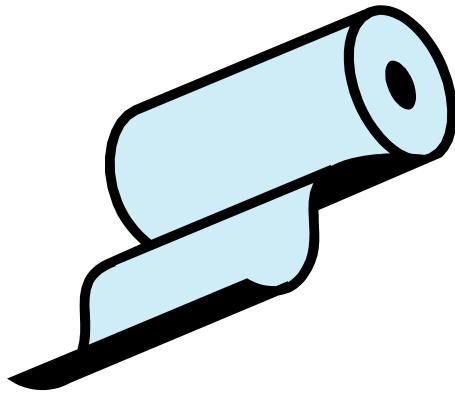


Curriculum Embedded Performance Task
Elementary School Science
Content Standards 3.1, 3.2 or 3.4

Soggy Paper

Student Materials



Connecticut State Department of Education
Bureau of Curriculum and Instruction

Soggy Paper

A Guided Exploration of Properties of Different Papers

ENGAGE:

Look around the room.

How many things can you see that are made of paper?

Is all paper the same? Can you find different kinds of paper?

List of properties we should look at:

EXPLORE:

In this activity, you will explore some of the properties of different kinds of paper.

1. GATHER materials for your group:

OBSERVE the properties of the different papers with and without the hand lens. Record your words and drawings in the following table:

PAPER TYPE	Properties Observed Without Magnifier	Properties Observed With Magnifier
Paper towel		
Tissue		
Napkin		

2. The ability of paper to hold water is called “**absorbency**.”

THINK about the properties you observed. Which properties might be related to how well the paper can hold water? ”.

3. PREDICT which paper type might hold the MOST water,

Most: _____

Which one might hold the LEAST water:

Least: _____

I think this because

Now you're ready to test your prediction.



EXPERIMENT #1: WHICH TYPE OF PAPER HOLDS THE MOST WATER? In this activity, you are going to pour 25ml of water onto a plate. Then you will count how many squares of each paper type it takes to soak up all the water.

1. Label three plastic cups: “towel”, “tissue” and “napkin”.
You will use the cups for storing the wet paper squares.
2. Measure 25 milliliters (mL) of water into the graduated cylinder. Decide which paper you want to test first.
3. Pour 25 mL of water onto the plastic plate.
4. Lay one paper square over the water spill, and leave it there until you can tell that it is not absorbing any more water.
5. Pick up the wet paper square and hold it over the plate until it stops dripping. Put the wet paper square in the labeled cup.
6. Keep using squares until there is no more water left in the plate.

7. Count how many paper squares you use to soak up all the spilled water. Record the number of squares you use for each paper type in a data table:

