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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What is the difference between ‘Hard’ water and ‘Soft’ water?

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

**Distillation**

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

**Reverse Osmosis**

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
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 help 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.

_____________________________________________________________________________________

_____________________________________________________________________________________

What effect does water have on shorelines?

_____________________________________________________________________________________

_____________________________________________________________________________________

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

_____________________________________________________________________________________

_____________________________________________________________________________________

The cause of tides …
Describe the **profile of a river** (How it is formed… the changes it goes through 2/3… and how it dies 4)

Stream Characteristics

What is **chemical weathering**?
What makes a watershed?

Alberta Watersheds

Describe the Theories of Continental Drift and Plate Tectonics.

How do these theories explain geological features on the ocean floor?
Describe the effects **glaciers** have on the land and what **landforms** are created as a result of their growth, decline and movement.

_____________________________________________________________________________________
_____________________________________________________________________________________

Moraines ___________________________________________________________________________

Eskers ___________________________________________________________________________

Drumlins ___________________________________________________________________________

Kettle Lakes _________________________________________________________________________

Delta ______________________________________________________________________________

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

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

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?

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

_____________________________________________________________________________________
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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

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<thead>
<tr>
<th>Similarities</th>
<th>Differences</th>
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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)

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<tr>
<th>Water Use</th>
<th>Benefits (+)</th>
<th>Costs (-)</th>
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Describe the Practices and Technologies that can affect water quality in the illustration provided.

Why is Monitoring and Assessing Water Quality on a regular basis necessary?

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

____________________________________________________

____________________________________________________

________________________________________________________________________________________