

### Implementation Guide for Educators

# #1 Introduction to Behavioral Economics

## Objectives

Students will:

- **Compare** behavioral economics and traditional economics.
- **Analyze** scenarios in which people fail to respond rationally to incentives.
- **Apply** their understanding of behavioral economics to various careers.

## Overview

In contrast to traditional economic theory, behavioral economics understands the tendency for people to make frequent, irrational decisions. In these lessons, students will discover the difference between how traditional and behavioral economic theories expect people to respond. Through a series of scenarios, videos, questions, and discussion, this Digital Lesson Bundle (DLB) challenges students to consider how an understanding of behavioral economic theory can benefit an individual's life, including their health and finances.

## Futures Spotlight

Throughout the Econ Essentials digital curriculum, teachers and students will gain insight into various industries, and market participants, and how they relate to the behavioral economics concepts they are exploring. One industry that is introduced that may not be familiar to the students is the futures industry. Students will explore how concepts discussed in the curriculum such as hedgers, speculators and price discovery in agriculture and energy relate back to the futures industry. Through these concepts, students should gain an understanding of how the industry fits into their lives and into the broader economy. Students will view a video about futures markets explaining the difference between types of market participants like hedgers and speculators. The video will also provide an explanation of how farmers and ranchers can use futures contracts to manage their business risk by locking in the price of crops or livestock, thus protecting themselves from price swings before their product is ready to come to market. Exchanges like CME Group help businesses everywhere mitigate the myriad of risks they face in today's uncertain global economy.

### Content Areas

Economics; Financial Literacy

### Suggested Time

4 sessions: 3 full class periods of approximately 45–50 minutes each and 1 partial class period of approximately 20 minutes

Note: This lesson may be completed on non-consecutive days, if necessary. Session 4 should take place at least one week after session 3.

### Grade Level

Grades 9–12

### Essential Questions for Students

- What is the difference between behavioral economics and traditional economics?
- Can economists actually predict people's behaviors?
- Why is predicting the choices people will make helpful?

### Materials

#### All Sessions

- Introduction to Behavioral Economics Implementation Guide
- Computer with projector, television, or interactive board

#### Session 1

- Introduction to Behavioral Economics [PowerPoint Slides](#) 1–12
- [3-2-1 Exit Ticket](#)—one copy per student  
(Note: There are two per page. Cut in half in advance.)

#### Session 2

- Introduction to Behavioral Economics [PowerPoint Slides](#) 13–22
- Tape
- [Think Like an Economist](#)—one copy per student
- [Behavioral Economics Theories](#)—one of each  
(Note: Tape around the room before or during the activity.)

#### Session 3

- Introduction to Behavioral Economics [PowerPoint Slides](#) 23–25
- **How Rational Are My Choices? Challenge Activity** (available [here](#))—one copy per student

### Session 4

- Introduction to Behavioral Economics [PowerPoint Slides](#) 26

## Background

For many years, economists held firm to the idea that—when faced with a decision—people will respond predictably to incentives. However, there are numerous situations in which people act irrationally, instead. For example, many people know that consuming too much sugar or not getting enough sleep can be harmful to a person’s health. Nonetheless, they consume sugar and fail to get enough sleep.

This is where behavioral economics comes into play. Instead of expecting people to make rational decisions, behavioral economists have identified numerous factors which influence people to make predictably irrational choices. By examining these factors, individuals, companies, governments and others can—among other choices—make different decisions about how to consume, produce, and market goods and services.

## Using this Guide

The goal of this guide is to prepare educators to use this digital lesson bundle. It provides slide-by-slide instructions to ensure educators are prepared to explain, discuss, and facilitate the hands-on content in the presentation. The presentation is designed to cover three and a half class sessions, but it can be flexible depending on the students’ needs and the time available. Additional extension ideas are included at the end of the manuscript.

The accompanying presentation was created with PowerPoint so that it can be used in a variety of classrooms. If you are displaying the slides on a projector or television, simply progress through the PowerPoint by clicking to advance. All of the interactive aspects of the presentation are set to occur on click. This may include images, text boxes, and links which will appear in your web browser. If you are using an interactive whiteboard, tap on each slide with your finger or stylus to activate the interactive aspects of the presentation. In the notes for each slide, there will be information on how to proceed.

