Part 1 - A World of Water

How is water recycled on Earth?  (p.368)

Illustration of the Water Cycle

What are some vital environmental concerns regarding the quantity and quality of water on the Earth?  (p. 366)  (p. 374)
Describe and illustrate the distribution of water on the Earth. (p. 372-373)

Part 2 - Earth’s Frozen Water

Describe the natural freshwater storehouses, including .... (p.375-379)

Icefields

Glaciers

Snow packs

What is the difference between valley glaciers and continental glaciers? (p. 376-377)
Using the illustration below, identify the location of those **glacial landform features** listed and describe how each of them form …

* moraine
* drumlin
* kettle lake
* esker

How does **glacial erosion** and **glacial deposition** affect the face of the Earth? (p. 380-382)
What clues to the past can ancient ice reveal?  (p.384-385)

How does global warming and natural disasters affect our water supply?   (p.386-387)

Part 3 - Fresh Water Systems

In what forms does fresh water exist on the Earth? (p.390-391)

Identify the major watersheds of Alberta (p. 393) &  http://www.albertawatersheds.org/index.html?LoadPage=maps
How does land use affect \textit{run-off} and the health of a \textit{watershed}? (p.392-394)

Describe how the \textit{rate of flow of a stream} can affect \textit{erosion} (run-off) and \textit{deposition} (sedimentation). (p.396-397) (400)

How do scientists determine the impacts of \textit{pollutants} on the aquatic environment? (p.400-401)

What can be done to \textit{reduce the impacts} of pollutants? (402-403)

What is causing \textit{aquifer depletion}? (p.405)

How can \textit{groundwater contamination} magnify environmental contaminants? (p.406-407)
Part 4 - The Oceans

96.5% of the ocean is water. The other 3.5% is the total amount of dissolved solids (salts) – but where does it come from?

How do the Oceans get salty? (p. 411)

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____________________________________________________

What does the Ocean floor appear like and how was it formed? (p. 413-415)

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Describe the effect of Ocean waves on shorelines and the creation of beaches. (p. 419-422)

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What causes Tides? (p. 423-425)

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How do Ocean currents affect climate and aquatic life? (p. 426-429)

Part 5 - Living In Water

Describe the diversity of freshwater and saltwater organisms. (p. 432-433)

What adaptations do plants and animals develop to enable them to survive in aquatic environments? (p.434-444)

Illustrate and Describe the interactions among aquatic organisms (food chains and food webs). (p.444-445)
Describe how **biomagnification** can affect organisms in a food chain and food web. (p.446-447)

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**Part 6 - Water Quality and Water Management**

What **scientific tests** are used to determine the properties and quality of a water supply? (p.448-450) (p.453-454)

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How can **dissolved solids** get into the water supply? (p.450)

- __________________________
- __________________________
- __________________________
- __________________________
- __________________________

How do people and water interact **negatively**? (p.451-452)

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Identify the variables that can be measured to determine **water quality**. (p.453)

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Describe how biological organisms can be used as biological indicators of water quality. (p.455-459)

Identify the bioindicator species (freshwater invertebrates) used to determine water quality. (p. 459)

<table>
<thead>
<tr>
<th>Can only live in clean water</th>
<th>Can live in slightly polluted water</th>
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<tbody>
<tr>
<td></td>
<td></td>
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</table>

Identify the water use activities that Water Quality Standards are set for.

- ____________________________________________________________
- ____________________________________________________________
- ____________________________________________________________
- ____________________________________________________________
- ____________________________________________________________
- ____________________________________________________________

What is needed in order to maintain a safe, reliable water supply? (p.460-463)
Illustrate the *process used to purify drinking water.* (p. 463)

Describe the following *purification processes* …

*distillation* ____________________________

______________________________

*osmosis* ____________________________

______________________________

*reverse osmosis* ____________________________

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How can *sustainability* be achieved, while balancing the needs of people, industries, agriculture and wildlife? (p.465-468)

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