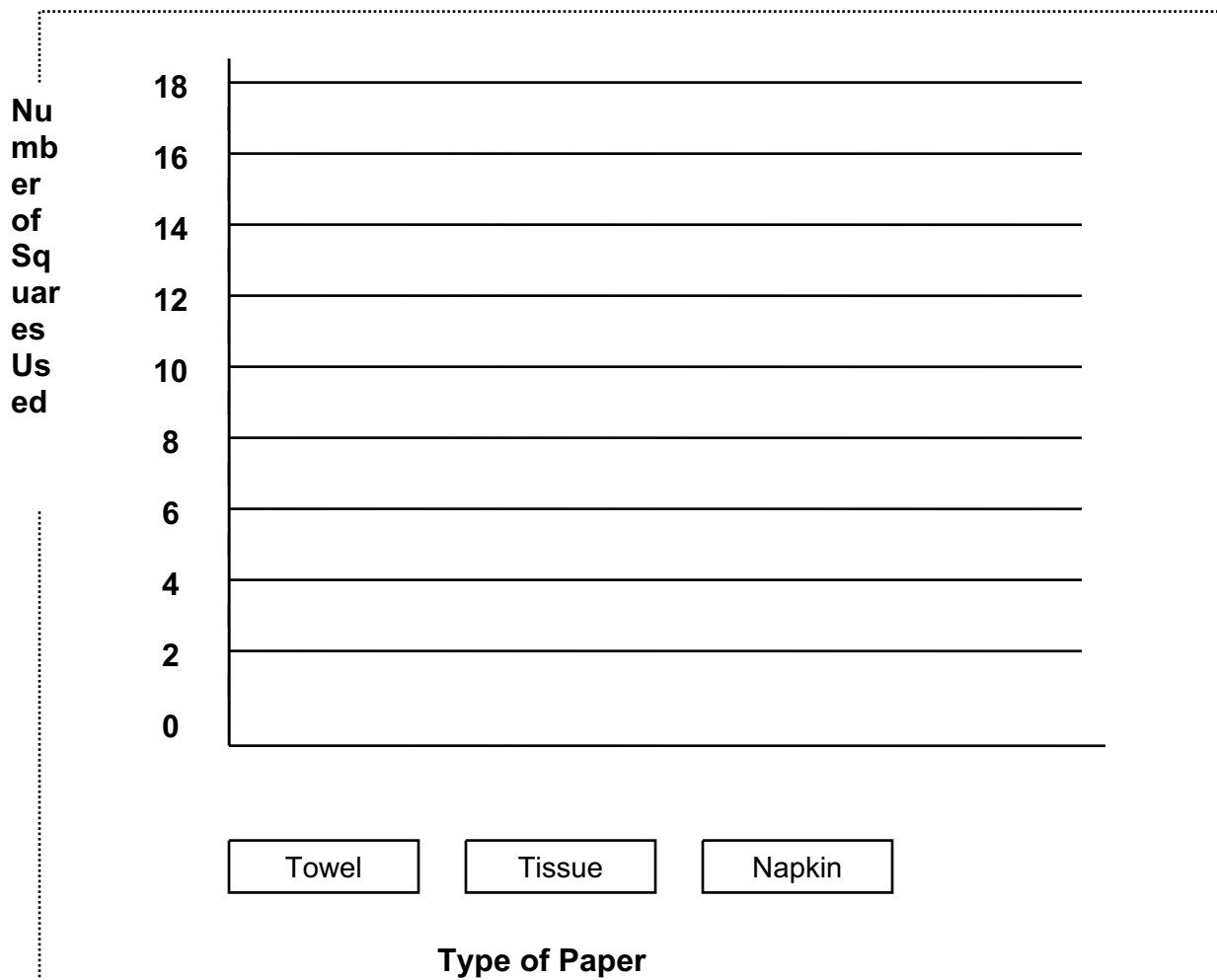
Type of Paper	Amount of Water Spilled	Number of Squares Used
Paper Towel	25 mL	
Tissue	25 mL	
Napkin	25 mL	

8. Test each of the other types of paper squares in the **SAME WAY**. Write the number of squares in the table above.

Graph Your Data:

Make a bar graph to compare how many squares of each paper type were needed to absorb 25 mL of water:

Water Absorbency of Different Paper Types



EXPLAIN

Think About Your Data:

1. Which paper type used the fewest squares to soak up all the water? _____

Which paper type used the most squares to soak up all the water? _____

2. Which paper type is the most absorbent? _____

Which paper type is the least absorbent? _____

Explain your conclusion: _____

What properties did the absorbent paper have that the less absorbent paper did not have?

4. **SHARE** your data and discuss your conclusions with the whole class.

Learn more about paper, trees and conservation

Many things we use every day are made of paper. We cut down trees and chop them into tiny pieces to make different kinds of paper. It takes many trees to make enough paper for all the things we use.

Trees are important to people and our environment in many other ways. People and animals eat the nuts and fruits that grow on trees. Birds, squirrels and other living things make their homes in trees. The roots of trees keep the soil from being washed away by rain. Many other plants grow in the soil.

We can conserve trees by using less paper. This can be done by recycling old paper or by reducing the amount of paper we use.

ELABORATE

EXPERIMENT #2: WHICH PAPER TOWEL BRAND IS BEST?

You may have seen TV commercials that claim that a certain type of paper towel is the “quicker picker upper”. But, can you believe everything you hear on TV? Is one brand of paper towel really better than the others? In this experiment, you will use what you learned in Experiment #1 to find out more about the properties of different paper towels.

1. Cut squares from several brands of paper towels. Gather the materials your teacher puts on the table.
2. Look carefully at the different types of paper towels with a magnifying lens and fill out the observation chart on the next page. TALK with your partners about which properties might make the paper towels more absorbent.

OBSERVE the properties of the different papers with and without the hand lens. Record your words and drawings in the following table:

PAPER TYPE (write the name)	Properties Observed Without Magnifier	Properties Observed With Magnifier

