



CLASSROOM ACTIVITY

Putting the "Inform" in Information

OBJECTIVES

Students will be able to:

- **Provide** examples of data businesses might collect.
- **Describe** how entrepreneurs use data to make decisions.
- **Suggest** methods of visually presenting data.

GRADE RANGE

6–12

DURATION

45–60 minutes

OVERVIEW

In this activity, students begin by watching and discussing an animated video about entrepreneurs using information to make business decisions. In small groups, students choose examples of data from several categories and consider how the information might be used in a real-world setting. Then, they choose one of these examples and offer recommendations about how this data could be visually represented. Students present and discuss their work. Options are provided for continuing the lesson with the use of *Venture Valley* and/or other extensions possibilities.

MATERIALS

- **Boom or Bust** Topic Series video—projected or sent to students to view independently
- **Think Like an Entrepreneur** capture sheet—one copy per student
- **Venture Valley Connect: Making Use of Information** handout—one copy per student (optional)

ESSENTIAL QUESTION

How do entrepreneurs use data to make business decisions?

TEACHER PREPARATION

This lesson encourages students to consider how entrepreneurs use data to inform their decisions. The animated video provides several examples that are debriefed in a facilitated whole-group discussion. Be sure to review

this information in advance. It can also be helpful to consider the prompts found in the **Think Like an Entrepreneur** capture sheet in advance to develop your own example scenario.

This classroom activity can be used as a standalone activity or in conjunction with the game, *Venture Valley*. Playing the game is not a prerequisite for the activity; however, it can be used to drive home key points and offers additional extension opportunities. In particular, this activity provides an opportunity for students to consider how data influences decision making in the game. Be sure to play the game ahead of your students so that you can provide prompting and support for students who may need extra help in making these connections.

PROCEDURE

Engage

- Inform students that you want them to start thinking like entrepreneurs—individuals who have taken the risk of starting a new business in hopes of earning a profit. In particular, you are going to ask them to consider the many decisions entrepreneurs must make and how they make them.
- Show the animated video **Boom or Bust** Topic Series Video (timestamp).
- Ask students what decisions Ethan and Isabella faced and how they made them.
- Facilitate a conversation with the class about how Isabella used the information to fuel her business decisions. Use the table below as a reference. Replay the video, if needed.

Question	Candice—Sample Answer
Social Media A new trend	Spice challenge trending on social media helped her decide what pizza topping to use for her special.
Sales Data What toppings sold well in the past	Past sales data showed that pepperoni sold well, meaning customers would likely buy it.
Cost of Goods Price of ingredients	Pepperoni has a lower cost to purchase as an ingredient and has the potential for a greater profit.
Target Customer Age and interests	Knowing the age of her target customers—and that there was a game coming up—helped in creating the right special and ads.

Explore

- Share with students that entrepreneurs use many types of information as they make different decisions.
- Divide students into small working groups and distribute a copy of the **Think Like an Entrepreneur** capture sheet to each student. Share with students that you want them to work in their groups to select one type of information or data from each category and consider how an entrepreneur could use it. They can think broadly (about any entrepreneur) or take on the mindset of the owner of a specific business or type of business.
- Allow students time to discuss and share ideas while visiting each group and offering support.
- Invite groups to share one or more of their examples with the rest of the class.
- Remind students that entrepreneurs are often on their own to start—meaning they may need to keep track of this information and make decisions without much help.
- Inform students that many businesses make use of various “dashboards” to keep track of information. Sometimes these look like tables or spreadsheets with information. In other cases, they are visuals with graphs. These dashboards help give an entrepreneur total visibility into their business, save time, improve results, increase productivity and increase profit.
- Direct each group to consider the most important piece of information they think an entrepreneur might track. It can be one from the capture sheet or another set of data they think would be valuable to track.
- Challenge students to sketch out what specific data they would collect and how they would display it.
 - Specific data collected might include:
 - Financial performance—profit, profit margins, and cash balances
 - Revenue/sales—sales per day and your top selling products/services
 - Website—tracking the total visitors and how they found out about your goods/services
 - Advertising—how many leads or sales resulted from your advertising
 - Email marketing— total number of emails sent, how many were opened, and the revenue generated with email marketing
 - Social media—return on investment from the use of social media sites
 - Product/service fulfillment—products delivered or built and percentage of on-time delivery of goods or services
 - Factors they might consider include:
 - Types of graphs
 - Ways to divide the information
 - Measures of central tendency such as mean, median, mode, and range
- Invite each group to present the results of their work and involve the class in providing feedback.
- As an exit ticket, have students reflect on how the information learned today can assist them in making decisions as an entrepreneur. How could they use this lesson to inform the decisions they make when playing Venture Valley and in real life?

VENTURE VALLEY CONNECT

Extend

Venture Valley offers several information dashboards throughout the game. If your students are able to play *Venture Valley*—either in the classroom or on their own time—use the **Venture Valley Connect: Making Use of Information** Student capture sheet as a way for students to consider the data they encounter in the game and how they put it to use. Consider opportunities for students to share their reflections.

