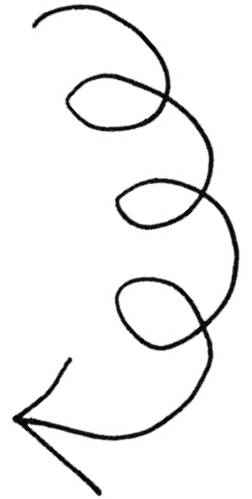


YOU'LL RECEIVE

- **3 weeks of science plans for back to school**
- **Step-by-step teacher lesson plans**
- **Printables for students**
- **Material Lists**
- **Engaging Ideas**

SCIENCE LESSONS

- Independent and Dependent Variables
- Experiments vs. Investigation
- Control vs. Experimental Groups
- Experiments Should be Replicable
- Qualitative vs. Quantitative Observations
- Repeated Trials
- Steps of the Scientific Method
- Scientific Method is Not Always Used by Scientists



SCIENCE EXPERIMENTS

- UnPOPpable baggies
- Which glue stick brand works the best?
- Which hoop flyer design will travel the farthest distance?
- Which keeps your hands the cleanest?
- Tallest and Strongest Cup Towers





WHICH GLUE STICK BRAND WORKS THE BEST?

Procedure:

1. In order for this experiment to be valid, you'll want to make sure you keep as many variables the same as possible. You'll want to use the same paper, the same amount of glue, the same places you place glue in the four corners + together. Repeat for all three.
2. Place glue in the four corners + together. Repeat for all three.
3. Leave in one place to dry.
4. Once the papers are dry, pull them together the same way.



Materials:

- 3 Different Glue Stick Brands
- Paper

Brand #3:

Cra-Z-Art

ages

are

+



Name:

UNPOPPABLE BAGGIES

Materials:

- Water
- Ziploc Baggies
- Sharp, round pencils

Procedure:

1. Before beginning, make sure you have round pencils that have been sharpened.
2. Fill a Ziploc Baggie half way with water. Seal the bag closed.
3. STOP! Make a prediction. What do you think will happen when you push a pencil through the bag of water?

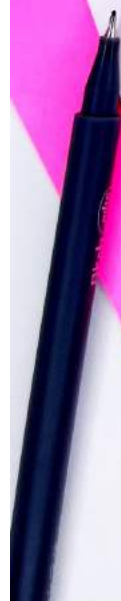
I predict water will come out of the bag.

4. Hold the top of the bag with one hand. Push the pencil right through one side and halfway out the other. Be careful not to push the pencils all the way through the holes or you'll end up with a mess on your hands!
5. If you are feeling brave, try this with as many pencils as possible.

What do you observe happen? The pencil went in, but water did not come out.

What do you think is the reason for this?

Draw a picture of your bag after you've completed these steps!



Name: _____

Step #1: Ask a Question

Step #2: Form a Hypothesis

Step #3: Design a Controlled Experiment

Step #4: Collect and Analyze Data

Step #

Name: _____

Step #1: Ask a Question

Which Brand of Paper Towels Will Absorb the Most Water?

Step #2: Form a Hypothesis

I believe Bounty will be absorb the most water because it is most expensive

Step #3: Design a Controlled Experiment

Materials: 3 different brands of paper towels, 1 cup of water, plate or container for under the paper towels, measuring cups

Process:

1. Take one sheet of paper towels from each brand and label them. Put the paper towel on top of a plate.
2. Gently pour 1/3 cup of water over the paper towel and discard it.
3. Wait 30 seconds. Lift up the paper towel into an empty measuring cup.
4. Pour the remaining water from the plate.
5. Record the amount of water left on the plate.
6. Repeat the steps for each paper towel brand.

Step #4: Collect and Analyze Data

Paper Towel Brand	Amount of Water Not Absorbed
Bounty	1/2 cup
Costco	3/4 cup

Which brand had the least amount of water remaining?
Bounty

Which brand had the most amount of water remaining?
Costco

Step #5: Draw a Conclusion

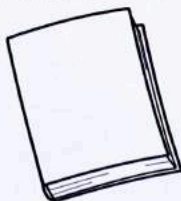
After completing the experiment, I found that the brand that absorbed the most water was Costco. The brand that absorbed the least paper towels was Bounty. In the

Name: _____

How Far Will the Ball Roll Down the Ramp?

Materials:

- 4 books
- Ruler
- Ball



Procedures:

1. Create a ramp from the 4 books.
2. Roll the ball down the ramp.
3. Using the ruler, measure how far the ball rolls.

	Trial 1
Distance	

Did your classmates all create a ramp?

