

Water education



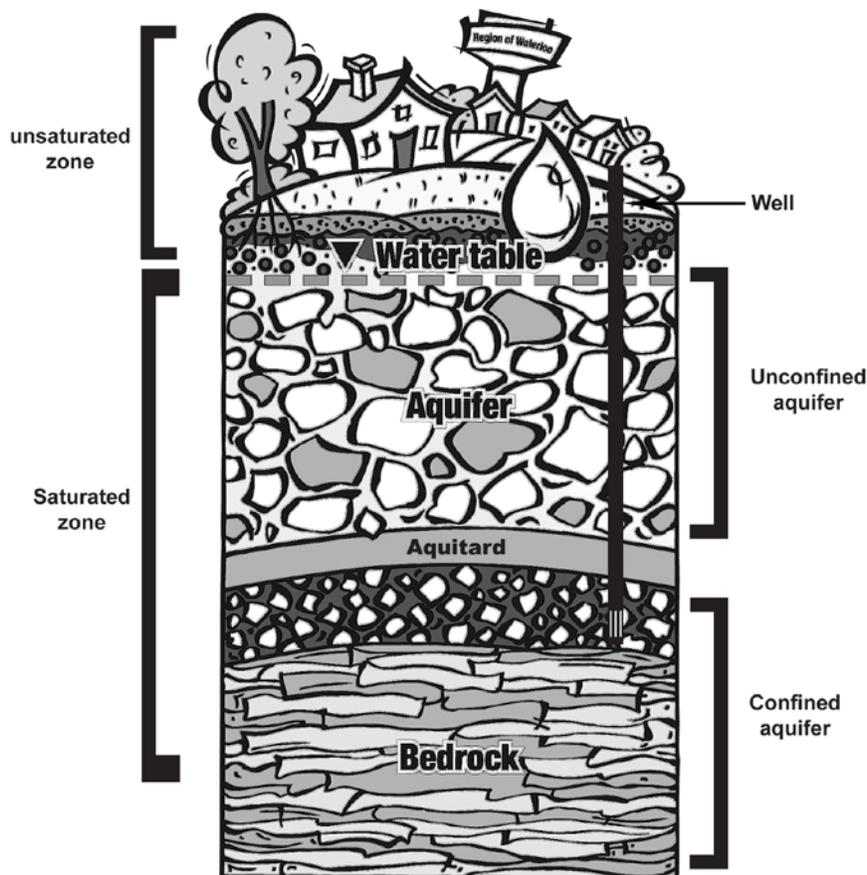
Answers: Part two - How well do you know water?

Use these key words to complete the sentences. Key words can be used more than once.

wastewater treatment plant	water towers	groundwater	production
local waterway	Grand River	porosity	wells
monitoring	safe	aquifer	permeability

1. Waterloo Region is located in the Grand River watershed.
2. In Waterloo Region, some of our drinking water comes from the Grand River but most comes from groundwater.
3. An aquifer is an underground geological formation that holds useable amounts of water.
4. Hydrogeologists, as part of their groundwater studies, consider how water travels underground through different materials such as sand, gravel and rock.
permeability is the capacity of water movement through soil or rock.
porosity is the capacity of soil or rock to hold water.
5. Region of Waterloo manages over 120 drinking water wells that supply water from groundwater aquifers to our homes. The Region uses two types of wells.
production wells supply water to our homes.
monitoring wells provide access to the aquifer to collect data on water levels.
6. The Mannheim Water Treatment Plant uses a multi-step process to treat water from the Grand River.
7. The Region of Waterloo tests municipal tap water repeatedly at every step of the process to make sure it is safe to drink.
8. Water towers store large amounts of drinking water and provide water pressure to move the water through pipes to our homes.
9. When water leaves our homes, it goes to a wastewater treatment plant where it is cleaned before returning to the Grand River.
10. Only water from rain or snow melt should go into a storm drain as it goes directly into a local waterway.

A groundwater aquifer



Aquifer: An underground geological formation that holds useable amounts of water. Unconfined aquifers receive water from the surface. Confined aquifers are located below an aquitard or confined between two aquitards.

Aquitard: Compact layers of rock, silt or clay that acts as a barrier for groundwater.

Saturated zone: The area below the water table where the spaces in the gravel, sand, silt or rock are filled with water.

Unsaturated zone: The gravel, sand, silt or rock above the water table.

Water table: The place under the ground surface where water will stand when a hole is dug.

Well: A hole dug or drilled into the ground to pump water from an aquifer.

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