Erosion Models Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Prediction about what the water will look like after rain event: |  |  |  |
| Soil Covering: | Bare: Topsoil Only | Leaves | Grass |
| Observations during and after the “rain event”: |  |  |  |

This demonstration shows the effect that plants have on soil erosion in our waterways. The top layer, called the **horizon**, of soil is where most of the nutrients are to help plants grow and maintain our food webs. If it gets washed away, or eroded, it clogs our waterways and removes vital nutrients. **Sediment,** which is fine materials that have been eroded, makes the water turbid or cloudy. Most animals and plants in the water cannot survive in waters with high **turbidity**. Allowing leaves and plants to act as natural sponges helps protect our soil and our waterways.

Claim-Evidence-Reasoning

Turn this worksheet over for sentence starter help.

Question: How do we reduce erosion into our waterways and keep turbidity low?

|  |  |
| --- | --- |
| Claim:  |  |
| Evidence: |  |
| Reasoning:  |  |

Claim, Evidence and Reasoning Sentence Starters

 **CLAIM** ● Directly answer the question/ prompt.

*Example Claim: My dad is a space alien.*

 Sentence Starters

● I observed \_\_\_\_\_\_\_\_\_\_\_\_\_ when \_\_\_\_\_\_\_\_\_\_\_.

● I compared \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_.

● I noticed \_\_\_\_\_\_\_, when \_\_\_\_\_\_\_.

● The effect of \_\_\_\_\_\_\_\_\_ on \_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_

**EVIDENCE** ● The scientific data that supports the claim.

○ Data are observations or measurements OR results from an experiment.

○ Specific Examples

○ Use numbers and data table information

*Example Evidence: My dad drinks green liquid, drives a spaceship, dresses oddly, speaks a weird language.*

Sentence Starters

● In the data …

● The evidence I use to support \_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_\_.

● I believe \_\_\_\_\_\_\_\_\_\_\_\_ (statement) because \_\_\_\_\_\_\_\_\_\_\_\_ (justification).

● I know that \_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_ because \_\_\_\_\_\_\_\_\_\_\_\_ .

● Based on \_\_\_\_\_\_\_\_\_\_\_\_ , I think \_\_\_\_\_\_\_\_\_\_\_\_ .

● Based upon \_\_\_\_\_\_\_\_\_\_\_\_ , my hypothesis is \_\_\_\_\_\_\_\_\_\_\_\_ .

**REASONING** ● Explains why the evidence supports the claim, providing a logical connection between the evidence and claim.

○ Why is the claim valid?

○ include general scientific principle

○ background/ prior knowledge



*Example Reasoning: The most logical conclusion we can draw from this evidence is that my dad is an alien. He drinks liquid that is the color of alien skin, speaks an alien sounding language, drives a spaceship and dresses like pictures of aliens, which leads us to conclude that he is not from Earth and is an alien.*

Sentence Starters

 ● Based on the evidence, we must conclude… because…..

● The most logical conclusion we can draw from this evidence is that…. because….

● These facts work together to build a case that… because…

● All of this proves that….. because…

● The reason I believe \_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_ .