SVN3M Water Unit Review

The test may consist of any of the following types of questions:	**To study effectively:**
Multiple Choice, True or False, Matching Diagrams (reading/interpreting/labeling diagrams, tables and graphs) Short Answer: define, explain, compare Sight passage: reading comprehension and analysis	● make sure you have all worksheets, with completed notes and answers (check the course website, which can be found at the following URL: *https://sites.google.com/tdsb.on.ca/svn3m/home/water*) ● memorize definitions for important terms ● write out point form answers to the main ideas ● do not cram all your studying into 1 or 2 sessions; review frequently if possible;

You will be allowed to use your class notes; there is no sharing of notes or cell phones allowed.

Topic	Terms to Define Facts to Memorize	Ideas to explain
Home Water Use	- how much water does an inefficient showerhead use per minute? How much for an efficient showerhead? - how much water does an old toilet typically use per flush? How much does a low-flush toilet use? - how much water does the average Canadian use every day? - what might be 4 ways to reduce your home water use?	- why would changing to a low-flush toilet most likely have the largest conservation impact on your household's water use?
Freshwater and the Water Cycle	- how much of the earth's surface is covered by water? - important properties of water: universal solvent, high heat capacity - availability of freshwater (what percentage of the world's water is fresh?), 6 possible sources of freshwater - water (hydrological) cycle diagram: precipitation, evaporation, transpiration, surface runoff, percolation, aquifer, groundwater	- why is water important to the proper functioning of living beings, particularly human beings? - with regards to global warming, why is it important both that most of the earth's surface is covered with water, and that water has high heat capacity? - how might the high heat capacity of water help provide the Natural Capital service of climate control? (hint: compare the climates of Vancouver and Winnipeg) - although freshwater is a renewable resource, why is it important to steward over both the amount of water that we use, and what we do with it?

Water: The Facts (Global Water Issues)	- What is the daily minimum amount of water that the UN recommends for living lives of dignity? - Which of agriculture, industry and domestic use makes up the largest share of water use globally? - What areas of the world are most water-stressed (in terms of availability per person)? - What are 5 ways that access to clean freshwater improves health? - What areas of Canada still have issues with access to clean freshwater? - What is groundwater overdraft? - Besides drinking water, what are 3 ways that water is embedded in beef production? (i.e. in what other ways is water used)	- What differences in water use would you be most likely find between developed and developing countries? - What are 2 social issues related to women and children in connection to the lack of access to nearby sources of freshwater?
Toronto's Drinking Water System	- what are the 7 main steps of Toronto's drinking water purification system? Label the different steps on a diagram of Toronto's water system. - explain the process of sedimentation; what are flocs? - what is removed during filtration? what materials are used in filters? - what is the purpose of chlorination? what is the purpose of fluoridation? - why are city reservoirs raised?	- what are the different kinds of contamination and pollution that the Toronto drinking water system must be able to handle? - what are some things we can do to preserve the quality of our drinking water and to place less strain on the city's purification system?
How much do I flush? Low flush toilets and water conservation	- how are low-flush toilets tested? - how many litres of water are used by an old toilet? How much is used by a new toilet? - how much water would you save in a year by replacing an old toilet with a new toilet?	- why is the toilet rebate program worth doing for the City of Toronto despite the cost of providing rebates to consumers? - why might installing new low-flush toilets help reduce greenhouse gas emissions?
Canada's Indigenous water crisis	- what are the 3 different types of water advisories? Explain them.	-what is the issue happening in regards to water and Canada's Indigenous people?
Bottled Water vs. Tap Water	- what testing is required by the province for - public municipal water sources in Ontario? - what testing is required for bottled water by the federal government?	- what are possible reasons that bottled water has increased over the last decade? - what are 3 possible environmental problems associated with bottled water?
Toronto's Water System	- what is the age of the water mains in Toronto?	- explain why increasing the water rates in Toronto might be important for

(Toronto Star article – "Time to plug the biggest leak")	- compare the cost of energy needed for the water system to other city services such as the TTC - why should fixing water mains be a priority?	preserving water quality. Give 2 reasons. - how might each of the following possible programs promote the quality and affordability of Toronto's water: rainwater harvesting, constructed wetlands, urban forests?
Water Pollution & Water Quality	- what is water pollution? - what are 3 kinds of water pollution? - what is the difference between point source pollution and non-point source pollution? Give 1 example of each. - what kind of levels of coliform bacteria are good (for human use)? - what is the difference between dissolved oxygen and biological oxygen demand? - what are 2 sources of inorganic chemical pollution? - what are 3 sources of organic chemical pollution? - what effect does temperature increase have on the amount of dissolved oxygen and carbon dioxide?	- how might streams (rivers, brooks) recover from pollution? Why are lakes more likely to be polluted? - why would the presence, type and number of bottom-dwelling invertebrates be indicators of water quality? - why would high levels of dissolved oxygen be desirable in a water source, and low levels of biological oxygen demand? - what is the difference between organic and inorganic chemicals?
Wetlands	- what is a wetland? - what are the four types of wetlands? - what are 4 benefits of preserving wetlands? - what is nutrient loading? - what is an indicator species/animal? - what is the difference between aerobic bacteria and anaerobic bacteria?	- what are examples of human activities which threaten the health and existence of wetlands?
Acid Rain	- what is Acid Rain? What are the two chemicals most commonly associated with acid rain? - what is the scale used to measure the acidity of chemicals? Explain the scale.	-how does acid rain affect wildlife and forests? Use one example to explain each. -what is the link between acid rain and human health?
Poster Project	- give a 1 paragraph overview or summary of your poster project topic - give a 1 paragraph summary of the practical action steps that were advocated or promoted in your poster project - you will be marked on clarity and accuracy of communication, including grammar and spelling	