



Seminole County Watershed Atlas Curriculum for Teachers  
**Amoebas & Temperature** *Handout*

*Students read selections and use the Graphing Tool to understand an amoeba dangerous to swimmers.*

**INSTRUCTIONS:** Read the following article from the Orlando Sentinel and complete the questions on the next 2 pages.

*Post Warnings for Amoeba, Residents Urge*

By Robert Perez | Sentinel Staff Writer

Posted August 2, 2002

OVIEDO – About 50 people, mostly Oviedo residents, packed City Hall on Thursday to learn more about a potentially deadly amoeba that lurks in most Florida waters.

Seminole County public-health officials explained how the amoeba, *Naegleria fowleri*, caused the death of an Oviedo boy last week and explained preventive measure that swimmers can take.

One question, however, was raised over and over that could not be answered: Why didn't we know about this sooner?

"I've lived in Florida for 10 years, and I didn't know about it," said Ann Stahl, who lives on Long Lake in Oviedo. "I certainly wouldn't let my children go in if I was aware of this. I never thought there was something in the water that could be fatal."

Outside City Hall, a large photo of Jacob Thomas Barrett was set up on an easel by his uncle, Thomas Barrett Barrett attended the meeting to urge that warnings about the amoeba be posted at all local lakes, ponds and rivers.

"We were told this happens once every 2.5 million hours of swimming," he said. "Let's post it so that it happens once every 5 million hours."

It would not be practical to post warnings on every freshwater body, said John Cochrane, Seminole County Health Department environmental manager. What's more, public health officials don't have authority over private lakes, he said.

That didn't ease concerns for many in the crowd. Michael Contreras said he would tell his 18-year-old son to stop going out on Long Lake until water temperatures drop.

"I love my children too much," he said. "He can wait a few months to go out on the lake."

The amoeba exists in soil and sediment and becomes active in freshwater bodies when temperatures reach at least 82 degrees, Cochrane said.

The amoeba gets into the body through the nose and travels to the brain. Cochrane suggested swimmers wear nose plugs, avoid stirring up sediment and avoid diving.

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**QUESTIONS:**

1. What is the main idea of the article? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. To avoid exposure to amoebas what data should a citizen analyze to determine whether or not it is safe to swim in a particular lake? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PROCEDURE & QUESTIONS:**

1. Go to : [www.Seminole.WaterAtlas.org](http://www.Seminole.WaterAtlas.org) > Education Tools > scroll down to Amoeba Fact Sheet. Read the fact sheet. How can the amoeba problem be avoided? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Go to the Research Tab (menu at the top of the screen) > Advanced Graphing Tool > (your lake) next > Water Quality > next > water temperature > next > Graph all stations > Select the period of data that will yield a graph with at least two years' information, if available. Click Graph Data. Note that sometimes you must refresh the screen if viewing a series of graphs. Control-R for Windows, Command-R for Mac.

3. If the data is not available to you for the lake nearest to your school, use another lake.

4. Print the graph.

5. According to the graph and the Amoeba fact sheet, what months of the year are amoebas most likely to be active? \_\_\_\_\_

6. Why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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7. If you were on the Oviedo City Board, what recommendations would you make? \_\_\_\_\_

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