USING GRAPHING TO ANALYZE MUSIC INDUSTRY DATA

Est. Time: 60 minutes

Subjects: Math

Age Range: Elementary (5th Grade)

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TEACHROCK

How can graphing be used to analyze music industry data?

In this lesson you will:

- Identify a line graph and investigate how graphs can be useful in explaining and understanding a topic

- Gather recorded music sales data from a music industry organization

- Explore the the work of singer and performer Whitney Houston

- Plot data onto a graph and analyze the results

Study the image to the right.

Consider or ask a friend:

- What data is shown here?

- At a glance, do you know where revenue increased or decreased over time?

- How might you gesture with your hand to demonstrate the slope of the revenue data over time?

- Might there be a diagram to visually represent this data so the changes in revenue over time are simple to explain and understand? What is that kind of diagram called?

Music Streaming Revenue in the United States*

Year	Revenue in Millions of Dollars
2005	149
2006	206
2007	234
2008	221
2009	206
2010	212
2011	248
2012	400
2013	643
2014	1000 (1 Billion)
2015	2000 (2 Billion)

* Source of data is the Recording Industry Association of America (RIAA)
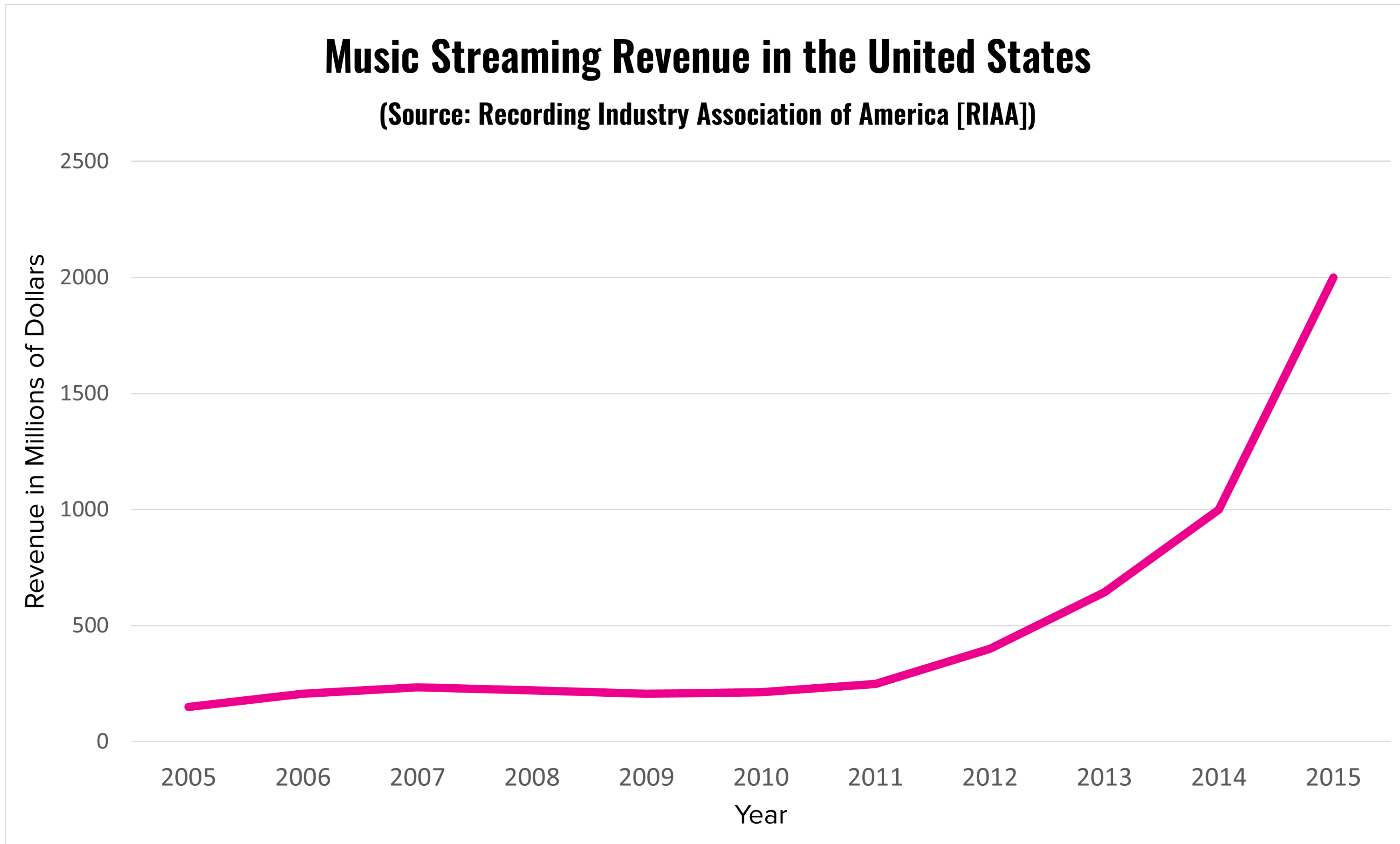
Study the image on the next slide.

