

Objective

To introduce students grades 9-12 to SCOOS. To build internet/web skills and to get students familiar with using the real time data found on the website.

Introduction

Students should have been introduced to the topic of water pollution. Students should have knowledge of the following vocabulary words: sewage treatment, runoff, particulates, fecal coliform, outfall, water quality, surface current, and the impacts that pollution has on human health

Materials

Computer with internet access

Worksheet

Time Allowed

1 class period (55 min) and time for follow-up discussion

Procedure

Make sure that the internet being used will run the plume data in a timely manner before assigning this worksheet to students.

You can preface this assignment with some background data or you can just give the assignment and have students work through the questions on their own in pairs of 2 or individually.

*Note: depending on the time of year and time of day the data collected will vary. You could also have different periods complete this lab on different days and compare the results that each period recorded.

Assessment

Completed lab and possibly (depending on the level of your students) a critical thinking short essay using the data from the lab.

Fun With SCCOOS !!!

Go to: <http://www.sccoos.org/> and click on ‘Data, products, and modeling’ at the top
On the left hand side under ‘available products’ click on ‘plume tracking’

1. Pick ‘Tijuana River’

- scroll to the bottom of the page and click on the link ""Huge waves at the Tijuana Sloughs are tempting, but dangerous Surfing" (2007-01-02) by Brad Melekian. Summarize the article below in 5-8 sentences:

- Go back to the page that has the plume data for the Tijuana River outfall. What is the date and time of the data you are looking at (hint: look at the table at the bottom)?

year - month - date : GMT (: PDT)

- How many stations are there for the Tijuana River? _____

- Do any of them have plume potential? Yes or No

- If yes ,how many _____ Write the station name and number below

- At the top of the page it says “An animated.gif has been created as an alternative to this animation sequence” Play the animation.
- You should see 2 animations streaming. (a map and a yellow bar graph at the bottom)
- What is this data showing? The yellow bar graph, the map, what do the colors mean? Why is it important to have streaming data for this site? How can this information be used? What information is lacking/missing? Explain (10-12 sentences).

2. Pick ‘Orange County’ (under plume tracking on the left-hand side)

- At the bottom of the page where does it say is the source of the plume data? Where is it coming from?

- Play the animated.gif _____ - _____ - _____ (_____: _____ PDT)
year month date

- How is the plume data from the Tijuana site?

- How is it similar from the Tijuana site?

- Why would the outfall data from the Orange County site be important to surfers and swimmers in the water?

3. Shoreline Water Quality

On the left hand side under ‘available products’ click on ‘shoreline water quality’. Click on ‘overview’

At the top of the page a map and on the left hand side of the map is a station list.

- Click on station 9N Bolsa Chica/Huntington Beach

- Last sampled: _____
- Total Coliforms: _____
- Fecal Coliforms: _____
- Enterococci: _____

- Click on station 46000 Thornhill Broome Beach

- Last sampled: _____
- Total Coliforms: _____
- Fecal Coliforms: _____
- Enterococci: _____

- Click on station B-24 Long Beach

- Last sampled: _____
- Total Coliforms: _____
- Fecal Coliforms: _____
- Enterococci: _____

How does B-24 compare with the other ‘Long Beach’ stations? Why?

- Click on station BDP14 Dana Point Harbor

- Last sampled: _____
- Total Coliforms: _____
- Fecal Coliforms: _____
- Enterococci: _____

How does BDP14 compare with the other ‘Dana Point Harbor’ stations? Why?