RESEARCH DATA FOR CAMPBELL PARK ELEMENTARY COMPS STATION

    1. Go to www.pinellas.wateratlas.org. Go to the bottom of the page and click on the link for the Near Real Time Data Mapping Application.

    2. Zoom in to the St. Petersburg area and select the station for Campbell Park-CPK (in downtown St. Petersburg).

        a. What data are recorded at this station? _____

        _____

        _____

    3. At the top where Data Source is provided click the link for COMPS. At the bottom of the metadata box there is a link for the Contact URL. Click this link to open a new window of the USF COMPS website. Click on the General Information link on the left. Answer the following questions.

        a. Who created COMPS and why? _____

        _____

        b. What does COMPS stand for? _____

        _____

        c. What does COMPS provide? _____

        _____

        _____

    4. Click the back arrow. Select the station for Campbell Park (#63). The parameters recorded by this station are displayed.

        a. What is the date and time of the last measurement? _____

        b. Convert the UTC time shown to your local time (See the section for latest observations).

        _____

    5. Close the boxes for COMPS and metadata to return to the DataMapper. View the air temperature and water temperature graphs for Campbell Park and observe differences.

ANALYSIS OF THE GRAPH:

    1. Looking at the 24 hour graphs for air temperature and water temperature, answer the following questions. Be sure to pay attention to the y-axis for the temperature graphs, notice differences.

        a. Which is higher during the day, air temperature or water temperature? _____

        b. WHY do you think this is? _____

        _____

        _____

        c. Which is higher at night, air temperature or water temperature? _____

        d. WHY do you think this is? _____

        _____

        _____

    2. Write a paragraph explaining the relationship between time of day, water temperatures, and air temperatures. _____

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Name: Date:

ANALYSIS OF THE GRAPHS, MATH PORTION:

According to Wikipedia, Fahrenheit is a temperature scale named after the physicist Daniel Gabriel Fahrenheit who proposed it in year 1724. In this scale, the freezing point of water is 32 **degrees Fahrenheit** (32 °**F**), and the boiling point of water is 212 degrees Fahrenheit, setting the boiling and freezing points of water 180 degrees apart. On the **Celsius** measurement scale, the freezing and boiling points of water are precisely 100 degrees apart, the unit of this scale a degree Fahrenheit is 5/9 of a degree **Celsius**. The two formulas used to describe these temperatures are:

$[°C] = ([°F] − 32) × \frac{5}{9}$	$[°F] = [°C] × \frac{9}{5} + 32$

Complete the following using the formulas above.

1. If the air temperature is 25.7 ° C what is the air temperature in °F? Show your work.

   _____

2. If the water temperature is 79 °F what is the water temperature in °C? Show your work.

   _____

Now reopen the COMPS link and look for the air and temperature graphs in the bottom section under latest observations. Notice the left and right y-axis of the graphs. The left side is in temperature degrees Celsius and the right side is in temperature degrees Fahrenheit. Why do you think they put both scales on the graphs? Who might use this data and why?

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Name: Date: