



Science Virtual Learning

6th Grade Science

Line Graphs

April 30, 2020



6th Grade Science
Lesson: April 30, 2020

Objective/Learning Target:

-I can use line graphs to understand how gravity is affected by the mass of objects.

****You will need paper for this lesson****

Recall These Terms

Line Graph: a graph that shows information that is connected in some way (such as change over time)

Parts of a Graph:

Title: Summarizes information being represented in ANY graph.

Independent Variable: The variable that is controlled by the experimenter, such as, time, dates, depth, and temperature. This is placed on the X axis.

Dependent Variable: The variable that is directly affected by the I.V. It is the result of what happens as time, dates, depth and temperature are changed. This is placed on the Y axis.

Scales for each Variable: In constructing a graph, one needs to know where to plot the points representing the data. In order to do this a scale must be employed to include all the data points.

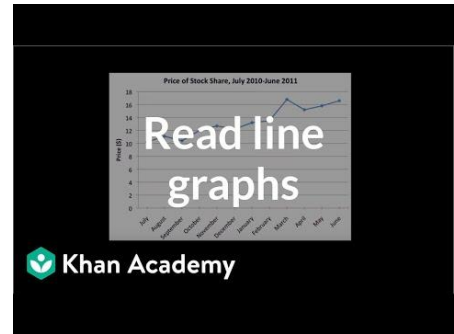
Warm up #1 - Let's Read a Line Graph!

Pause this [video](#) 13 seconds in. By looking at the line graph, write a prediction on your paper to this question:

1. Over the course of the year, is the price of the stock rising, falling, or staying the same?

Continue watching the video and at the end answer this question:

2. Was your prediction correct? Why?



Warm Up #2

Answer the following questions on your paper. (These questions refer to the [video](#) on the previous slide.)

3. According to the graph, what was the price of stock in September?
4. Why are the points on the graph connected with a line?
5. When do line graphs tend to be used?

Warm Up #1 & #2- Answer Key

1. Over the course of the year, is the price of the stock rising, falling, or staying the same?

Over the course of the year, the price of stock is rising.

2. Was your prediction correct? Why?

My prediction was correct because the line graph started a little over \$10 for July and ended around \$16 for June.

3. According to the graph, what was the price of stock in September?

The price of stock was a little over \$10.

4. Why are the points on the graph connected with a line?

The points are connected with a line to show there is a trend.

5. When do line graphs tend to be used?

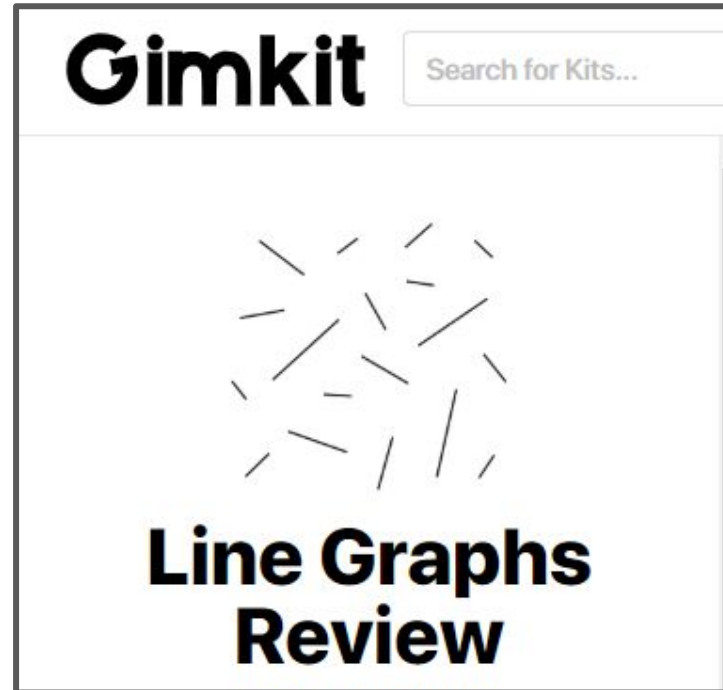
Line graphs tend to be used when you have something that is changing over time.

Practice #1

Today you will be playing a [Gimkit](#) about Line Graphs. You will play at your own pace until you reach the goal of \$500,000.

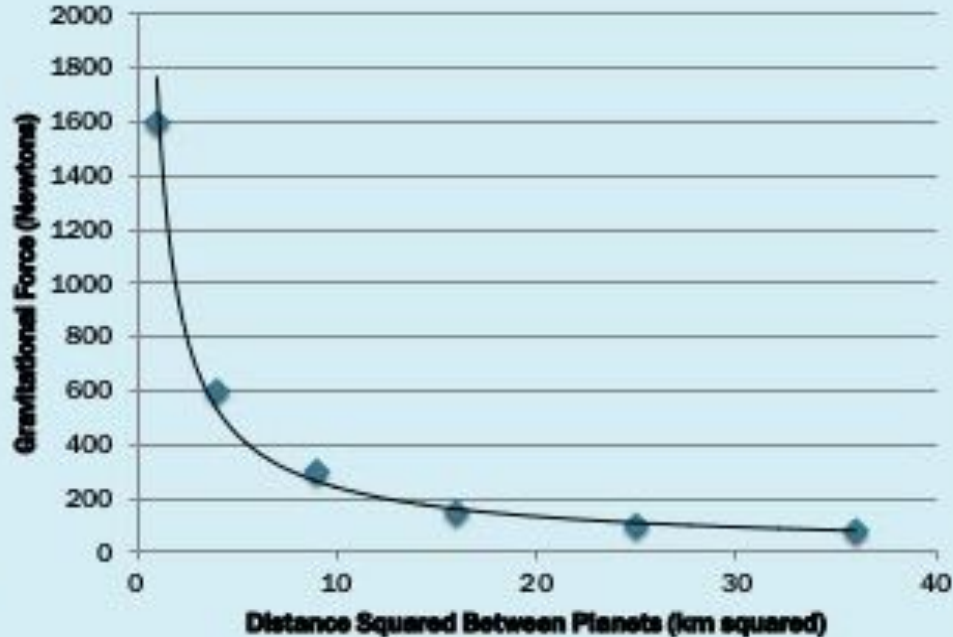
Click “View Correct Answer” if you get one wrong.

The answer key is [here](#).



The screenshot shows the Gimkit website interface. At the top left is the Gimkit logo. To its right is a search bar with the placeholder text "Search for Kits...". Below the search bar is a large, faint watermark of a star shape composed of many small line segments. At the bottom of the page, the text "Line Graphs Review" is displayed in a large, bold, black font.

Gravitational Force vs. Distance Squared



Practice #2

Using this line graph, answer the following questions:

1. At which distance is the gravitational force the highest?
2. As the distance increased, did the gravitational force increase or decrease?
3. Estimate the gravitational force at 10 km^2 .

Practice #2 - Answer Key

1. At which distance is the gravitational force the highest? **About 1 km²**
2. As the distance increased, did the gravitational force increase or decrease? **Decrease**
3. Estimate the gravitational force at 10 km². **About 250 N.**

Additional Practice

- For more practice on reading line graphs, check out this [link](#) and answer the 10 practice questions at the bottom of the page.
- For more understanding on how mass and distance affect the force of gravity, check out this [link](#).