Students begin this series of lessons by comparing the difference between “human” and “econ” responses to situations. They consider various scenarios and people’s responses and then learn how each was influenced by specific concepts from behavioral economics (herding, status quo bias, sunk cost fallacy, and misconception of randomness). Students apply this knowledge as they consider how factors from behavioral economics might influence individuals in their careers. Finally, students track their own personal decisions over the course of a week and reflect on their choices and the factors that influenced them.

### Procedure

# Session 1

## ENGAGE | Slides 1-7

### Overview

You will begin this session by asking students a series of five questions. Students will keep a tally of their responses as either an H or E as they go along.

#### Slide 1

- Inform students that you will be posing a series of questions to them—each with two possible responses.
- Let them know they will need a paper and pen or another method of taking informal notes about their responses.

#### Slide 2

- Read the question aloud. Click to show the answer options then allow time for students to review their choices.
- Direct students to create a table to tally their responses. Instruct them to label one column “H” and the other E.”
- Show which responses receive the H and E tally mark as noted below.
  - Strength for Amelio = H
  - Healthy Student Lunches = E
- Poll students to see how many responded with each choice (optional).

#### Slide 3

- Ask a student to read the question aloud then click to show the answer options.
- By clicking again, show which responses receive the H and E tally mark as noted below.
  - Buy the extended warranty = H
  - Skip the extended warranty = E
- Direct students to update their tally marks.
- Ask students with varying responses to share their thoughts.
- Poll students to see how many responded with each choice (optional).

#### Slide 4

- Pose the question then click to show the answer options. Remind students to answer honestly. If your students do not drive yet, ask them to answer based on how they expect they would respond when they do start driving.

- By clicking again, show which responses receive the H and E tally mark as noted below.
  - Read it = H
  - Ignore it = E
- Direct students to update their tally marks.
- Poll students to see how many responded with each choice (optional).

### Slide 5

- Let students know this is the final question and that it likely requires them to think about the future since in most states you must be 18 to purchase lottery tickets.
- Pose the question then click to show the answer options.
- By clicking again, show which responses receive the H and E tally mark as noted below.
  - Yes = H
  - No = E
- Direct students to update their tally marks.
- Poll students to see how many responded with each choice (optional).

### Slide 6

- Direct students to total their H and E responses. Use this time to do the same on your tally of class responses if you chose to poll after every question.
- Inform students that the H responses are representative of what behavioral economics would call the “Human” response while E’s are representative of the “Econ” response.
- Ask students to raise their hand if they had 3 or more H responses. Do the same for those with 3 or more E responses.

## LEARN | Slides 7–12

### Overview

You will continue the lesson by introducing students to the concept of behavioral economics by explaining how people respond to choices as “humans” or “econs.” Students watch a video that presents the concept of behavioral economics and contrasts it to traditional economics. You will then revisit the scenarios from the beginning of the session to consider why various responses represent a human or econ response. Students work in small groups to sort responses to situations as characterizing humans or econs and statements as representing behavioral economics or traditional economics.

### Slide 7

- Explain what behavioral economists mean when they refer to a “human” response.
- Let students know that people often respond to situations or choice with what is called their automatic system. When we talk about “going with your gut reaction,” this is your automatic response.

- Click to show students the photo of a bacon cheeseburger.
- Ask students if they have ever seen someone eating something and all of a sudden wanted the same thing. This is an example of an automatic response. You didn't want the item to begin with, but you do now that you've seen it.
- Share that human responses are often irrational ones.

### Slide 8

- Explain that, in contrast to humans, econs act much more rationally. They use what is called their reflective system, which is controlled, self-aware, slow, effortful, and rule following.
- Ask students how they think someone acting as an "econ" would approach the same bacon cheeseburger or another desirable food item. Responses might address the following:
  - Is the person already hungry?
  - Do they like the food?
  - Is it healthy or nourishing?
  - Do they have the money to buy that food?
  - What other meals or snacks do they have planned?

### Slide 9

- Play video.
- Revisit a selection of the scenarios from slides 2 through 6. Challenge students to explain how various responses represented either a human or econ response.

### Slide 10

- Let students know you are going to do one more activity to help determine if they are humans, econs, or a mix of each, but this time with a short three question math quiz.
- Direct students to note their answers on a piece of paper or electronic document.
- Click to reveal the questions and give the following instructions: "Here are several problems that vary in difficulty. Try to answer as many as you can. As soon as you are done, flip over your piece of paper or close your device."

