### Modified In-School Off-School Approach Modules (MISOSA) Distance Education for Elementary Schools SELF-INSTRUCTIONAL MATERIALS



## HOW THE SLOPE OF LAND AFFECTS THE AMOUNT OF SOIL CARRIED AWAY



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# HOW THE SLOPE OF LAND AFFECTS THE AMOUNT OF SOIL CARRIED AWAY



The carrying away of soil is called soil erosion. Can you name the agents of soil erosion? Do the activities below.

- Α.
- Look for the factors that bring about soil erosion in the maze. Look horizontally and vertically. You must find at least four in the maze.
- Write your answer in your notebook.

Κ	Μ	Α	Α	С	Ε
I	S	Ν	S	Κ	Y
S	S	I	М	В	Α
Μ	Ε	М	L	Ρ	Ν
0	W	Α	Т	Ε	R
0	I	L	S	0	Α
I	Ν	S	Ν	Ρ	С
Ν	D	Ν	Μ	L	С
Е	Ε	Μ	0	Ε	В

Β.

Go out and observe some animals in your community. In what ways do animals erode the soil? Do you know of other animals that help erode the soil?





### Where do you live? Do you live on plain or on a mountainside? In which place do you think more soil is eroded? Let's find out.

### Activity 1



#### Investigate

- Get three wooden boxes.
- $\Phi$  Fill each box with soil.
- Set the three boxes as shown above.
- Slowly pour water into each box.
- The height from which the water is released should be the same.
- Compare the amount of soil washed away from each box.

Answer the following questions:

- 1. Did the soil in the first box flow with the water? Why?
- 2. How much soil in the second box was carried away by the water?
- 3. How about in the third box?
- 4. Which variable caused the differences in the amount of soil that was carried away in the experiment?



### **READ AND LEARN MORE:**

The experiment showed that water carries away soil when the land has a slope. The steeper the slope, the more soil is carried away by running water.

Where rain falls, some water sinks into the ground while some water flows somewhere else. The erosion of soil caused by running water depends on the slope of the land, the amount of rainfall and the presence of plants.

Mountains and valleys change as they grow old. Erosion by wind and water carries away broken particles of rocks and soil until the mountains become level lands or plains.

Plateaus also change due to erosion. The top of some plateaus become rounded. Valley may also form when rivers cut through the plateaus. Streams can curve valleys.

Erosion of land has been going on for millions of years and will continue as long as there is soil and there are wind and water that will move it.

Rivers are formed when rain water coming from mountains moves in a low place. This water makes its own path by eroding the soil. The river begins to grow when more water flow is added into it. It will eventually branch out to different direction as you have observe in activity 1,2 and 3.

It takes thousand or even million of years for erosion to change the shape of the land.

### I learned that:

- Water carries away soil when the land has a slope. The steeper the slope, the more soil is carried away by running water. The erosion of soil caused by running water depends on the slope of the land and the amount of rainfall.
- Erosion by wind and water carries away broken particles of rocks and soil until the mountain become level lands or plains.



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- $\oplus$  Study the picture above.
- Applying what you have learned on soil erosion, which land form will you choose to plant more trees, Picture A or B? Why?
- If you are to build it in a high slope? Why?



A. Study the set of pictures in each number. Choose in which picture will erosion create the greatest damage/harm. Explain why?







