

Name _____ Date _____ Block ____

Stickiest Tape Lab**Background:**

Richard Drew invented masking tape in 1923 while he was working for the 3M Company. He was testing some new sandpaper at an auto body shop when he heard the workers complaining about how difficult it was to make a car two-tone. Every time they covered a section of the car with butcher paper and heavy adhesive tape, after the paint dried the tape would peel off parts of the paint. This made it more expensive for the customer and time consuming for the painter. Drew realized that what the shop needed was a less sticky tape. He went back to work and created masking tape. This early masking tape was a wide paper tape with adhesive on only the edges of the tape - not in the middle. Drew went on to create the world's first clear tape or Scotch tape, as it is known today.

Problem:

Which tape is the stickiest?

Identify variables:

- Independent variable _____
- Dependent variable _____
- Control variable _____

Hypothesis:

When _____

then, _____

Materials:

3 brands of tape	2 rulers
3-5 Books/blocks of wood	Ball bearing

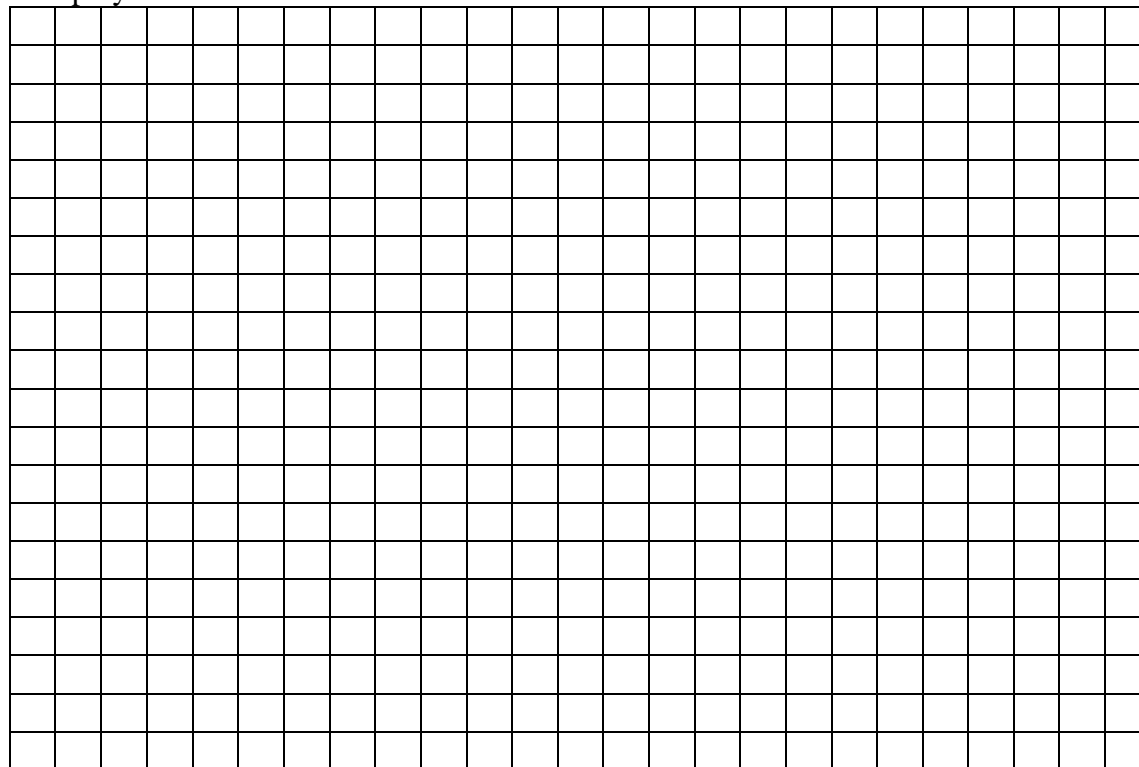
Tape A	Tape B	Tape C
Duct Tape	Masking Tape	Scotch Tape

Procedure:

1. Make of stack of books/wood blocks 10 cm high.
2. Tape one end of the ruler to the stack to form a ramp.
3. Place a 45 cm length of tape on the table **STICKY SIDE UP** at the end of the ramp.
4. Allow the ball bearing to roll down the ramp and along the tape until it stops.
5. Measure how far the bearing rolled from the base of the ramp to where it stopped.
6. Record your data.
7. Do five trials with each brand of tape.

	Tape A	Tape B	Tape C
Trial 1			
Trial 2			
Trial 3			
Trial 4			
Trial 5			
Average			

Graph your results:



CONCLUSION

1. Restate the problem in your own words

2. Restate your hypothesis:

3. How did you test your hypothesis?

4. What was the independent variable? _____

5. What was the dependent variable? _____

6. What are three variables you controlled (kept the same)?

7. Does the data support your hypothesis? _____

8. Use the data to explain your answer to the question above.

9. Did you or your partner notice any variables that could have affected the outcome of your experiment? (Sources of error.)

10. Now that you know which tape is the stickiest, what other experiments could you do with different tapes?