Consider or ask a friend:

- What kind of graph is this?

- At a glance, what do you quickly notice that might not have been easily understood when viewing the data in the previous slide?

- Why might a graph be useful when explaining data rather than a list of numbers?

- Have you had any experience looking at data on a graph to better understand something?

- Have you had any experience plotting data on a graph to better present and explain something?

- What is the source for the music industry data presented on this graph?

Music Streaming Revenue in the United States

(Source: Recording Industry Association of America [RIAA])

In this lesson, you will be plotting music industry data onto a line graph and analyzing the results.

Consider or ask a friend:

- What kind of music industry data has been featured in the previous slides?

- Where might someone find that data in order to plot it onto a graph?

Consider or ask a friend:

- What is the Recording Industry Association of America (RIAA)?

- Who is creating the recorded music that the RIAA is keeping track of as data?

The Recording Industry Association of America (RIAA) considers itself, "the definitive source of revenue data for the recorded music industry in the United States." An essential source when analyzing recorded music sales, the RIAA asserts that it "provides the most comprehensive data on U.S. recorded music revenues and shipping data dating all the way back to 1973."

The case study for plotting data onto a graph will be the acclaimed singer and performer, Whitney Houston. Houston is one of the top album sellers listed on the RIAA site. In the United States, she is the first Black artist to achieve Diamond status (certification of over 10 million sales) for three of her albums.

Now, start gathering data to create your own graph!

Visit the **RIAA's Gold & Platinum webpage**. Have a look around the page and notice the various filters and tabs available to customize a data search.

Find the "Advanced Search" function on the page:

- Enter Whitney Houston in the "Artist" field

- Select Album in the drop down menu of the "Format" field

Work through the instructions in **Handout - Music Industry Data Graphing Activity**. Graph the data that you gathered and answer the questions.

Then consider or ask a friend:

- Looking at the graph you created and the questions you answered, how might you summarize Whitney Houston's sales history in the United States in a sentence or two?

- Thinking as a music industry executive, what might be some scenarios and reasons for plotting industry data onto a graph and presenting it to your coworkers?

- Considering other jobs besides the music industry, what might be some careers where it would be beneficial to gather data, plot it on a graph, analyze the results, and present it?

SUMMARY

- Data is an important resource for analyzing, explaining, and understanding a topic

- Data can often be more easily explained and understood when presented on a graph

- There are all sorts of graphs, but a line graph is especially helpful when representing a sloping set of data over a period of time

- All sorts of components comprise a line graph, including an x and y axis, as well as variables that are plotted on each axis

- Whitney Houston, an acclaimed singer and performer, is the first Black artist in the United States to achieve Diamond status (certification of over 10 million sales) for three of her albums

BE CREATIVE

Imagine that you are a popular music blogger writing about the various ways people have listened to music on electronic devices over the years. Visit the **RIAA's U.S. Sales Database webpage**. Review the *U.S. Recorded Music Revenues by Format* graph. Select three formats (Streaming, Download, CD, LP, etc.) to research. Write a blog with information about each format you chose, including the year it generated the most revenue for the music industry.

BE CURIOUS

- Visit the **RIAA's Gold & Platinum webpage** again. Review the Top 20 album sales artists. Choose an artist and survey their sales data. Plot the data on a line graph. Provide a brief written analysis of your conclusions.

- Dive deeper into Whitney Houston's data. Using the "Advanced Search" function on the page, enter *Whitney Houston* in the "Artist" field but explore the different options to select in the drop down menu of the "Format" field. Plot the data of your choice (singles, albums, compilations, Gold status, Platinum status, etc.) on a graph of your choice. Provide a brief written analysis of your conclusions.

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