

Review - Section 4D

Name: _____

- 1) Rank the different sources of water from highest to lowest percentage on this planet.
- 2) What is the difference between ocean water and freshwater?
- 3) Describe the water cycle.
- 4) Why does water that falls from the sky not have salt in it?
- 5) Ocean water and fresh water drunk directly from the source will make a person sick. In both cases, why?
- 6) List the steps of water purification by the city, in order.
- 7) Why does this process work for freshwater but not for ocean water?
- 8) Describe two processes that can be done to purify ocean water, and why they work.

9) What is the difference between hard water and soft water?

10) Water softeners are machines that remove hard water ions and replace them with soft water ions. How does this machine work?

11) Water stored in a water tower has chlorine in it. Why do we put chlorine in the water after cleaning?

12) In the water purification lab, we did three things to test the water for purity. How did each of the following show water purity?

a) microscope

b) laser shine through it

c) conductivity tester

13) In the water softening lab, we used three different softeners to see their water softening effectiveness. A student's data is shown below. Which was the best softener, based on the data?

	Hard Water	Treated w/ Sand	Treated w/ Calgon	Treated w/ Resin
Reaction to Na_2CO_3	Turned cloudy	Turned cloudy	No change	No change
Reaction to ivory soap	Murky water	Murky water	No change	A little murky
Height of suds when shaken	10 cm	8 cm	2 cm	4 cm

14) In the purification of the ocean water lab, we filtered and distilled ocean water to see which process worked better. A student's data is shown below. Which was the better purifier, based on the data?

	Ocean Water	Filtered	Distilled
Reaction to AgNO_3	Turned cloudy	Turned cloudy	No change
Reaction to Na_2CO_3	Cloudy	Cloudy	No change

15) Describe how the following conditions could cause a fish kill?

a) low pH

c) high pesticides

b) high organic carbon

d) high heavy metals