

Science on Seneca Webquest

On May 5th our class will climb on board a research vessel to collect data regarding the biological, chemical, physical, and geological status of Seneca Lake. In order to familiarize yourself with the Science on Seneca experience, we'll explore their website.

Type "Science on Seneca" into Google.

1. List two of the objectives of Science on Seneca from their home page

A.

B.

2. Click on the *Seneca Lake* link to the left of the screen. Click on the "Find out more" link.

A. How many Finger Lakes are there? List them all in the space below

B. Seneca Lake is the deepest of all the Finger Lakes. How deep is it?

C. Under the Finger Lakes map is a link called *Land Use*. Click on it and find Seneca Lake at the bottom of the page. Click on the land use link. According to the pie graph, what is the largest percentage of land use in Seneca Lake devoted to?

The Northern end of the lake is colored red. This is the location of Geneva, NY. What does the red color mean?

- D. Go back to the *Seneca Lake* link. Click on "Learn the history and myths of Seneca Lake" Click on *Legends of the Lake* and read about The Serpent. What happened in 1900? Do you think there was/is really a serpent in the lake?
3. Go back to the home page and click on "*About the William Scandling*".
- A. How big is it?
 - B. How long has it been in use by the colleges?
 - C. What can students learn while on the vessel (list 4 areas)?
 - D. List 5 pieces of equipment found on board the William Scandling.
4. Click on the *SOS manual*.
- A. How long is Seneca Lake (look on p. 5)
 - B. On p. 6, list 4 factors that currently threaten the health of Seneca Lake.

C. What percentage of the Seneca Lake watershed is devoted to forest (p. 7)?

D. On p. 10 there is a waiver that you'll be required to sign before we go out on the boat. Look it over. Are there any concerns you have at this moment?

E. On p. 12, what will be measured by the GPS?

F. Look at the bottom of p. 14.
What is a secchi disc?

What sorts of factors affect the readings on the disc?

G. Look at the temperature graph on p. 14 (figure 5). What is the temperature at the surface of the lake?

What is the relationship between temperature and depth?

What is the thermocline?

At what depth (m) is the most rapid drop in temperature observed?

H. Read about chloride ion concentration on p. 19. Seneca Lake has a higher chloride concentration than most of the other Finger Lakes (150 ppm vs ~ 50 ppm). What are some possible ways that chloride ion enters the lake?

The remainder of the manual describes the tests that you'll be conducting on board the research vessel. In the coming weeks, we'll be looking into the procedures for conducting these tests.

5. Return to the menu on the home page. Click on *SOS for students*.
 - A. Click on *Animals and Plants of the Finger Lakes*. Click on *Phytoplankton*. Name and describe a characteristic organism in this group.

B. What is the difference between *phytoplankton* and *zooplankton*?