- **Venture Valley:** The game, [Venture Valley](#), allows students to make simulated business decisions based on various key datasets. After playing several rounds of the game, invite students to consider the information they used to make decisions. Which data did they reference most often? Was some data more useful than others? Challenge students to consider when entrepreneurs should make decisions based on data and when they should base them on intuition.
- **Careers in Data:** Ask students if they have ever heard of the field of data science. The [U.S. Bureau of Labor Statistics](#) projects a 31.4% growth in data science occupations between 2020 and 2030. Invite students to research the field of data science, including what it takes to work in the field and what individuals might expect to earn in that role.
- **Data Privacy Day Promotion:** Have you ever heard of [Data Privacy Day](#)? Celebrated each January 28th, the day aims to encourage discussion of data privacy and encourage both individuals and corporations to take action. Point out that many websites, apps, and companies publish their data privacy policies, but people often ignore them. Divide students into groups and invite them to develop a way to promote data privacy awareness among their peers.
- **Local Business Data Usage:** Invite a local businessperson to speak to the class about how their business uses data to help them make decisions. Think broadly about potential business contacts including individuals who work in marketing, information technology, finance, and human resources.

STANDARDS CORRELATION

Common Core Standards in Mathematics

- Measurement and Data:
 - Represent and interpret data.
- Statistics and Probability:
 - Summarize and describe distributions.
 - Investigate patterns of association in bivariate data.

Common Core Standards in English Language Arts

- Speaking and Listening:
 - Comprehension and Collaboration.
 - Presentation of Knowledge and Ideas.

National Standards for Business Education

- Personal Finance:
 - Use a data-informed decision-making process as it applies to the roles of citizens, workers, and consumers.

Directions: Select one type of information from each category and describe how businesses could use it when making decisions.

Transaction Data

- Average amount spent per customer
- Number of people in a store by hour of the day
- Time spent by customers per visit

Category Choice:

Describe how an entrepreneur could use this element when making decisions:

Log Data

- Average online rating of each product by customers
- Results of customer satisfaction surveys
- Audio recordings of customer service calls or transcripts of online support chats

Category Choice:

Describe how an entrepreneur could use this element when making decisions:

Customer Profile Data

- Geographic locations of customers
- Demographic information and sales (age, occupation, salary)

Category Choice:

Describe how an entrepreneur could use this element when making decisions:

Marketing Data

- Number of shares and likes on social media posts
- Followers with the largest number of likes
- Percent of people who open, click, or purchase items from an email campaign by day of the week

Category Choice:

Describe how an entrepreneur could use this element when making decisions:

Venture Valley Connect: Making Use of Information

You've played the game. Now make the connections!

As an entrepreneur in Venture Valley, you encounter many pieces of information—some of which are ever changing. Much of the information is presented visually or organized into data dashboards making it easy to consume in a short period of time. Check out each dashboard below, and share what information it tells you and how you might use that information in the game.

Data in Venture Valley	Information Shown	Use in Decision Making
 <p>Pet Walking Cash: \$447</p> <p>Revenue for Rank 2: \$1,098/\$6,552</p> <p>Summary Revenue: \$7,890</p> <p>Overhead Expenses: \$4,440</p> <p>Products Sales: 1973</p> <p>Market Customer Base: 325</p> <p>Lifetime Totals: Revenue \$1,098, Sales 275</p> <p>Month to Date: Starting Balance \$0, Cash In +\$1,098, Cash Out -\$490, Current Balance \$607</p>		
 <p>Minigolf Cash: \$2,814</p> <p>Summary Revenue: \$8,395</p> <p>Overhead Expenses: \$8,940</p> <p>Products Sales: 631</p> <p>Market Customer Base: 232</p> <p>Employee Wages: 2 Employees x 224 Hours per month = \$2,688 per month. Rate: \$6 per hour. Employee Balance: \$1,108</p>		
 <p>Minigolf Cash: \$1,982</p> <p>Summary Revenue: \$9,926</p> <p>Overhead Expenses: \$9,470</p> <p>Products Sales: 764</p> <p>Market Customer Base: 238</p> <p>Quality: Standard \$4</p> <p>Set Price: \$13 (3.2x Markup)</p> <p>Daily Totals: Sales per Day: 40, Revenue Generated: \$524, Gross Profit after COGs: \$363</p>		
 <p>Minigolf Cash: \$2,118</p> <p>Summary Revenue: \$9,300</p> <p>Overhead Expenses: \$9,392</p> <p>Products Sales: 722</p> <p>Market Customer Base: 236</p> <p>Business Appeal: Wages, Sku Prices, Marketing</p> <p>Marketing Budget: Per Month</p> <p>Market Penetration: 10.6% (Wages), 7.2% (Sku Prices)</p> <p>Map customers unclaimed: 82.2%</p>		