### Slide 11

- Display the answers given by humans and econs. Ask students which they think are the correct answers (answer: the econ responses) and why (answer: because people that gave these answers took their time and completed the entire program rather than giving their gut, incorrect response).
- Inform students that these same questions have been answered by thousands of people and is called the Cognitive Reflection Test. It was developed by a Yale professor, Shane Frederick.<sup>1</sup> Even students at very selective colleges (MIT, Yale, Harvard, and Princeton) frequently miss these questions.
- Ask students to consider how this "test" supports the idea that behavioral economics might be more reliable than traditional economic theory. (Answer: With this quiz, many students give the

<sup>1</sup><https://pubs.aeaweb.org/doi/pdfplus/10.1257/089533005775196732>

first, quick, automatic answer. They do not take the time to fully work out the problem (i.e. writing it down, checking to see if the answer they provide makes sense, etc.). Traditional economic theory assumes that people would take these steps, but behavioral economics takes into consideration that people do not approach every decision logically.)

- Challenge students to consider how this test might be adjusted to account for other factors that behavioral economists consider such as the impact other people can have on an individual's decisions. If students struggle to answer, provide the following prompts:
  - Do you think your answers would have been different if:
    - I had asked everyone to come to the front of the class and write your answer on the board?
    - You had been given the wrong answer and then asked to say if it was right or wrong?

### Slide 12

- Invite students to complete a [3-2-1 Exit Slip](#). This will help students summarize their learning and comprehension of the lesson.
- After the lesson, review the students' 3-2-1 Exit Slips and determine if there are any questions that need to be addressed in the next session as well as areas of student interest for further study.

# Session 2

## APPLY | Slides 13–22

### Overview

Students work in small groups to predict how people might respond to situations from two perspectives: traditional and behavioral economics. Following the activity, students will do a “gallery walk” of various behavioral economic theories trying to match their situations to the theories. The session concludes with students considering the advantage of understanding behavioral economics.

### Slide 13

- Briefly review the key takeaways from session 1 and take a few moments to address any questions or misconceptions that were noted in your review of the **3–2–1 Exit Slips**.
- Inform students that economists frequently perform experiments to determine how people respond to a specific situation or choice. Tell students they will be working in small groups and making predictions about how people would respond in a specific situation or experiment.
- Divide students into small groups of two to three students and distribute a copy of Think Like an Economist to each student. Determine which groups will consider each scenario. It is okay for more than one group to examine a given experiment.
- Allow time for students to read and discuss their experiment and make predictions.
- Invite students to pair with another small group to compare their scenarios and predictions. Encourage students to confirm or supportively challenge the other group on their predictions.
- While students work, hang each of the [Behavioral Economics Theories](#) around the room.

### Slides 14

- Let students know that each of the **Behavioral Economic Theories** hung around the room depicts one or more theories from behavioral economics.
- Invite students to take a “gallery walk” around the room, reading each description. Challenge them to match the theory to the scenarios from [Think Like an Economist](#) and note the theory or theories in the margins next to each scenario.

### Slide 15

- Ask students whose groups had this scenario to share their predictions and a highlight of their discussion.
- Click to display the behavioral economics theory: herding
- Ask how many students correctly identified the theory for this scenario.
- Click to display the graph. Discuss why people might eat more when additional people are with them.
- Challenge students to consider how knowing this information might influence someone who is trying to lose weight.

(Note: Herding is explored in even greater detail in another lesson.)



### Slide 16

- Share with students how traditional economic theory explains retirement savings. It is assumed that people will calculate how much money they will need in retirement, how long they expect to need that money, and then save enough over time to live comfortably when they stop earning a regular income.
- In reality, many people do not save as often or as much as they feel they should for retirement. In most cases when presented with the choice to “opt-out” of a retirement plan rather than an “opt-in” version, more people will end up saving.
- Click to reveal Status Quo Bias as the behavioral economic theory behind this scenario.
- Ask students if any are familiar with Newton’s 1st Law of Physics, in particular, the portion that says an object at rest will remain at rest. Challenge students to compare the Status Quo Bias and Newton’s 1st Law.

(Note: The theory of decision paralysis is also at play in this scenario. It will be explored in another lesson.)