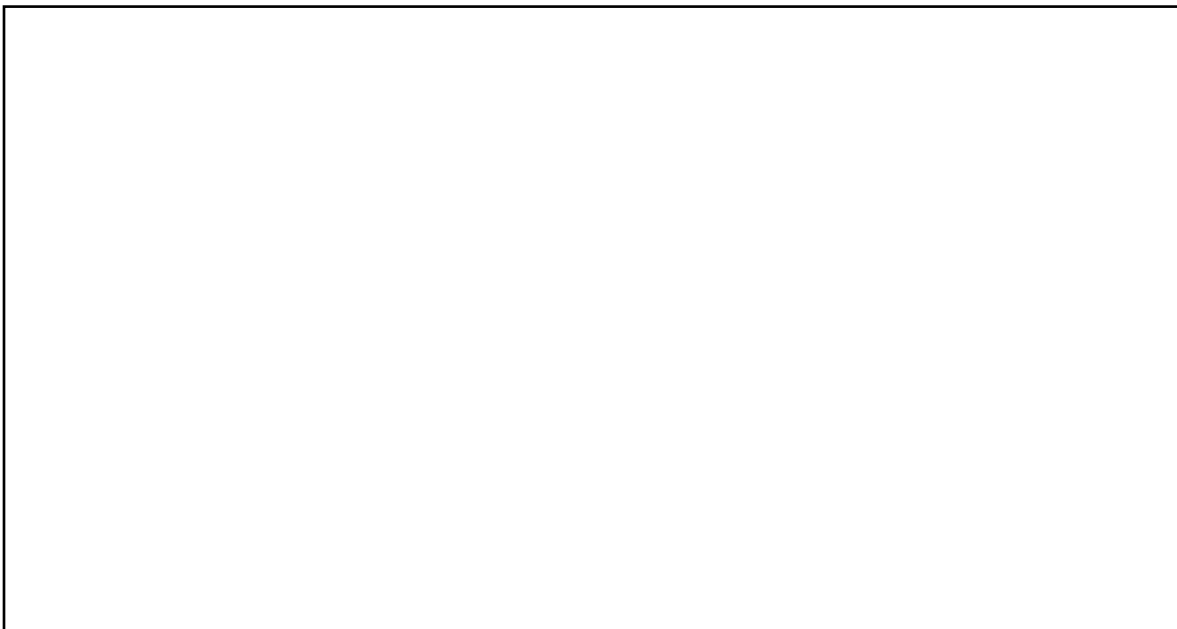
4. PREDICT which paper type might hold the MOST water,

Most: _____

Which one might hold the LEAST water:

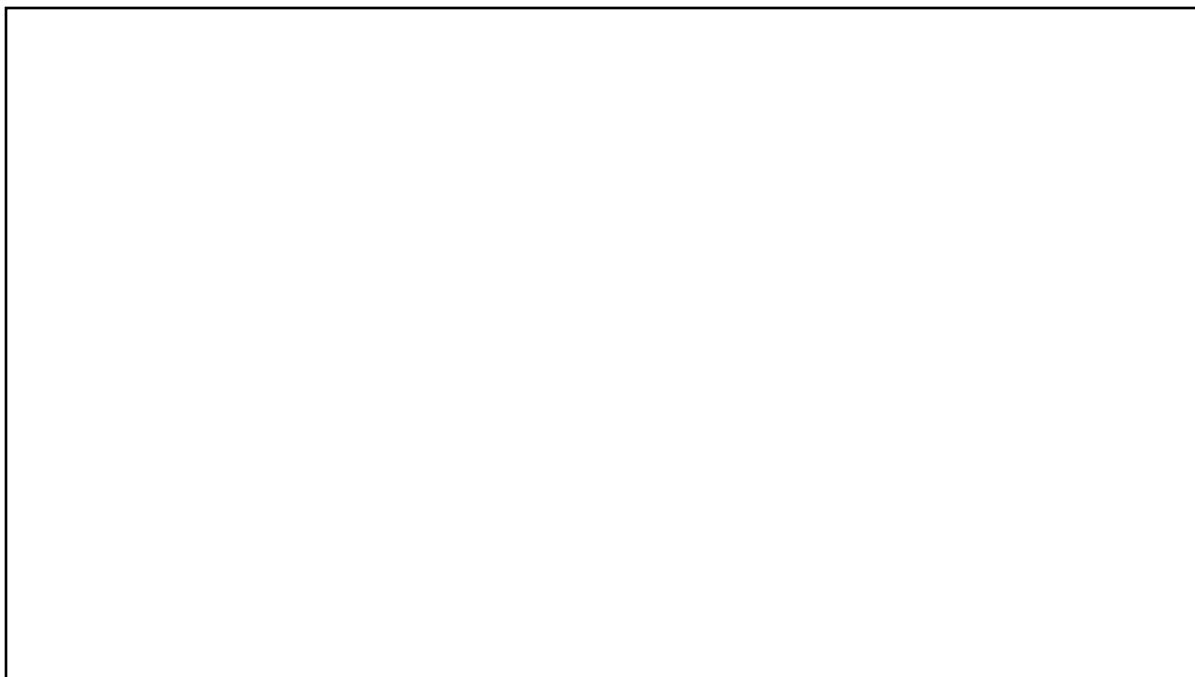
Least: _____

I think this because



3. WRITE the science question you are trying to answer.

4. Draw on the next page the steps you will do to complete your experiment. Remember to label your measurement tools and the types of paper you are testing.



