



## Using Data to Analyze an Artist's Success

### OVERVIEW

#### ESSENTIAL QUESTION

How can data be analyzed and interpreted to better understand a band's success?

#### OVERVIEW

*In this lesson, students analyze statistical data to evaluate the Grateful Dead's successful business model.*



For a good portion of the history of the music industry, success was defined according to record sales. Even today the popularity of an artist or band is often measured in terms of chart-topping hits and albums.

Yet, there are other avenues for success available for musicians and bands that don't rely primarily on sales or streams. Perhaps one of the best case studies on a group who found success outside record sales is the Grateful Dead.

The Grateful Dead was an American Rock band formed in 1965 in the San Francisco Bay Area. Known for its eclectic style which fused elements of Rock, Folk, Country, Jazz, Bluegrass, Blues, Gospel, and Psychedelic Rock, the band is also famous for its many lengthy live performances and devoted fan base.

While the Grateful Dead achieved only a moderate level of commercial success in terms of record sales, they consistently filled arenas and became very successful through ticket sales.

The Grateful Dead played to an estimated 25 million people over their career—more than any other band in history. In 1998, The Guinness Book of World Records certified that the band had played the “most rock concerts ever performed” at the time, with 2,318. The Grateful Dead played to one of the biggest audiences ever recorded for a live event at Summer Jam at Watkins Glen in 1973, to an estimated 600,000 people. In the 1990s, the Grateful Dead made a total revenue of \$285 million from touring, making them the highest-grossing American band of the decade, and the second-highest grossing band in the world, only behind The Rolling Stones. What makes that statistic even more remarkable is lead guitarist Jerry Garcia died in 1995, meaning they achieved this feat in the first half of the decade alone.

The Grateful Dead achieved success through hard work. They toured relentlessly, performed extended and always-changing concerts, and connected directly with fans in creative ways. In so doing, the band accomplished something beyond economic success: they became a cultural force.

## OBJECTIVES

Upon completion of this lesson, students will:

**1. KNOW (KNOWLEDGE):**

- How to make data-informed analysis based on statistical information, and write hypotheses using mathematical operations
- How to read and analyze data presented in a graph
- How to use a frequency table and calculate mean
- The business model of the Grateful Dead

**2. MASTERY OBJECTIVE:**

- Students will be able to analyze statistical data and apply mathematical knowledge to create and solve equations to better understand the Grateful Dead's successful business model.

## ACTIVITIES

**MOTIVATIONAL ACTIVITY**

1. Display **Image 1, Partner Discussion Questions**. Tell students to partner up and ask each other the questions displayed in the image.
2. Ask students to share their partner's responses to the discussion questions. Create a list of the ways students suggest their favorite musical artists gained popularity.
3. Have the class look at the list of ways artists gain popularity, and ask:
  - How can musicians and bands translate their popularity into a way to make a living as artists?
  - What are some ways musicians and bands could make a living?
  - What kinds of data or information could be analyzed to show a band's or musician's success?

**PROCEDURE:**

1. Show **Image 2, Grateful Dead Live**. Tell students that they will be investigating the band the Grateful Dead by analyzing and interpreting the data that explains the group's success.
  - What is this chart showing? (*Record sales, by category, for selected Rock bands.*)
  - Do you recognize the band logos shown in the illustration? What bands are being represented? (*From left to right: The Beatles, The Rolling Stones, the Eagles, and the Grateful Dead.*)
2. Show **Image 3, Billboard Album Charts**. Ask students:

- In the chart, what do the different color records denote?
  - By analyzing the data in the chart, how would you compare the Grateful Dead to the other bands listed?
  - What might you conclude from the data in this chart about the Grateful Dead?
  - What are some other ways the Grateful Dead might have achieved success, outside of selling records and albums?
3. Show **Image 4, Following the Grateful Dead for 30 Years**. Ask students:
- What kind of data is being shown in this image?
  - Approximately how many concerts did the Grateful Dead perform in the state you live in?
  - Do you have relatives or friends in another state? How many concerts did the Grateful Dead perform in that state?
  - What might be the result of all this touring? How might doing so many concerts have contributed to the Grateful Dead's success?
4. Pass out **Handout - Grateful Dead 1966 Tour Worksheet**. Individually, in small groups, or as a class, go through each question in the worksheet, and report answers in class. (**Teacher's Guide** available here.)
5. Explain to students that the Grateful Dead's audience continued to grow after their 1966 tour. The class will now be investigating what the band did to grow their audience.
6. Play **Clip 1, "Not the Band, But the Deadheads."** Ask students:
- Who are "The Deadheads"?
  - Why might these Grateful Dead fans go to concerts?
  - What strategies might have the Grateful Dead used to grow their "Deadhead" fanbase?
7. Play **Clip 2, "The Fan Mandala."** Ask students:
- What were some of the different groups of fans the clip mentions?
  - What does the presence of these various groups say about a Grateful Dead concert? (*If needed, provide the follow-up question: do you think the band welcomed different types of people?*)
  - Deadheads are known for following the band on tour, to see many Grateful Dead concerts in the same year. How might the Grateful Dead keep their concerts interesting for fans who want to see them multiple times?
8. Pass out **Handout – Grateful Dead Setlists (Teacher's Guide** available here). Individually or in groups, have students complete the handout questions. Go through the answers together as a class, then ask students:
- Based on your calculations, can you make any conclusions about how the Grateful Dead approached their live concerts? How did they keep their concerts interesting for their most devoted fans?
  - How does the data from the setlists support your analysis?

9. Play **Clip 3, “Grateful Dead Tapers.”** Ask students:
  - What might motivate Deadheads to record the concerts they attend?
  - The clip mentions that the band’s record company did not approve of fans recording the live shows. Why might they have disapproved of Grateful Dead concert recording?
  - How did the band feel about the tapers? What was their initial motivation for allowing recordings to be made?
  - Why did the band’s decision to allow recordings turn out to be “visionary”?
  - What might you do at a concert today that would be similar to what these fans were doing? (*Note to teacher: encourage students to consider how they might record and post videos from a concert on YouTube, Instagram, Facebook, Twitter, etc.*)
- How might the creation of live recordings grow the Grateful Dead’s audience?
10. Tell students they will now be looking at the final year the Grateful Dead toured, 1995, and analyze the data to see how much the band’s audience grew, and how much revenue they made in ticket sales. Pass out **Handout - Grateful Dead 1995 Tour Worksheet (Teacher’s Guide available here)**. Individually, in small groups, or as a class, go through each question in the worksheet, and report answers in class.
11. As a class compare the final answer on **Handout - Grateful Dead 1966 Tour Worksheet** with **Handout - Grateful Dead 1995 Tour Worksheet**. Together calculate the percentage of growth in ticket sales between these two tours (round to the nearest hundredth). ( $87,146,781.48 - 348,224.45/348,224.45 = 249.26$  percent growth.)

## SUMMARY ACTIVITY

1. Ask students:
  - After doing these calculations, what conclusions can you make about how the Grateful Dead developed such a strong following? How does the data support your analysis?
  - If you are a musician or band seeking to become better known, what lessons might you draw from the Grateful Dead? How would you try to build your audience? What kind of data would you rely on to analyze your success?
  - What possible points of data on touring and selling tickets have not been included in your analysis? (Hint: are there costs associated with touring?)

## EXTENSION ACTIVITIES

1. Use **Extension Activity - Ticket Design** to design a unique concert ticket for a musician or band of your choice. Try to make the design fit the image or persona of the artist(s) you chose.

## STANDARDS

### COMMON CORE STATE STANDARDS

#### *The Number System*

CCSS/Math.Content.6.NS.B.3: Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

#### *Statistics and Probability*

CCSS/Math.Content.6.SO.A.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.*

#### *College and Career Readiness Anchor Standards for Reading (K-12)*

Craft and Structure 4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

Integration of Knowledge and Ideas 7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

#### *College and Career Readiness Anchor Standards for Speaking and Listening (K-12)*

Comprehension & Collaboration 2: Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

Presentation of Knowledge 4: Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

#### *College and Career Readiness Anchor Standards for Language (K-12)*

Language 1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Vocabulary Acquisition and Use 6: Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

## RESOURCES

### VIDEO RESOURCES

- *Long Strange Trip*- “Not the Band, But the Deadheads”
- *Long Strange Trip*- “The Fan Mandala”
- *Long Strange Trip*- “Grateful Dead Tapers”

### HANDOUTS

- Handout - Grateful Dead 1966 Tour Worksheet
- Handout - Grateful Dead 1966 Tour Worksheet (Teacher’s Guide)
- Handout - Grateful Dead Setlists
- Handout - Grateful Dead Setlists (Teacher’s Guide)
- Handout - Grateful Dead 1995 Tour Worksheet
- Handout - Grateful Dead 1995 Tour Worksheet (Teacher’s Guide)