FLINN SCIENTIFIC

Name_____

Data Table

Chemical and Mechanical Weathering of Rock

Part 1. Mechanical Weathering

Marble Chips	Original Mass _____ g	Mass After 3 Minutes _____ g	Mass After 6 Minutes _____ g	Mass After 9 Minutes _____ g	Mass After 12 Minutes _____ g
	Original Observations	3-Minute Observations	6-Minute Observations	9-Minute Observations	12-Minute Observations
Halite Chips	Original Mass _____ g	Mass After 3 Minutes _____ g	Mass After 6 Minutes _____ g	Mass After 9 Minutes _____ g	Mass After 12 Minutes _____ g
	Original Observations	3-Minute Observations	6-Minute Observations	9-Minute Observations	12-Minute Observations
Granite Chips	Original Mass _____ g	Mass After 3 Minutes _____ g	Mass After 6 Minutes _____ g	Mass After 9 Minutes _____ g	Mass After 12 Minutes _____ g
	Original Observations	3-Minute Observations	6-Minute Observations	9-Minute Observations	12-Minute Observations

Part 2.

Geological Changes	Observations

Part 3.

Glacial Changes	Observations

Name_____

Part 4.

Ice Expansions	Observations

Part 5.

Expansion and Contraction Effects	Observations

Part 6.

Chemical Weathering	Marble	Granite
	20-Minute Observations	20-Minute Observations
	1-Day Observations	1-Day Observations

Part 7.

Oxidation	Initial Observations
	Observations After 2–3 Days

Part 8.

Organic Processes	Observations

Name_____

Post-Lab Questions

Part 1. Mechanical Weathering

1. What was the effect of the amount of time and the amount of weathering?

2. How did the mass of the marble chips change with the amount of time?

3. What do you think would happen to the marble chips if they were shaken for a day or longer?

4. How did the mass of the halite chips change with the amount of time?

5. How did the mass of the granite chips change with the amount of time?

6. What rock used in this activity is the most resistant to this type of mechanical weathering?

Part 2. Geological Changes

1. What happened to the two rocks as they were rubbed together?

2. What could this possibly be simulating?

Part 3. Glacial Changes

1. What happened to the surface of the ice cube?

2. Describe what happened to the surface of the polystyrene tray.

3. Predict what would happen if a glacier moved across the surface of land.

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Part 4. Ice Expansion

1. Explain what happened to the glass vial.

2. Give an everyday example of ice expansion.

Part 5. Expansion and Contraction Effects

1. Judging from the heating and rapid cooling of the glass vial in this procedure, what do you think happens to rocks as they are heated and cooled?

2. Give a real-life example of a rock being rapidly heated and cooled.

Part 6. Chemical Weathering

1. What changes were observed in each sample?

2. Did a chemical change occur? If so, what evidence was seen?

3. Based on the observations, what variables affect the rate of chemical weathering of rock?

4. What sample used in this activity is the most resistant to chemical weathering?

Part 7. Oxidation

1. What type of weathering occurred in this activity—mechanical or chemical? Support your answer with evidence.

2. What changes were seen after three days in the acidic solution?

3. What caused the changes to the pyrite chips?

Part 8. Organic Processes

1. How did the growing bean seeds affect the simulated rock in this procedure?

2. Name two everyday or common examples of "organic" soil disruption.