?
4. What is the pH of a neutral substance? What is the pH of an acidic substance? What is the pH of a basic substance?
5. Describe how periods of climate change affects glaciers. How does this affect the environment?
6. Describe how ocean basins and continental drainage systems are created. Include volcanic action, plate tectonics, erosion and glaciation in your answer.

1. Label the diagram.

**Chapter 2: Oceans control the water cycle**

1. Name two currents that are important in Newfoundland and Labrador and compare their temperature.
2. Name two types of ocean currents and discuss their differences regarding depth.

1. Name 3 factors that affect surface currents.

1. Name two factors that affect deep currents.
2. When warm water and cold water meet, which one floats, which one sinks and why?
3. When really salty water and less salty water meet, which one floats, which one sinks and why?
4. Explain why the surface current of the Gulf Stream sinks and becomes a deep current when it reaches the Arctic.
5. Give two reasons why water at the bottom of the ocean is colder than water at the surface.
6. Explain the difference between the mixing layer, the thermocline, and the deep ocean.
7. Draw a diagram showing ocean upwelling. Why is upwelling important to the fishery?
8. Draw a diagram that shows the differences between swells and breakers. What is the difference?
9. Make a diagram and indicate the following parts of a wave: Trough, crest, wave length, wave height.
10. What causes a Tsunami?
11. Define tide. Explain how tides are created.
12. The effect that waves and tides have on the shoreline is influenced by 4 factors. What are they?
13. What is the difference between a headland and a bay?
14. Describe how erosion and deposition from wave action affects the following: beaches, shoals, sand bars, sea caves, sea arches, sea stacks.
15. Describe three types of technology used to study the ocean.

**Chapter 3: Bodies of water influence climate and species distribution.**

1. Complete the following table on the effects of depth on abiotic factors of the ocean.

|  |  |
| --- | --- |
| Abiotic Factor | How depth affects each factor. |
| Light |  |
| Temperature |  |
| Salinity |  |
| Pressure |  |
| Dissolved Oxygen |  |

1. Explain why we have a lot of fog in St. John’s.

1. Why spring so late, and summer so much cooler in St. John’s and other coastal areas, than other more central parts of Newfoundland?

1. Explain how the wind causes differences in air temperature.

1. Complete the table about the differences between El Niño and La Niña?

|  |  |  |
| --- | --- | --- |
|  | El Niño | La Niña |
| How trade winds are affected |  |  |
| Ocean Temperature |  |  |
| Weather patterns |  |  |
| Marine productivity |  |  |

1. Describe some positive and negative effects of marine technology on ocean species.
2. Discuss how new technologies have contributed to overfishing.

1. Discuss how the offshore oil industry impacts marine environments.
2. Discuss potential impacts that aquaculture technologies have on marine environments.