

Name: _____

Date: _____

Erosion Investigation

1. What is the purpose of this investigation?

2. Answer the questions in the table for your group's investigation.

Questions to answer for your investigation	Erosion Investigation Planning
What materials will you need for this investigation?	
What are the dependent variables you will be testing?	
What are the independent variables you will be monitoring?	
The Mars-like landscape will be different for each group. How can we make sure that the different landscapes ("mountains" or "flats") are not causing different outcomes?	
What is your initial hypothesis?	
What do you predict will happen to your dependent variable?	

3. Develop the procedure with your group. Make sure everyone agrees with each step before writing the next step. Your group will test water and one other liquid: vegetable oil, acetone, or isopropyl alcohol. Record the other liquid on the line below.

Our group is testing water and _____.

**NOTE FOR SAFETY: Acetone and isopropyl alcohol are both extremely flammable. Do not use any flame near them.*

- 1.
- 2.
- 3.
- 4.

- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

4. Record data in the “Group Results” column of the table during your investigation. Circle the liquids your group used in the investigation.

Liquid	Group Results	Class Results
Water		
Oil		
Acetone		
Alcohol		

5. Which liquid is the best candidate for having created the landforms you observed on Mars? Why do you think that?

6. After using the molecular models, how do you think the martian landscape was created? Draw on polarity and force interaction thinking in your response.

- How certain are you of this?
- How did your work with the molecular models inform your thinking?