



## Science In Action 8 – Fresh and Saltwater Systems - Review Booklet Unit 5

### 1.0 *Humans depend on Water Supply and Quality*

- Key Concepts
- Water resources: oceans, glaciers, groundwater, lakes and rivers
  - Contents of water: minerals, organisms, organic material
  - quality testing ensure it is safe to drink

Illustrate a Model of how water is **distributed** on the Earth.

List the factors that are used to determine **water quality**

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_____	_____
_____	_____
_____	_____
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What is the difference between **'Hard'** water and **'Soft'** water?

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There are two processes that are used to change saltwater into freshwater. Describe and illustrate each.

**Distillation** \_\_\_\_\_

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**Reverse Osmosis** \_\_\_\_\_

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

- Key Concepts
- **Waves** and **Tides** interact with landforms causing **erosion** and **sedimentation**
  - Water interacts with Earth to produce variations in **climate**
  - Stream and River characteristics helps us understand erosion and deposition shape the Earth's surface
  - **Plate tectonics** (ocean basins and continental drainage system in North America) and **glaciers** (further erosion of the drainage system)

Describe what causes **waves** and how do they form.

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What effect does water have on **shorelines**?

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Describe what tides are and illustrate what causes them to be formed.

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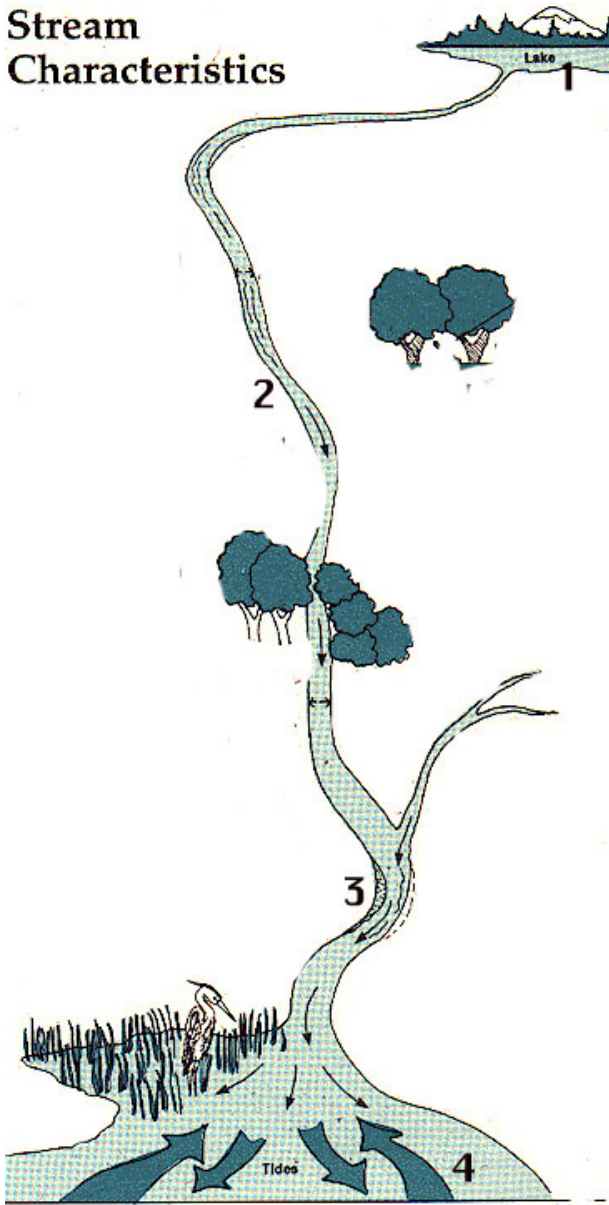
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The cause of **tides** ...



Describe the **profile of a river** (How it is formed 1... the changes it goes through 2/3... and how it dies 4)

### Stream Characteristics




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What is **chemical weathering**?

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What makes a **watershed**?

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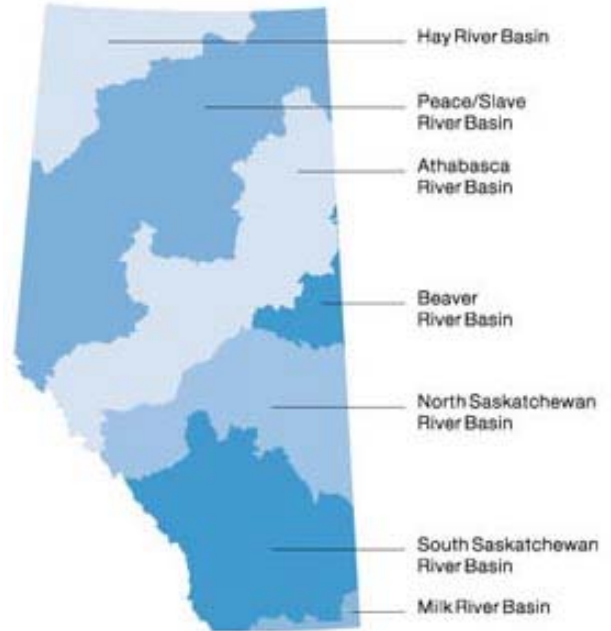
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**Alberta Watersheds**



Describe the **Theories of Continental Drift and Plate Tectonics**.

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How do these theories explain geological features on the **ocean floor**?

