

## Unit 5 - Fresh and Saltwater Systems

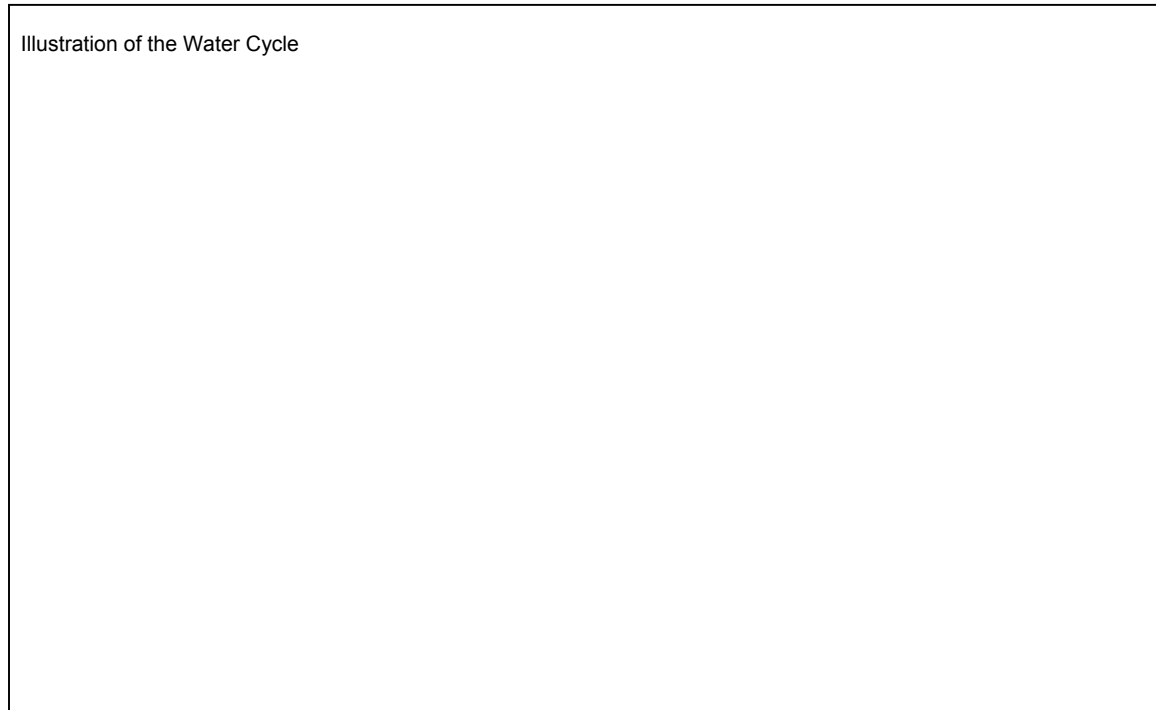
Complete each of the following questions, relating to the specific learner outcomes, covered this year in Grade 8. The questions in this review reflect what you should have mastered and will be tested on the **Final Achievement Exam**. The answers will be covered in class.

### Part 1 - A World of Water

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

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What are some vital *environmental concerns* regarding the **quantity and quality of water** on the Earth?  
(p. 366) (p. 374)

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Describe and illustrate the **distribution of water** on the Earth. (p. 372-373)

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**Part 2 - Earth's Frozen Water**

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

**Icefields** \_\_\_\_\_

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**Glaciers** \_\_\_\_\_

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**Snow packs** \_\_\_\_\_

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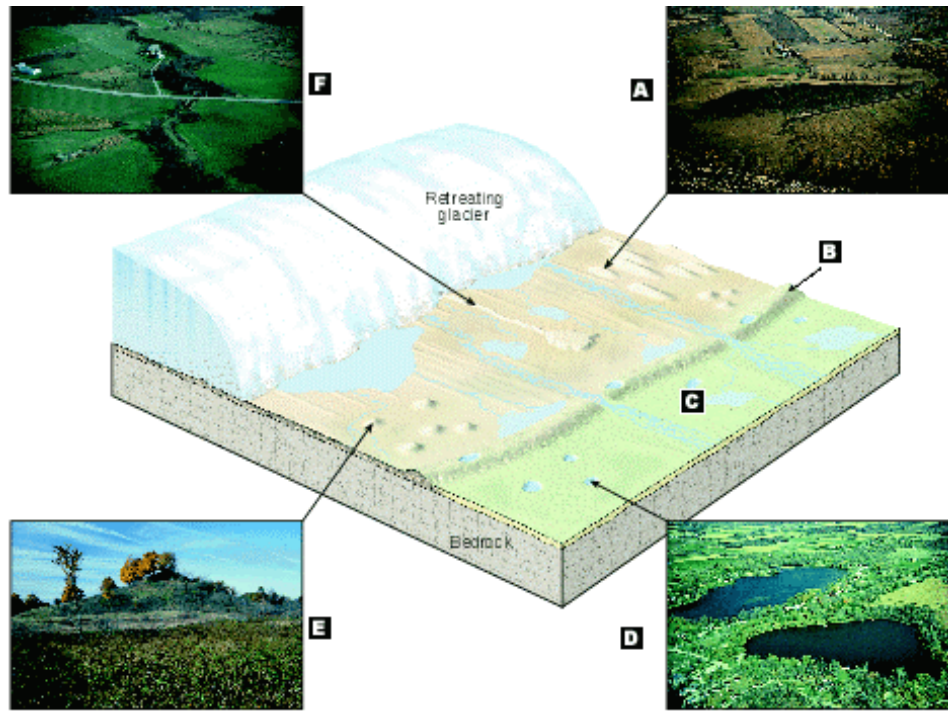
What is the difference between **valley glaciers** and **continental glaciers**? (p. 376-377)

