



Geosphere



Biosphere



Hydrosphere



Atmosphere

Unearthing Clues

Station #1:

What observations can you make as the demonstration is done? Describe or sketch these observations.

Soil Only

Small Plant in Soil

Large Plant in Soil



Explain how the plant and soil interact in this demonstration.

In the book, Hugh Bennett talks about plants being planted in the wrong soils. Why do you think it is important for farmers to know about both plants and soil?



Station #2:

Which sphere does the soil represent? The grass?



What observations can you make as the demonstration is done? Describe or sketch these observations.

Soil Only

Soil with New Grass

Soil with Grass

Which pan was most affected by the rain? Why do you think this happened? Explain your thinking.

Why would more mature or older plants be important on a farm? How could a farmer make sure there was some of each type (new and more mature) plants?

Station #3:

What observations can you make as the demonstration is done? Describe or sketch these observations.

Pan tipped at 15 degrees.

Pan tipped at 30 degrees.

Compare and contrast the two pans and what happened.

In the story Hugh Bennett described the need to use different types of plowing and different types of steps or levels. Why do you think he suggested this based on your observations above?

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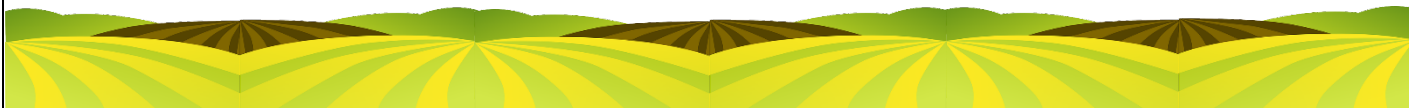
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Station #4:

In this activity, you will be observing what happens to soil when you blow across it using a straw. What sphere do you think this represents?

What observations can you make as the demonstration is done? Describe or sketch these observations.

First try with blowing through a straw.

Second try when you blew harder through a straw.

How do you think this model represents what happened in the Dust Bowl?



What do you think would happen if these trays had plants in them and you tried to blow across them? Explain your thinking.

Solving the Soil Problem

In the story, Hugh Bennett was trying to help teach people about reasons that the Dust Bowl was happening. He's asked for your help in explaining these points.

His point is on the left and you are asked to explain what happens with each point and provide evidence from your investigations.

Hugh's Reason	My explanation and evidence.
Rains had washed soils away.	
Winds had blown soil away.	
Soil erosion was destroying America's farmlands.	
Huge dust storms picked up dry soil and blew it away.	
Water was allowed to run off the fields taking soil with it.	
Farmers needed to understand more about plants and soil.	

