Diaper Disaster

These are words that nobody wants to hear! Challenge your students to put their knowledge of science to the test and save parents from this nightmare scenario! In this activity, your students will identify controls and variables and work through the basic steps of science to test the effectiveness of various diaper brands.

Materials:
3 separate newborn diaper brands (varying in cost) - 1 of each diaper per group
Water
Graduated cylinder
Stopwatch

Procedure:
Calculate the cost of each diaper by dividing the cost of the package by the number of diapers.
Allow students to make observations about each diaper.
Students will develop a hypothesis.
Note: To allow for differentiation, you may choose to encourage students to design the experiment themselves or you can help them define the following variables and constants.
Identify the independent variable (the diaper brand).
Identify the dependent variable (the amount of absorption).
Discuss control groups (comparing each diaper to one another acts as the control in this scenario).
Identify experimental constants (how to check for leakage, how much water to pour, where to pour, speed of pour, time in between pours, etc).
Students will carry out their experiment until they determine a "winner".
They will develop a conclusion explaining the outcome of their hypothesis and discussing the data and variables they tested.

The Effect of
_____ on _____
(independent variable) (dependent variable)

Science is all about investigating questions or problems in order to find a solution. This means that curiosity is one of the most important aspects of science! Think about the questions you come up with on a daily basis. Where do they come from? What makes you question the world around you? Every question you develop comes from an observation, so you must begin any scientific process with your five senses!

You will design your own procedure based on the following information. In order to carry out a successful experiment, you must organize your initial observations, your hypothesis, your subjects or groups, and the variables you will be manipulating and observing.

Observations:

_____

_____

Hypothesis: Is it testable? Be sure to include both variables!

_____

_____

Independent (manipulated) variable:

_____

Dependent (responding) variable:

_____

Control Group:

_____

Control Variables/Constants: Make sure they're kept the same throughout the experiment!

_____ _____ _____

_____ _____ _____

Procedure: Describe the steps you will take to carry out the process of testing your hypothesis:

1. _____

   _____

2. _____

   _____

3. _____

   _____

4. _____

   _____

5. _____

   _____

Data: Use another sheet of paper to construct a data table for your experiment.
Conclusion: Write a detailed summary describing the outcome of your experiment. Was your hypothesis correct? Why or why not? What could be done to improve your experiment?