### Slide 17

- Ask students whose groups had this scenario to share their predictions and a highlight of their discussion.
- Click to display the behavioral economics theory: Sunk Costs. Discuss how this theory applies to the scenario.
- Challenge students to describe a time they have been influenced by sunk costs in the past or a situation in which sunk costs might influence them in the future.

(Note: The theories of loss aversion and anchoring is also at play in this scenario. Each will be explored in future lessons.)

### Slide 18

- Ask students whose groups had this scenario to share their predictions and a highlight of their discussion.
- For students unfamiliar with this sports example, explain that this scenario describes what is often called the “hot-hand theory.” The premise is that a player who has made numerous shots will continue to do so.
- Share that this has been disproven, however, in a variety of experiments.
- Compare the phenomenon to one with which students may be more familiar—flipping pennies. Some people have a hard time believing that the odds of a coin landing on tails after landing on heads three times in a row is still 50% or 1 in 2. The past event doesn’t influence the current one.
- Click to display the behavioral economics theory: Misconception of Randomness. Discuss how this applies to the scenario.

### Slide 19

- Challenge students to create a scenario based on one of the four theories presented.
- Allow time for students to develop and/or write down their scenario.
- Encourage students to share their scenarios while other students offer opinions on how they predict people will respond.

# Session 3

## CONNECT | Slides 20–23

### Overview

Students examine three career profiles and discuss how behavioral economics might connect to each.

### Slide 20

- Introduce the Behavioral Economics at Work activity. Decide if students will work independently or in small groups to brainstorm and share this with the class.

### Slides 21–23

- Show each video and allow time for students to identify connections.
- Facilitate a discussion about each career and the potential connections to behavioral economics. The notes below can help guide or add to the conversation.
  - **Slide 21:** Career and Technical Education Teacher
    - The number of jobs available for career and technical education teachers is directly related to the number of students choosing to take such classes as most career and technical education courses are often electives.
    - Some students may not choose these courses because they are not the “status quo” (math, English, science, social studies, etc.).
    - For many years, there has been a push for more students to pursue college even when many students graduate with tremendous amounts of debt or choose majors that limit their job options. Shifts in what is considered the popular choice may influence if people take these courses.
  - **Slide 22:** Farmers and Ranchers—**Futures Spotlight**
    - Explain to students that exchanges like the CME Group bring together all kinds of people from around the world looking to manage their risk. Hedging is one type of trading that allows market participants to lock in a price now for a commodity at a later date, ultimately offsetting their price risk.
    - Farmers and ranchers come to exchanges to work with something called *futures* to hedge their commodity(ies). Hedgers like farmers and ranchers can sell a “futures contract” on the crops or livestock they want to sell to protect themselves from unpredictable declines in price before their product is ready to come to market. In other words, he/she trades futures to drive risk out of his/her business.
    - Farmers and ranchers may have a tie to or oversee their family business, which can lead them to make more decisions based on emotion.
    - Students will learn in subsequent Digital Lesson Bundles about the endowment effect which suggests that people overvalue what they own. In this instance, farmers and ranchers who produce their own goods may place a high value on their hard work and as a result may be reluctant to sell at lower prices.

- **Slide 23:** Dietician
  - One role of a dietician is helping people to make rational choices about what they eat. An understanding of behavioral economics could help people do their job better.
  - If everyone made rational decisions about their diets and lived healthy lifestyles, there would likely be less demand for dieticians.

### EXTEND | Slide 24

#### Overview

Students are challenged to track their economic decisions for one week.

#### Slide 24

- Distribute a copy of **How Rational Are My Choices?** [Challenge Activity](#) to each student.
- Inform students that they will be tracking economic decisions they make over the course of five days.
- Invite students to record two decisions per day on the **Tracking My Decisions** capture sheet (included in the challenge activity).
- Challenge students to consider each decision, identify the factors which influenced each one, and then record whether or not they believe it was more in line with traditional economic decision making or behavioral economics.
- Let students know when they will be expected to complete the assignment and discuss their results.

## Session 4

EXTEND, cont. | Slide 25

### Overview

After tracking their economic decisions for five days, students share and analyze their decisions.

### Slide 25

- Invite students to form small groups and share at least two decisions they recorded on their **Tracking My Decisions** capture sheet.
- Lead a class discussion about the process of writing down and considering their decisions. Do they believe thinking about why they made some of these decisions will influence future choices? Why or why not?

