



Inquiry Card

S.O.S. (Save Our Soil)

Type of Inquiry:

PEOE

Process Skills:

Observing, predicting, explaining, questioning, gathering data, comparing, contrasting.



The Scenario:

Erosion is our soil's worst enemy. Especially during the rainy season, water can wash away nutrients, reducing the quality of the soil. The young scientists will use funnels filled with soil. They will simulate heavy rain or flooding by adding large amounts of water and collecting the runoff in a glass container under the funnel. They will then compare the clarity of the water in each sample.

Open-Ended Inquiry Questions:

- If I add vegetation to my soil, what will happen to the runoff water?
- What type of vegetation can better protect the soil from erosion?

Instructions:



1. Give the instructions to the young scientists on how to conduct the experiment.
 - Using funnels filled with soil, you will simulate heavy rain or flooding by adding large amounts of water and collecting the runoff water in a glass container. You will have one funnel with only soil and one funnel with soil and vegetation. You will then compare the clarity of the runoff water.
2. Let them PREDICT what will happen and EXPLAIN their prediction.
3. Let them prepare the different samples (with vegetation and without vegetation) and run water through the soil. Let them write their OBSERVATIONS and EXPLAIN them based on their current knowledge.
4. Brainstorm with the young scientists what they could change for the next cycle of the PEOE.
5. Repeat the cycle by changing only one variable at a time.

Possible Independent Variables:

Presence of vegetation, density of the vegetation, type of vegetation, presence of straw.



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