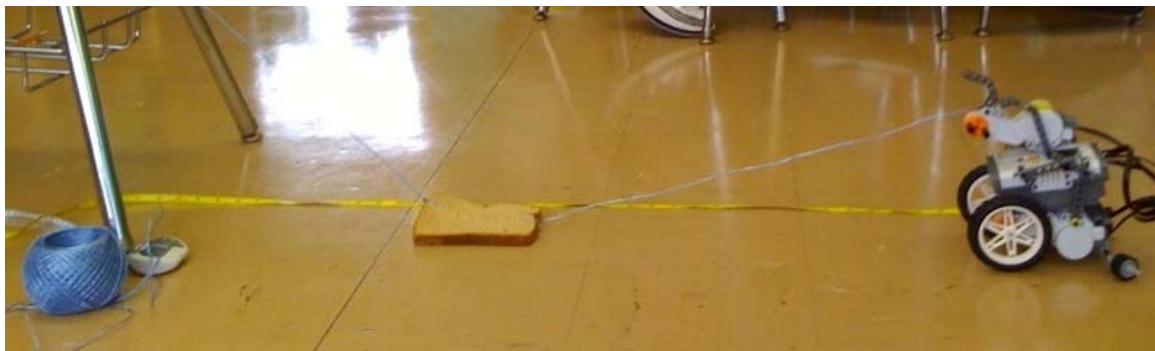


## Force: Determining the force needed to tear different breads

Name: \_\_\_\_\_

Date: \_\_\_\_\_



Force is the amount of push or pull on an object. Some of the different types of forces are the following:

Gravity – The tendency for an object to fall towards the earth.

Electrostatic Force – The force between two charges (positive and negative).

Nuclear Forces – The forces for particles, that takes place within atoms.

Elastic Force – The force that allows an object to first stretch, and then return back to its original shape.

Centripetal/Centrifugal force – The force that acts on an object that is in a circular motion.

**References**

Hewitt, Paul. Conceptual Physics. New Jersey: Prentice Hall, 2002.

Zitzewitz, Paul. Physics Principles and Problems. Ohio: McGraw-Hill, 2002.

Hypothesis:

Materials:

Procedure:

Conclusion:

Data:

$$F = (\text{power} \times \text{time})/\text{distance}$$

$$F = (p \times t)/d \text{ (Change the power)}$$

	Power	Distance	Time	Force
White Bread		26 inches		
White Bread		26 inches		
White Bread		26 inches		

You may also conduct this experiment with raisin and wheat bread.

$$F = (p \times t)/d \text{ (Change the distance)}$$

	Power	Distance	Time	Force
White Bread	100 %			
White Bread	100 %			
White Bread	100 %			

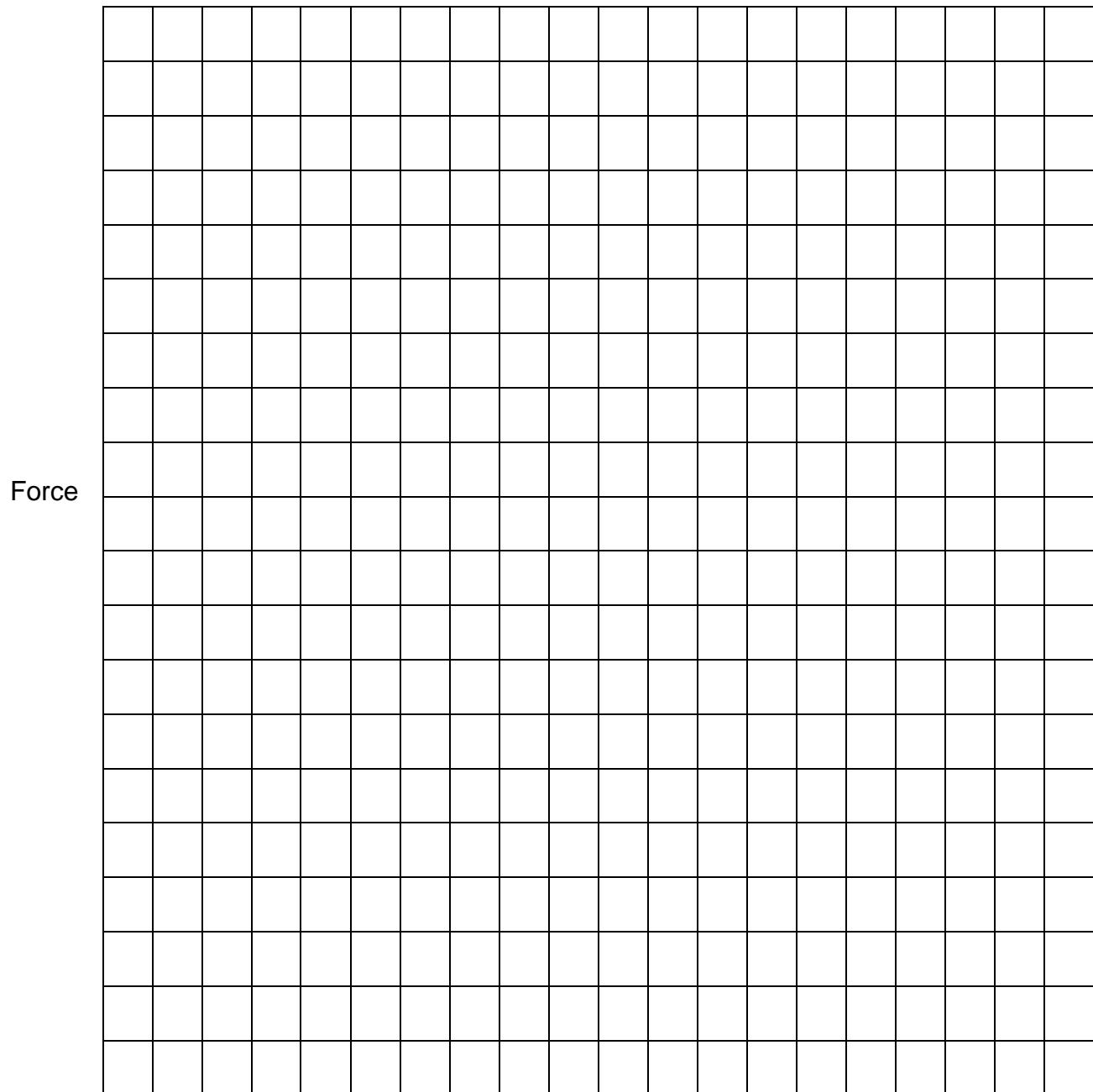
You may also conduct this experiment with raisin and wheat bread.

$$F = (p \times t)/d \text{ (Change the bread)}$$

	Power	Distance	Time	Force
White Bread	100 %	26 inches		
Rasin Bread	100 %	26 inches		
Wheat Bread	100 %	26 inches		

Results: Please make a bar graph of the different forces determined for the different conditions. Be sure to note the different conditions on the X-axis below.

$$F = (p \times t) / d$$



Different Conditions (e.g., bread)