Did your classmates all roll the ball the same way?

Why do you think there are differences?

Create a new list of student complete

Draw the ramp you created.

Name: _____

WHICH BREAD WILL SHOW MOLD FIRST

Procedure:

1. Label the baggies with a Permanent Marker: Control, Clean Hands, Dirty Hands.
2. Use the paper towel to place the control slice of bread into the baggie.
3. After touching door handles, desks, chairs, etc., rub your hands on both sides of the Dirty Hands bread. Place it into the baggie.
4. Wash your hands with soap and water. Dry completely. Then rub your hands on both sides of the Clean Hands bread. Place into the baggie.
5. Observe for several days. Record your results.

Materials:

- 3 slices of bread
- 3 Baggies
- Permanent Marker
- Soap and Water
- Dirty Hands Paper Towel

	Control	Clean Hands	Dirty Hands
Day 1			
Day —			
Day —			

What is the control group in this experiment? How do you know? _____

Why do experiments have control groups? _____

What are the variables in this experiment? _____

Name: _____

TALLEST AND STRONGEST CUP TOWERS

Materials:

- Cups
- Measuring Tape
- Textbooks

Procedure:

1. Your goal is to create two different towers. First, you'll build the tallest tower possible using the cups given to you. Then, you'll take those same cups and create a tower that can hold the most weight.
2. Before beginning, take a few minutes to draw a plan for each of the towers below. Remember, you can't use tape, scissors, or any other supplies.
3. You'll now have 10 minutes to create the tallest tower. If it doesn't exactly match your plan, that's okay. You may need to make adjustments as you go. If you finish before time is called, try to make the tower even taller.
4. Measure and record the height of the tower. Also, draw a quick sketch of what your tower actually looked like at the end of the building time.
5. Now, you'll take those same cups and build a tower that can hold the most weight. Your tower needs to be more creative than just leaving the cups stacked. You'll have 10 minutes to create the strongest tower. Draw a quick sketch of the tower once it's finished.
6. Once time is called, set textbooks (one at a time) on top of your tower. Record the number of books that your tower could hold before crashing.

	Tallest	Strongest
Plan for Tower		
Final Tower		
	How tall was your final tower? _____	How many books could your tower support? _____
	What was the height of the tallest tower in your class? _____	How many books could the strongest tower in your class hold? _____

Ask a Question

- A testable statement

Design a Controlled Experiment

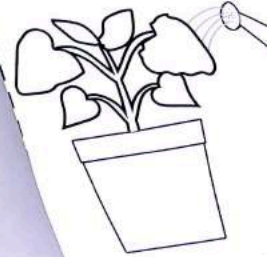
Collect and Analyze Data

Draw a Conclusion

- separated from rest of experiment
- No variable changes



Experiment



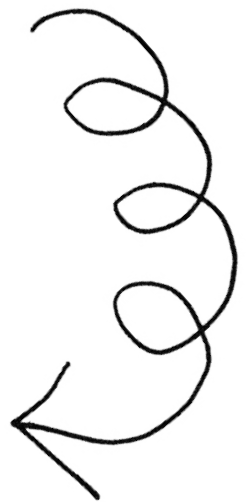
Dependent Variables

Independent Variables

INCLUDED:

3 Weeks of Science Lesson Plans

- 5 experiments & investigations
 - Student recording sheets
- 8 Scientific Method Lessons
 - Student foldable notes
 - Teacher lesson plans
 - Hands on activities
 - Exit Slips



Name: _____

TALLEST AND STRONGEST CUP TOWERS

Procedure:

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4. Measure and record the tower actually looked like
5. Now, you'll take those s
6. Once time is called, se

Plan for Tower

Final Tower

- Materials:
- Cups
 - Measuring Tape
 - Textbooks

Name: _____

WHICH KEEPS YOUR HANDS THE CLEANEST?

Procedure:

1. Label each baggie "Untouched", "Soap and Water", and "Hand Sanitizer".
2. Place an untouch
3. Wash your han
4. Touch other i
5. Close all b
6. After a

Materials:

- Bread
- Hand Sanitizer
- Soap and Water
- Baggies
- Marker

Name: _____

WHICH HOOP FLYER DESIGN WILL TRAVEL THE FARTHEST DISTANCE

Procedure:

1. Cut strips of the paper and create a loop.
2. Tape loops on to the straw.
3. Create three different designs to see which on

Design #1

Design #2

Design #3

Sketch

Sketch

Trial 1:

Trial 3:

your favorite? Why?

Purchase now to see your students engaged while practicing science skills!