

# Air & Water Temperatures Math Portion

## Handout

*Students interpret graphs and draw conclusions.*

### 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:

$$[^{\circ}\text{C}] = ([^{\circ}\text{F}] - 32) \times \frac{5}{9}$$

$$[^{\circ}\text{F}] = [^{\circ}\text{C}] \times \frac{9}{5} + 32$$

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.

\_\_\_\_\_

### RESEARCH DATA FOR CAMPBELL PARK ELEMENTARY COMPS STATION:

1. Go to [www.pinellas.wateratlas.org](http://www.pinellas.wateratlas.org) and use the DataMapper Tool at the bottom of the page.
2. Zoom in to the St. Petersburg area and select the station for Campbell Park-CPK (in downtown St. Petersburg). Use the link at the top from Data Source for COMPS and then select the link at the bottom of the metadata box for Contact URL. Select the Campbell Park Elementary station (#63).

Notice the air and temperature graphs and 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?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name:

Date: