

Name:

Predictions:

1. Given four rock types (Limestone, Shale, Sandstone and Granite) order from most to least likely to weather.

2. In the Adirondacks, there is a range in the acidity of the rain levels. At Location A, the rain that falls on the cliff side has a concentration of 0.1 M and at Location B the rain that falls on the cliff side has a concentration of 1.0 M. Which location is going to experience the most chemical weathering?

Data Collection:

3. Complete the tables below using the Chemical Weathering computer model. Choose four different acidity levels and test the affect the acidity has on each rock type. Record the number of ticks it takes for all of the rock to weather away. Stop at a maximum of 500 ticks.

Bumpy Terrain Off Data. (Make sure the bumby_terrain switch is turned off)

	Number of Ticks			
Acidity	Limestone	Shale	Sandstone	Granite

Bumpy Terrain On Data. (Make sure the bumby_terrain switch is turned on)

	Number of Ticks			
Acidity	Limestone	Shale	Sandstone	Granite

9. In Lake A is bedded with limestone and Lake B is bedded with quartz. In both locations 1.0 M acid rain falls. In Lake B 15 fish die, but in Lake A only 1 fish dies after this acid rain fall. Based on the mineral composition of the lake beds why were the fish in Lake B affected more than Lake A?
10. How many more times acidic is rain with a pH of 3 than rain with a pH of 5?
11. A chemist collected rain water from Rochester, NY and determined its concentration to be 0.00001 M. He then tested the rain water with litmus, bromcresol green and phenolphthalein what color would each indicator appear?