Name_____Hour____

Where Does the Mass of a Plant Come From When It Grows?

Knowledge Probe: What do plants need to grow?

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Part 1: Does plant mass come from water?

Prediction:

_____

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_____

Investigation Plan: Using these materials, design an investigation that will prove whether or not the mass of plants comes from water.

* soil
* cup
* Wisconsin Fast Plant Seeds
* Scale
* Graduated cylinder

Questions to consider:

What are you testing (independent variable)? _____

What are you measuring (dependent variable)? _____

What will have to stay the same (constants)?

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What will you be comparing your experiment to (control)?

_____

Procedure: **LIST** your procedure in the space below. Get it checked by your teacher before you start your experiment.

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Data Table: Design a data table that you can use to record the data you collect throughout your experiment in the space below. Get it checked by your teacher before you begin your experiment.

D**ata Analysis:** Using graph paper, design a table or a graph that best organizes the data from all the groups in your class. This should help you answer the question of whether or not the mass of plants comes from water. Staple it to the back of this lab. Use your graphing packet to help you.

Evaluation:

1. What was the starting mass of the cup, soil, and seed? _____
2. What was the ending mass of the cup, soil and plant? _____
3. What was the change in mass from beginning to end of the cup, soil and plant? _____
4. How much total water was added to the cup and soil? _____
5. What could **not** be controlled in the experiment?

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CER: Does plant mass come from water?

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Part 2: Does plant mass come from soil?

Prediction:

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Investigation Plan: Using these materials, design an investigation that will prove whether or not the mass of plants comes from the soil.

* dried soil
* cup
* Wisconsin Fast Plant Seeds
* Scale
* Graduated cylinder
* Filter paper
* Funnel

Questions to consider:

What are you testing (independent variable)? _____

What are you measuring (dependent variable)? _____

What will have to stay the same (constants)?

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What will you be comparing your experiment to (control)?

_____

Procedure: LIST your procedure in the space below. Get it checked by your teacher before you start your experiment.

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Data Table: Design a data table that you can use to record the data you collect throughout your experiment in the space below. Get it checked by your teacher before you begin your experiment.

D**ata Analysis:** Using graph paper, design a table or a graph that best organizes the data from all the groups in your class. This should help you answer the question of whether or not the mass of plants comes from the soil. Staple it to the back of this lab. Use your graphing packet to help you.

Evaluation:

1. What was the starting mass of the cup? _____
2. What was the starting mass of the seed? _____
3. What was the starting mass of the dried soil? _____
4. What was the ending mass of the cup?_____
5. What was the ending mass of the plant?_____
6. What was the ending mass of the dried soil? _____
7. What was the change in the mass of the cup from beginning to end? _____
8. What was the change in mass of the plant from beginning to end? _____
9. What was the change in the soil mass from beginning to end?_____
7. What could not be controlled in the experiment?

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CER:Does the mass of a plant come from the soil?

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