

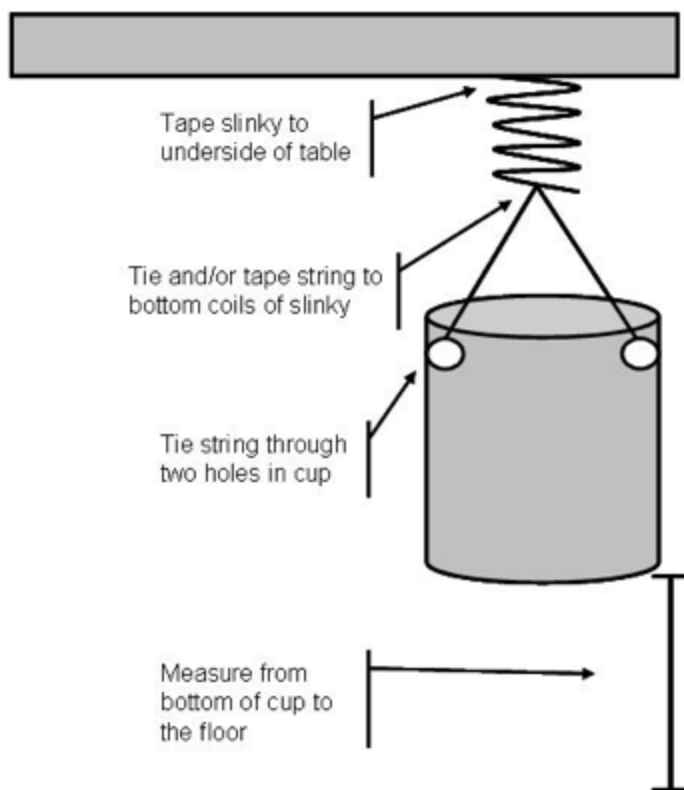
# Candy Experiment

## Candy Experiment

Click [here](#) to download lesson.

Summary	Students will create their own data to construct a graph and equation of negative and fractional slope.
Goals	<ol style="list-style-type: none"><li>1. Learn how to graph functions with negative slopes.</li><li>2. Understand how and why negative slopes can be applied to real world problems.</li><li>3. Explain the use of representations in words.</li></ol>
Materials	Handouts, Rulers/Measuring Tapes, Candy, Cups, String, Spring Slinkies, Tape
Duration	50 minutes
Keywords	Contextualized Situations Data Collection Fractional Slope Function Representations Hands-On Activity Line of Best Fit Linear Functions Negative Slope Production of Equations Production of Graphs Slope Small Group Work x-intercept y-intercept

## Activity Plan:



Have students form groups of three or four. Each group goes to a station where there is a set up of a spring attached to a cup and a table, candy, and a ruler (as illustrated above).

Each group will measure the distance from the floor to the *bottom* of the cup. Then they will add one candy and measure again. They will keep adding one candy until there are 4 candies in the cup.

The students should create a table from their findings. Then each group should find an equation and graph to best fit the experiment and answer the following questions. The *x*-axis is number of candies and *y*-axis is number of inches to the floor. (Handout Page 1-3)

Questions:

1. What is the *y*-intercept of the equation?
2. What does the *y*-intercept mean?
3. How low will the cup be if there are 10 candies?
4. How many candies will it take for the cup to touch the floor?

## Handout: Candy Experiment

(Page 1)

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

Materials: a spring attached to a cup, 4 candies, a ruler

Experiment:

1. Measure the distance from the *bottom* of the cup to the floor. Record this information in the table below.
2. Insert 1 candy into the cup. Now measure the distance from the *bottom* of the cup to the floor again. Record this information in the table below.
3. Follow step 2 until there are 4 candies in the cup.

Number of candies	Distance to floor (inches)
0	
1	
2	
3	
4	

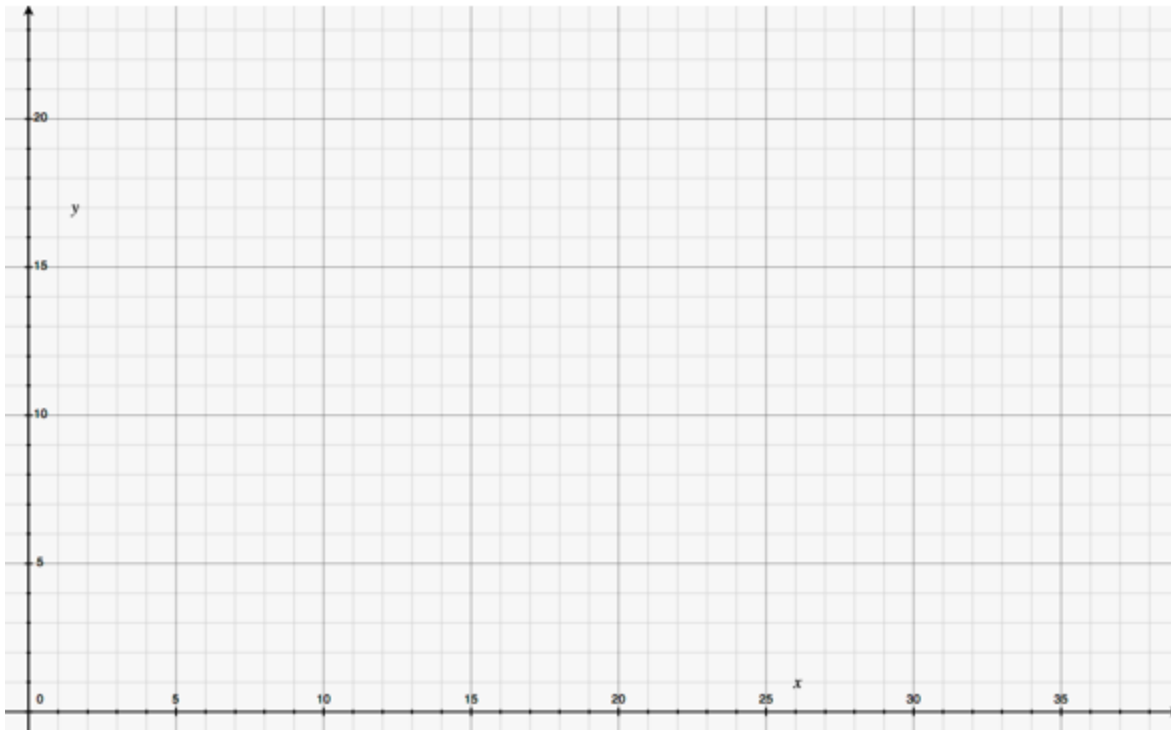
Write the function that describes the relationship between number of candies in the cup and distance of the bottom of the cup to the floor:

# Handout: Candy Experiment

(Page 2)

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

Graph below the function that you expressed in page 1.



What is the  $y$ -intercept for the function?

What does the  $y$ -intercept mean?

## Handout: Candy Experiment

(Page 3)

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

How low will the cup be if there are 10 candies?

How many candies will it take for the cup to touch the floor?