

Name _____

Date _____

Period _____

Team Member: Name _____

Obtaining and Interpreting USGS Stream Gauge Data

Purpose: To investigate a government source, obtain elevation and temperature data about a local river and determine its slope.

Method: We will be using GE to help us find the real-time elevation data for the Hudson River that is published online by the United States Geological Survey (USGS). We will find the Four Hudson River gauges, and follow the link that appears in the pop-up to get the USGS data. Once the USGS web site opens for each gauge, scroll down to the elevation graph, and write down the approximate high and low for yesterday.

Directions:

1. Go to your email, download and save the USGSSStreamGagingStns.kmz to MyDocuments, and use it to open Google Earth (GE). Or <http://www.hudsonwatershed.org/atlas/kmls/USGSSStreamGagingStns.kmz>
2. Under Places – Temporary Places – , on the left hand side of the map, find the Hudson River Stream Gauges.(Hint: They are in alphabetical order).
3. For each gauge, double-click on the name so that the pop-up window appears over the map icon.
4. Click on the URL in the pop-up to navigate to the USGS web site for that gauge.
5. Once the USGS web page opens, scroll down to find the Temperature graph and the Elevation graph.
6. Determine the approximate highs and lows from each for yesterday and add them to the table below.

Measure:

Date _____		Elevation above NGVD 1929, feet		Temperature, degrees Celsius	
Station ID	Station Name	Lowest Elevation	Highest Elevation	Lowest Temp.	Highest Temp.
1359139	HUDSON RIVER AT ALBANY NY				
1376304	HUDSON RIVER SOUTH OF HASTINGS-ON-HUDSON NY				
1372058	HUDSON RIVER BELOW POUGHKEEP				
1374019	HUDSON RIVER AT SOUTH DOCK AT WEST POINT NY				

7. Use the GE measuring tool (ruler) to find an approximate distance from Station # 1376304 (Hastings) to Station # 1359139 (Albany). _____.

8. What is the Elevation Difference between Station # 1376304 (Hastings) to Station # 1359139 (Albany)?

_____.

9. Calculate the slope in degree of the Hudson River from Albany to Hastings using:

Slope Angle = Inv Tan (Elevation Difference / Measured Distance) _____

What do you think causes the daily elevation highs and lows of the river?

What do you think causes the temperature of the water to change?

What questions do you have? _____
