For each of the following experiments, write down the Independent Variable and the Dependent Variable. (Remember, the Independent Variable is the one thing in the experiment that changes, and the Dependent Variable is the thing you measure.)

A science class wants to know if watering a plant with cold water or with hot water will make it grow taller. The science class has two plants in the classroom and every day for one month they water one plant with cold water and one plant with hot water. At the end of the month, the science class measures the height of the two plants.

Independent Variable:

Dependent Variable:

Mariah wants to know what type of laundry detergent will get her family's clothes the cleanest. She buys one bottle of Tide and one bottle of Gain. Mariah washes half of her family's clothes with Tide detergent and half of her family's clothes with Gain detergent. After every load of laundry, Mariah measures the number of stains left on the clothes. After two months of doing laundry using the two different detergents, Mariah adds up the number of stains for the Tide group, compares it to the number of stains for the Gain group, and finds that the clothes washed with Tide got the cleanest.

Independent Variable:

Dependent Variable:

A scientist wants to know what color of flower bees like the best. The scientist plants 4 different flowers- one red flower, one blue flower, one purple flower and one yellow flower. The scientist then sets up a camera and records, or measures, how many bees fly to each flower over a 3-day period. The scientist watches the video footage and learns that more bees flew to the blue flower than any other color.

Independent Variable:

Dependent Variable:
A candy store manager wants to know which kind of chocolate melts the fastest, dark chocolate or milk chocolate. The candy store manager puts a dark chocolate bar and a milk chocolate bar outside in the sun for the same amount of time, and then measures how long it takes each one of them to melt.

Independent Variable:

Dependent Variable:
1.) What is soil texture?

2.) What is sand?

3.) What is silt?

4.) What is clay?

5.) What is the difference between particle density and bulk density?

6.) What are the 4 types of soil structures?

7.) What are the 4 types of soil pans?

8.) Explain how you can tell the health of a soil by looking at its colors.
# Importance of Soil Notes

*Use with Importance of Soil Notes Powerpoint*

| Name ____________________________________________ | Period _______
|--------------------------------------------------|---------------|

1.) What caused the Dust bowl?

2.) Where is soil located in relation to bedrock and the atmosphere?

3.) What are plant nutrients?

4.) What two types of nutrient cycles are involved with soil?

5.) What are the 4 needs of soil?

6.) What is anchorage?

7.) What is the soil matrix?

8.) What are 4 human uses for soil?
Plants and Animal Life in the Soil Notes

Use with Plant and Animal Life in the Soil Notes Powerpoint

<table>
<thead>
<tr>
<th>Living thing found in the soil</th>
<th>Purpose/Niche</th>
<th>Advantages/Disadvantages of Living Thing</th>
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</table>
1.) What is Tillage?

2.) What are the 3 goals for tillage?

3.) What is Conventional tillage?

4.) What is Conservation tillage?

5.) What is the difference between Conservation and Conventional tillage?

6.) What are the advantages and disadvantages of crop rotation?

7.) What are the advantages and disadvantages of dryland farming?

8.) What is LISA?