



# Examples of Natural Systems

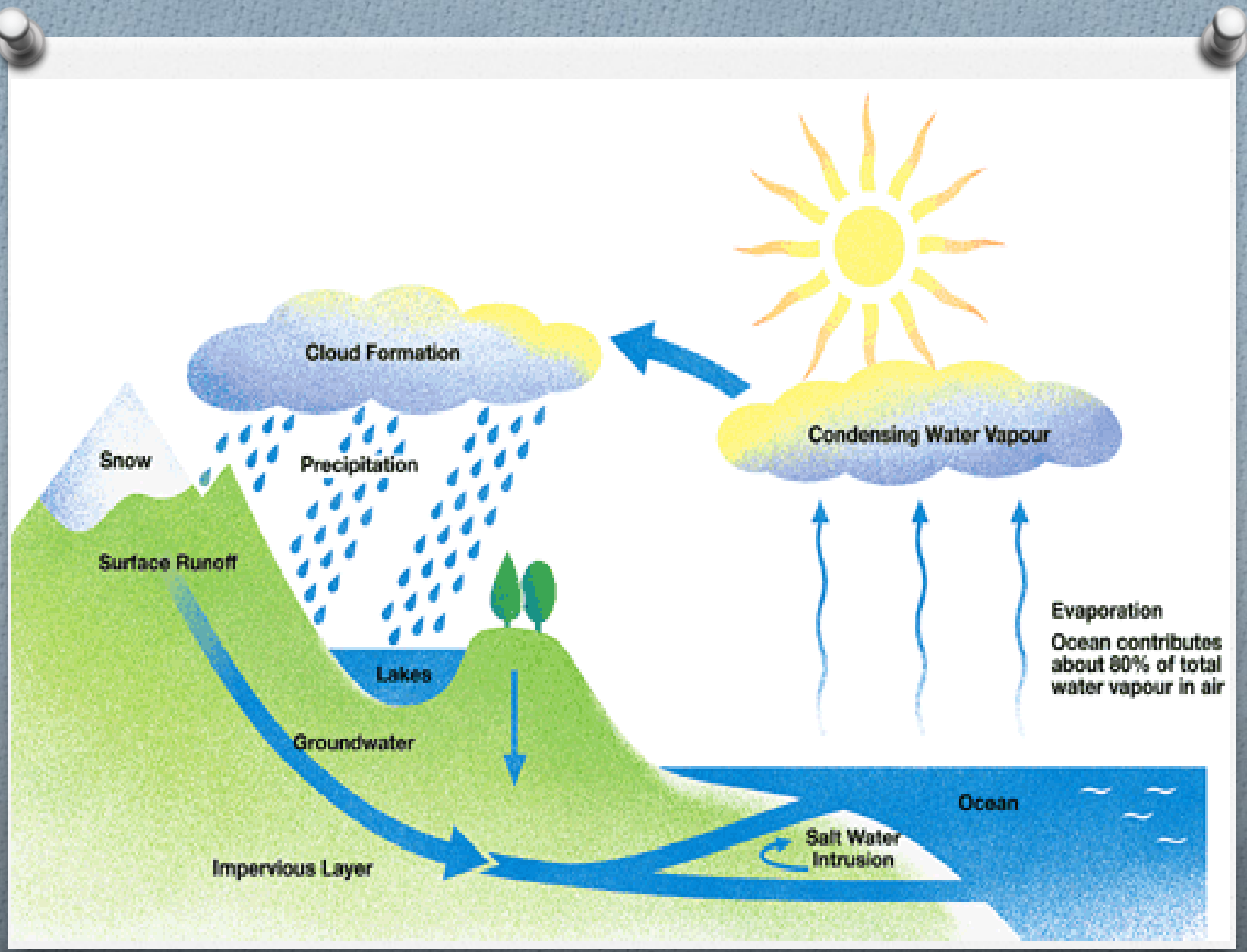
# 1. The Water Cycle

- o Is the natural system that involves the circulation of water to support life on Earth.
- o The water on Earth is continuously flowing and changing state from gas (water vapour), to liquid, to solid (ice).
- o The Earth never loses or gains any water.
- o It is a **CLOSED SYSTEM** and the water in that system is constantly recycled.

- Canada has approximately 9% of the world's fresh water supply.



- o Most of Canada's fresh water is located in unhabitated areas and in **AQUIFIERS** (which are layers of porous rock that can store large quantities of water.)



# Animated Water Cycle

- o <http://earthguide.ucsd.edu/earthguide/diagrams/watercycle/>
  
- o <http://earthguide.ucsd.edu/earthguide/diagrams/groundwater/index.html>

## 2. Decay Cycle (Nitrogen Cycle)

- o In natural systems there is no waste.
- o Creatures such as fungi and bacteria act as **DECOMPOSERS** to eat and recycle nature's waste material.
- o When leaves fall to the ground they are broken down by decomposers and the leaves nutrients are passed back into the soil for other plants to use.
- o This process of decomposition and regeneration in nature is called the **DECAY CYCLE**.

# DECOMPOSERS

They consume (eat) dead plants & animals and decomposes them - reduces them to simpler forms of matter.

PRIMARY DECOMPOSERS

Fungi & Bacteria





- Decomposers break down the dead matter from trees or animals break down plant leaves.
- Nutrients are released back into the soil.
- Roots of trees absorb these nutrients.
- Nutrients travel up the trunk and are used as energy for growth.
- Consumers eat the leaves of trees or the dead leaves fall back to the ground.