## Standards

- [Voluntary National Content Standards in Economics](#) from the Council for Economic Education
  - Standard 2—Decision Making (Grade 12 Benchmark 4): Costs that have already been incurred and benefits that have already been received are sunk and irrelevant for decisions about the future.
  - Standard 4—Incentives (Grade 12 Benchmark 1): Acting as consumers, producers, workers, savers, investors, and citizens, people respond to incentives in order to allocate their scarce resources in ways that provide them the highest possible net benefits.
- [National Standards for Personal Financial Education](#) from the Council for Economic Education and JumpStart Coalition for Personal Financial Literacy
  - Spending (12.4): Consumers may be influenced by how prices of goods and services are advertised, and whether prices are fixed or negotiable.
  - Managing Risk (12.12): Extended warranties and service contracts are like an insurance policy.
- [National Standards for Family and Consumer Sciences Education](#) from the National Association of State Administrators of Family and Consumer Sciences
  - Consumer and Family Resources (2.7): Demonstrate the ability to use knowledge and skills to manage one's financial resources effectively for a lifetime of financial security.
- [The College, Career, and Civic Life \(C3\) Framework for Social Studies State Standards](#) from the National Council for the Social Studies
  - Economic Decision Making (D2.Eco.1.9-12): Analyze how incentives influence choices that may result in policies with a range of costs and benefits for different groups.

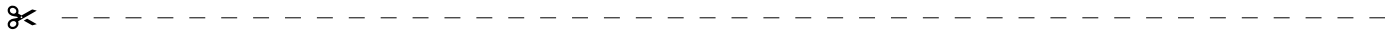
# 3-2-1 Exit Ticket

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

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

Class: \_\_\_\_\_

3	Things I learned today:
2	Things I found interesting:
1	Question I still have:



# 3-2-1 Exit Ticket

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

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

Class: \_\_\_\_\_

3	Things I learned today:
2	Things I found interesting:
1	Question I still have:

# Think Like an Economist

**Scenarios:** Read your assigned scenario.

1. A person goes out to eat with one of their friends. Do you think that person will eat more than usual, less than usual, or about the same? What if they are in a group of five people? How about nine?
2. For years a company has offered an optional 401(K) retirement program. About 45% of employees regularly contribute a portion of their earnings. The company changes the program and now enrolls all employees automatically. Employees can now “opt out” if they don’t want to participate. After a year, do you think more people are investing, less, or about the same?
3. A family buys \$100 in weekend passes to a nearby indoor waterpark. Then—out of the blue—they win a free package at an even nicer park. BUT—they find out they can only use the passes on the same weekend. Which park do they go to—the one that cost \$100 or the one with free tickets?
4. You are at a basketball game and your favorite player is having a great game. He’s made the last 10 shots he’s attempted. Your friend says he can’t keep it up. He bets you dinner after the game that the player will miss the next shot. Do you take the bet?

**Our Predictions:** Predict how each type of economist would expect people to respond.

Traditional Economist	Behavioral Economist

**Teacher:** Hang each of the Behavioral Economics Theories around the room.

# Misperception of Randomness

People often believe random events to be non-random and non-random events to be random

## CONSIDER:

- If you flip a coin three times and get heads each time, are you still just as likely to get heads as tails on the next flip?

**Teacher:** Hang each of the Behavioral Economics Theories around the room.

# Herding

People often do what others around them are doing.

## CONSIDER:

- Similar to peer pressure, people can be influenced just by seeing or hearing others around them—even if they don't consciously realize it.



**Teacher:** Hang each of the Behavioral Economics Theories around the room.

## **Status Quo Bias**

People have a general tendency to stick with what they know.

### **CONSIDER:**

- Do you usually sit in the same area of the cafeteria most of the time or move to a different table each day?
- If you have been paying for a movie streaming service and they increase the rate by a dollar, are you likely to cancel or keep the service?

**Teacher:** Hang each of the Behavioral Economics Theories around the room.

## **Sunk Cost Fallacy**

Once people have invested in something, they have a hard time giving up on it. In reality, their commitment to it may even grow. In economics, a sunk cost is any past cost that has already been paid and cannot be recovered.

### **CONSIDER:**

- You go to the movies. You buy tickets, popcorn, and a drink. After 30 minutes, you can't stand the movie. Do you stay or leave?