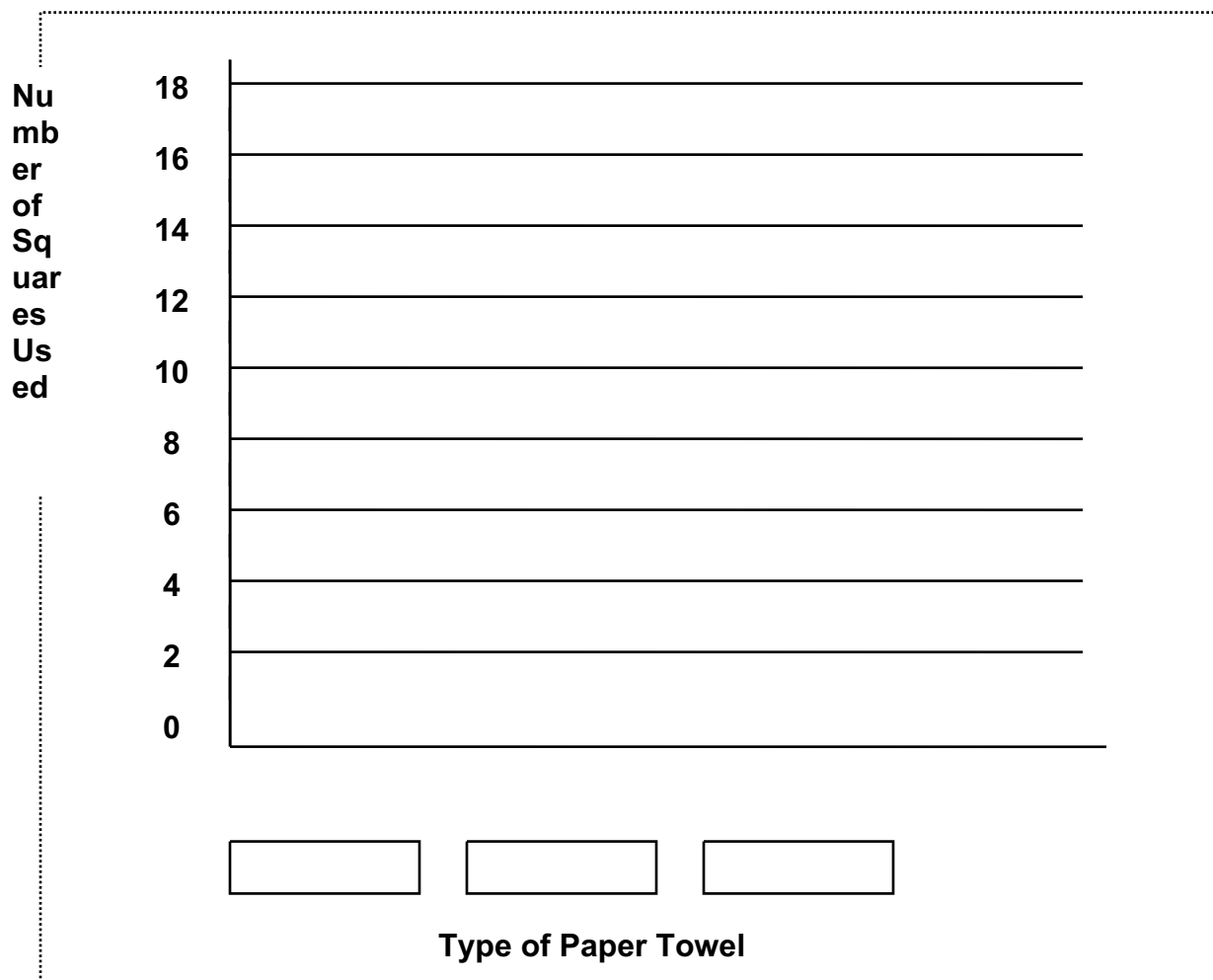
DATA

5. Fill out the data table below

Type of Paper (write the name)	Amount of Water Spilled	Number of Squares Used
	25 mL	
	25 mL	
	25 mL	

6. Complete the graph on the next page:

Water Absorbency of Different Paper Towels



Communicate Your Learning:

Write a letter to someone in your family who may shop for paper towels. Explain to them which paper towel they should use and support your opinion with your science data. After you are finished with your first draft share your letter with your partner and talk about how you can make it better. Be sure to sign and date your letter!