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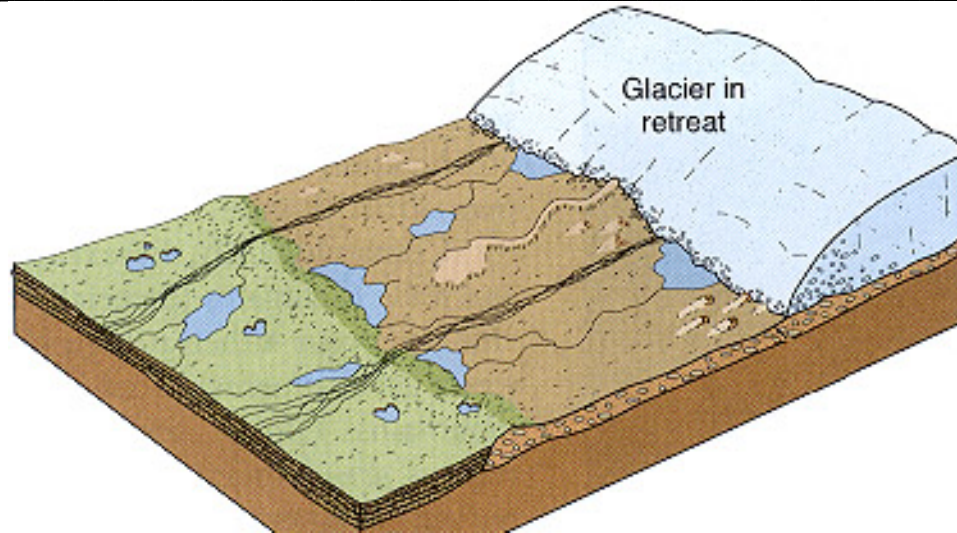


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Describe the effects **glaciers** have on the land and what **landforms** are created as a result of their growth, decline and movement.

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**Moraines** \_\_\_\_\_

**Eskers** \_\_\_\_\_

**Drumlins** \_\_\_\_\_

**Kettle Lakes** \_\_\_\_\_

**Delta** \_\_\_\_\_

What effect does a **large body of water** have on climate?

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What effect do **ocean currents** have on climate?

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## 3.0 Living things in aquatic environments are affected by many factors

### Key Concepts

- Organisms are affected by the quality of their aquatic environment
  - Water conditions: light, temperature and depth of the water
  - Oceans can support a much **greater diversity** of living organisms
  - A **population** - the number of a certain species living in a certain area
- Each aquatic organism has adapted to a particular quality of water

What is **diversity**?

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Describe the diversity you would find in a pond (Like the one illustrated here, or in the textbook - p.373)

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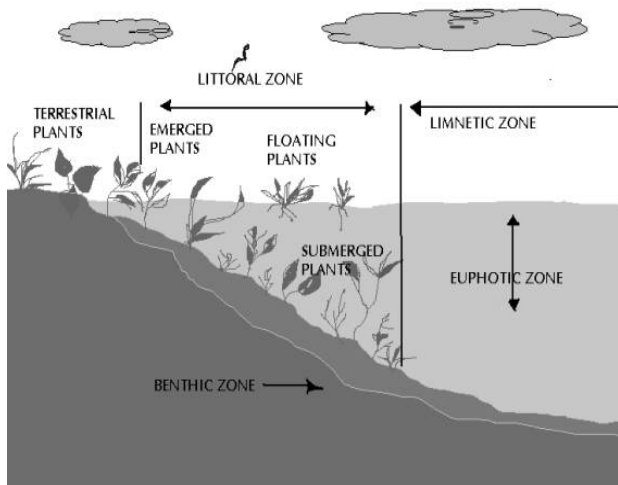


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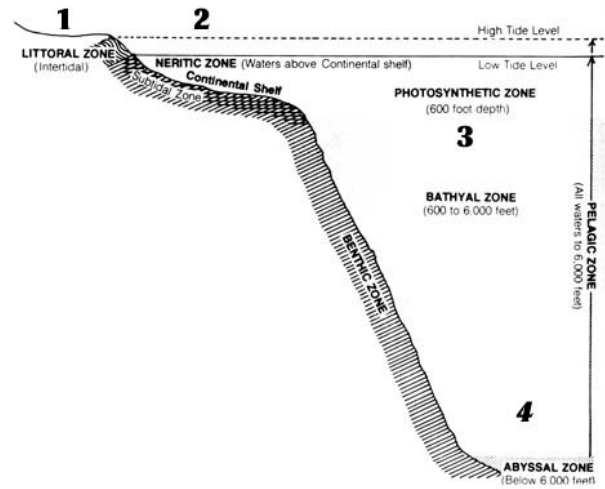


Describe the regions, or zones of a lake and the ocean. How are they similar and how are they different?

### Lake Zones



### Ocean Zones



### Similarities

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### Differences

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**4.0 Human Activities Affect Aquatic Environments**

Key Concepts

- Water is used by humans for work, play and for survival
- Greatest use of water – **irrigation** for agriculture (next is industry)
- **Monitoring** helps us to determine what impact humans have on the aquatic environments they interact with
- Science and Technology must be supported by Action and Commitment

How do humans **use water**? (Benefits and Costs)

Water Use	Benefits (+)	Costs (-)

Describe the **Practices and Technologies** that can affect water quality in the illustration provided.

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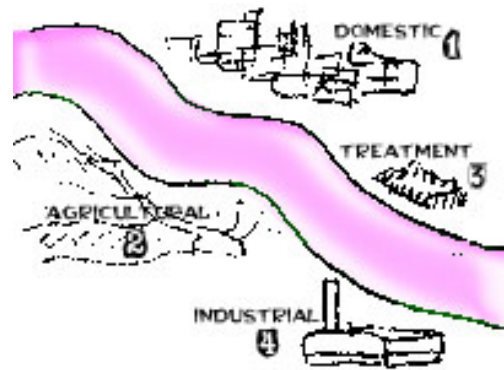


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**A sample environment**



Why is *Monitoring and Assessing* on a regular basis necessary?

**Water Quality**




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What must people be in order for solutions to environmental water issues to be achieved?

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