NAME

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PAPER TOWEL ABSORBENCY LAB

01 QUESTION

How does the brand of paper towel change how much water it can absorb before dripping?

02 PREDICT BEFORE YOU MEASURE

WHICH BRAND MAY HOLD THE MOST WATER BEFORE THE FIRST DRIP?

○ Brand A ○ Brand B ○ Brand C ○ not sure yet

Predict before testing; a thicker or more textured appearance does not guarantee the highest measurement.

03 VARIABLES

I CHANGE (INDEPENDENT)	I MEASURE (DEPENDENT)

I KEEP THE SAME (CONTROLLED) · CHANGED: PAPER TOWEL BRAND. MEASURED: CLEAN-WATER VOLUME AT FIRST VISIBLE DRIP IN TWO TRIALS AND THE AVERAGE. KEEP SQUARE AREA, DRIP ENDPOINT AND SLOW ADDITION METHOD THE SAME.

04 MATERIALS

- ☐ Three paper towel brands
- ☐ Two equal-area squares per brand
- ☐ Catch bowl or tray for each trial
- ☐ Clean water and graduated cylinder or dropper
- ☐ Ruler, scissors, labels and drying cloth

05 PROCEDURE

SAFETY Add water slowly and steadily — pouring too fast can make a towel drip early even if it could have absorbed more given time. Cut every brand's test sheet to the exact same size, since a bigger sheet naturally holds more water regardless of the brand.

1 **LABEL EQUAL SQUARES** Label Brand A, B and C. Cut two equal-area samples from each brand; place every trial over its own tray. ☐

2 **DEFINE THE ENDPOINT** Use clean water and stop at the first visible drip passing through the towel. ☐

3 **ADD SLOWLY** Add water to the center of each first sample in a consistent slow manner. Record total volume in milliliters at the first drip. ☐

4 **REPEAT AND AVERAGE** Use the second fresh square for each brand. Add water the same way, record the first-drip volume and average both trials. ☐

5 **COMPARE AND CLEAN** Compare averages. The test measures amount before dripping, not absorption speed; wipe drips and dry the floor. ☐

DATA AND EXPLANATION

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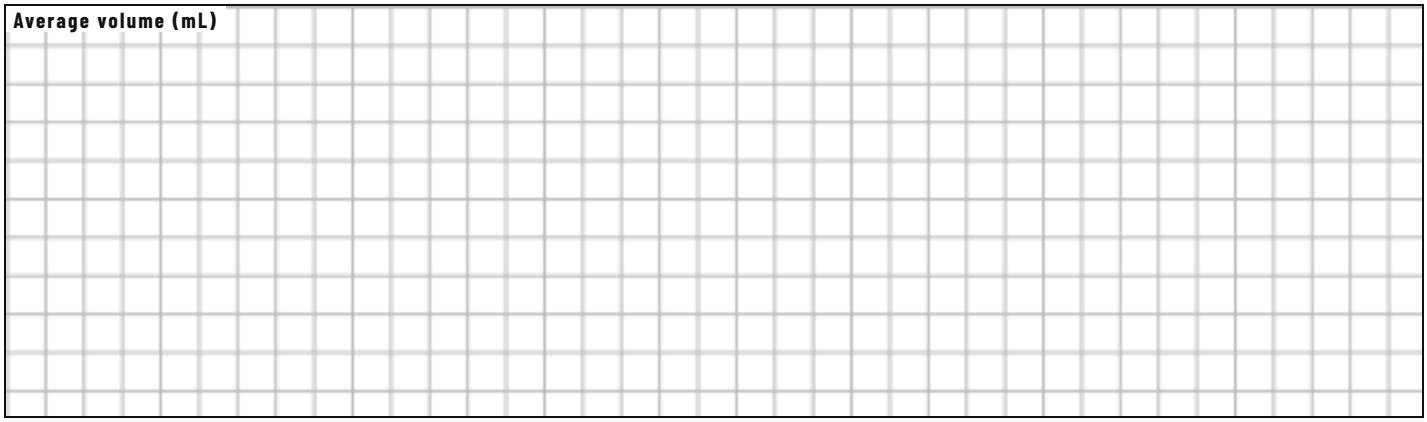
06 RECORD YOUR OBSERVATIONS

PAPER TOWEL BRAND	WATER BEFORE DRIP (ML)	TRIAL 2 (ML)	AVERAGE (ML)
Brand A			
Brand B			
Brand C			

Average volume = (Trial 1 volume + Trial 2 volume) ÷ 2. The endpoint is the first visible drip; all amounts are in milliliters.

SHOW ONE CALCULATION

07 AVERAGE WATER HELD BEFORE FIRST DRIP



Graph the average water volume for each brand. Start the vertical scale at zero; the measured volumes are nonnegative.

X: Paper towel brand

08 EXPLAIN IT WITH EVIDENCE

CLAIM

EVIDENCE

REASONING

Reasoning must use: brand · equal area · first drip · milliliters · average

09 THINK FURTHER

Would the brand ranking stay the same if you tested more equal-area squares from each package?