

Lesson One PowerPoint: Introduction to a Saline Environment

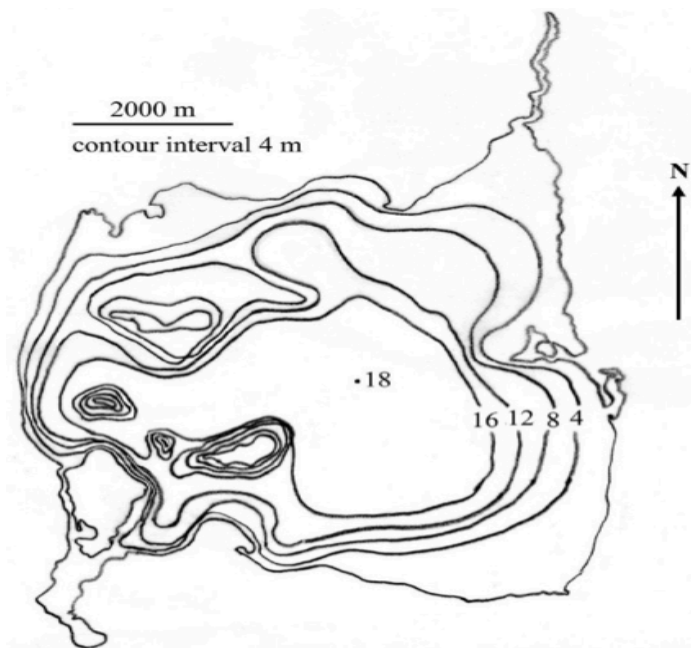
- 1) Why are some parts of the ocean not as salty as other parts? (2 reasons).
 - a)
 - b)
- 2) Why is the GSL (Great Salt Lake) 9 times saltier than the ocean?
 - a) The north end of the lake is quite shallow, and mostly isolated from the south end by a railroad causeway. Why is it a different color?
 - b) And why are those smaller areas in the south also light blue?
- 3) How has the GSL changed recently?
- 4) How has the GSL changed in the distant past?
- 5) Aside from NaCl (Sodium chloride, common table salt), what other salts are present in seawater evaporites?
- 6) Why are some evaporation ponds reddish?
- 7) What mineral evidence suggests that Mars once had oceans, rivers, and lakes?
- 8) Why are saline lakes in the Western US interesting and important?
 - a)
 - b)
 - c)
 - d)

Name: _____ Teacher/Period: _____ Date: _____

9) Why would we measure populations of extremophile organisms in saline lakes of the western US? (What does the population size tell us about the environment?)

10) Mark 5 places (on the map) where you would expect to find high numbers of salt-loving extremophiles in this saline lake.

Explain **why** you expect them to be in those particular spots.



11) How might you measure populations of extremophile organisms if someone brought you samples from this saline lake? (Write down at least 3 ideas.) For each way to measure the population(s), describe challenges/limitations you may encounter.

Idea	Measurement technique	Challenge/limitation
a)		
b)		
c)		