Scientific Method Study Guide

Vocabulary:

Classify: group objects according to similar properties or characteristics

Communicate: to tell others about findings

Hypothesis: a prediction of outcomes in an investigation

(Plural: hypotheses)

Infer: to reach a conclusion based on evidence

Observation: what you see, hear, taste, smell, or touch

Predict: an idea about what will happen in the future

Sequence: to put things in order from beginning to end

Scientific Observation: one that anyone can make and the result will always be the same

Unscientific Observation: an opinion which may not be agreed upon

The Scientific Method

1. Question
2. Hypothesis
3. Procedure
4. Results
5. Conclusion

Ask a question

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Construct a hypothesis

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Test with experiments

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Analyze the results

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Formulate a conclusion

An Investigation

Paper Towel Test

Question: Will Bounty brand or school brand paper towel absorb the most water?

Prediction: We predict that Bounty will absorb the most water because it feels softer and thicker.

Materials: Bounty paper towels, School brand paper towels, two 100 ml beakers, Water, Pencil, Paper

List of steps (procedure): 1. Cut paper towels to 5 inch by 5 inch squares.

2. Place 80 ml of water into 2 beakers

3. Dip store brand paper towel into one beaker and Bounty brand paper towel into the other until soaked.

4. Lift from water and drip for 15 seconds.

5. Measure the amount of water left in the beaker and subtract it from the 80 ml of water you started with.

6. Repeat procedure two more times.
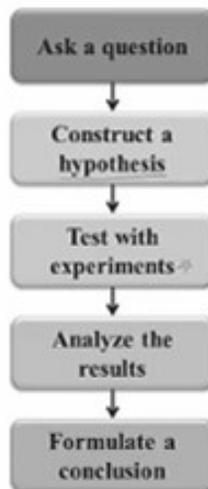
7. Record data:

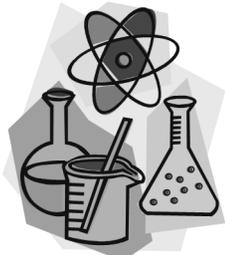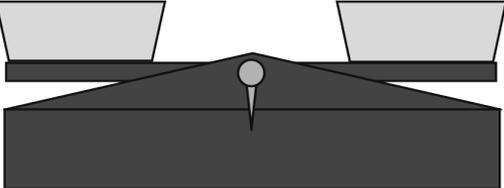Results: The chart shows the amount of water absorbed by each paper towel.

Brand of Towel	Test 1	Test 2	Test 3
Bounty	50 ml	57 ml	61 ml
School Brand	22 ml	28 ml	26 ml

Conclusion: We were right, Bounty paper towels absorb more water.

Scientific Tools	Uses	Picture
beaker, graduated cylinder, graduated syringe	To measure volume of liquids Milliliters (mL) Liters (L)	
Meter stick, ruler, measuring tape	To measure length, width, height, or distance Centimeters (cm) Meters (m)	
Forceps, tweezers	To pick up small objects	
Tuning fork	To make vibrations which make sound	
Balance	To compare mass of objects Grams (g)	
Thermometer	To measure temperature Fahrenheit (°F) Celsius (°C)	