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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)

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What clues to the past can **ancient ice** reveal? (p.384-385)

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

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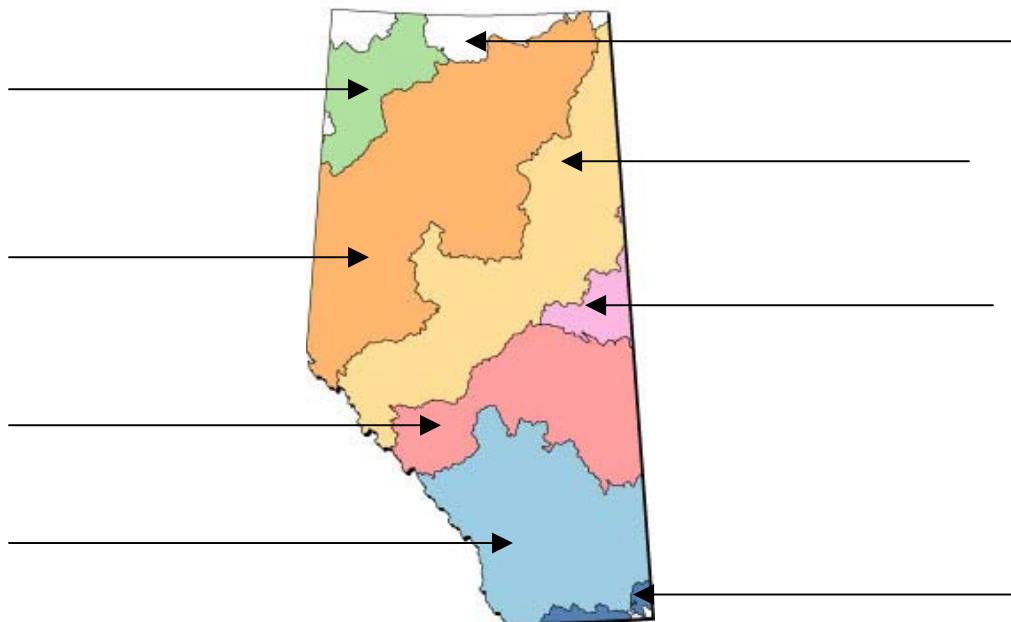
### Part 3 - Fresh Water Systems

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

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Identify the major **watersheds** of Alberta  
(p. 393) & <http://www.albertawatersheds.org/index.html?LoadPage=maps>



How does land use affect **run-off** and the health of a **watershed**? (p.392-394)

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

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How do scientists determine the impacts of **pollutants** on the aquatic environment? (p.400-401)

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What can be done to *reduce the impacts* of pollutants? (402-403)

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What is causing **aquifer depletion**? (p.405)

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How can **groundwater contamination** magnify environmental contaminants? (p.406-407)

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## 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)

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**Part 5 - Living In Water**

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

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

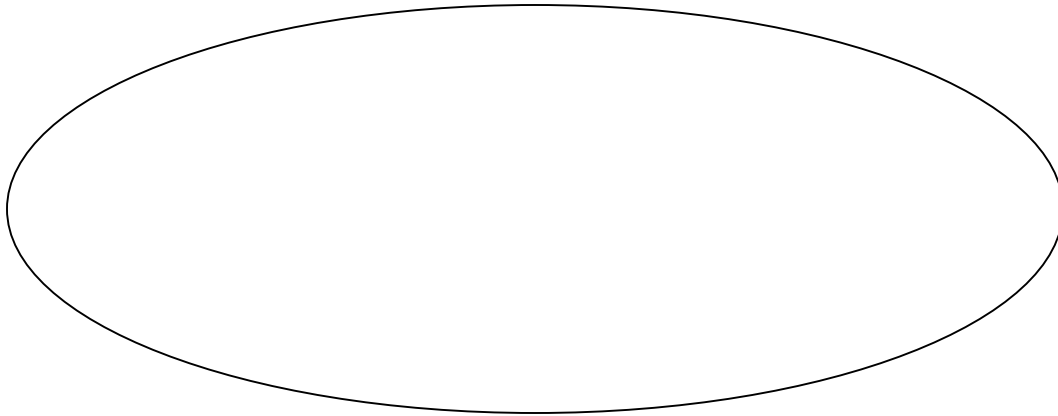
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Illustrate and Describe the interactions among aquatic organisms (**food chains** and **food webs**). (p.444-445)



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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)

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- \_\_\_\_\_
- \_\_\_\_\_
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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)

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

Can only live in clean water	Can live in slightly polluted water

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

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
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What is needed in order to maintain a **safe, reliable water supply**? (p.460-463)

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Illustrate the **process used to purify drinking water**. (p. 463)

Describe the following **purification processes** ...

*distillation* \_\_\_\_\_

\_\_\_\_\_

*osmosis* \_\_\_\_\_

\_\_\_\_\_

*reverse osmosis* \_\_\_\_\_

\_\_\_\_\_

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

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