

BEHAVE YOURSELF: BEHAVIORAL ECONOMICS FOR KIDS

FEDERAL RESERVE BANK of KANSAS CITY

TEACHER BACKGROUND

One definition of behavioral economics is the use of economic assumptions to explain and predict behavior. These assumptions often have a psychological basis or motivation. When behavior based on an assumption is recognized and pointed out, action can be taken to change the behavior, if needed.

Four basic principles of behavioral economics (Laibson and List 2014) are:

- “People try to choose the best feasible option, but they sometimes don’t succeed;”
- “People care (in part) about how their circumstances compare to reference points;”
- “People have self-control problems;”
- “Although we mostly care about our own material payoffs, we also care about the actions, intentions, and payoffs of others, even people outside our family.”

If students become aware of the psychology behind their actions, or why they decide to behave as they do, they will have better insight into their behavioral responses and learn ways to counteract assumptions, if necessary.

LESSON DESCRIPTION

Students will be introduced to the topic of behavioral economics and four behavioral economics concepts: bandwagon effect; endowment effect; loss aversion; and mental accounting. They will participate in an activity that illustrates each concept to better understand the concept’s effects on their behavior. Students will discuss situations in their everyday lives that relate to these concepts.



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GRADE LEVEL: 6-8

CONCEPTS: Bandwagon effect; endowment effect; loss aversion; mental accounting

OBJECTIVES: Students will:

- 1) Identify and give examples of the behavioral economics concepts introduced in the lesson.
 - 2) Discuss the effect that behavioral economics can have on their decision-making ability.
 - 3) Apply the behavioral economics concepts to situations in their everyday lives.
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ESSENTIAL QUESTION: Why is it important to understand how behavioral economics affects our decisions?

TIME REQUIRED: Entire lesson can be completed in 60 minutes. Lesson also could be taught in four segments of 15 minutes, highlighting one behavioral economics concept per segment.

MATERIALS

Enough new pencils for all students in class, identical except for color (50 percent one color, 50 percent alternate color)
(Segment 2)

Extra new pencils for about half the students (50 percent one color, 50 percent alternate color) (Segment 2)

Visual 1, Pencil Exchange, one copy for teacher (Segment 2)

Handout 1A; and 1B Allowance Cards, cut up (one card distributed to each student) (Segment 3)

Handout 2, Student Council Election, one copy to each student (Segment 4)

Handout 3, Assessment, one copy to each student

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PROCEDURE

SEGMENT ONE: LOSS AVERSION

- 1) Introduce behavioral economics by explaining to students that the concepts in this field of economics will help them understand the reasons they decide to behave the way they do. Tell students to imagine this scenario: They are riding their bike in the park and spot a \$10 bill on the side of the bike path. Since no one is nearby looking for the money, they pick up the \$10 and put it in their pocket. They are excited about their windfall, and begin thinking about what they might buy with it. They continue riding for a while, and then pedal home. When they arrive, they reach into their pocket and realize the \$10 must have dropped out during the ride.
- 2) Ask volunteers to describe how they would feel about this situation. (*Answers will vary but may include that they'd feel happy to find the money, but upset or mad that they later lost it.*) Ask them if the fact that the money was not theirs originally makes a difference in how they feel. (*Answers will vary but may include that it really didn't matter, or they were still upset over losing the \$10 bill.*)
- 3) Tell students that this scenario is an example of “**loss aversion**,” the behavioral economics concept that says “it hurts more to lose something than feels good to win something.” The negative feeling coming from a loss can be much stronger than the positive feeling coming from a gain. So most people focus on (and fear) losses much more than they hope for gains.
- 4) To further illustrate this concept, ask students to give examples of times they have gained or won something, and share their feelings connected to the win. (*Answers will vary, but may include winning a prize or a sports game. Feelings described may include happiness or excitement.*)
- 5) Next, ask students to give examples of loss situations, and share their feelings connected to the loss. (*Answers will vary, but may include losing a sports game, losing a friendship, or losing a valuable item. Feelings described may include sadness, disappointment, or anger.*)
- 6) Discuss the difference in the intensity of their feelings in each situation. Ask the following:
 - Would you say you had stronger feelings about winning or losing? (*Answers will vary, but more students should report that the feeling of losing was stronger than the feeling of winning. Memory of the loss may be painful to the student and last longer than memory of a win, so stronger emotion may be involved.*)
- 7) Explain to students that the feelings resulting from loss aversion may affect how they make decisions. They may choose not to take risks in different situations where losing something of value might be painful. Share the example of losing a best friend. Students may be wary of forming close friendships in the future (a gain), because of the hurt related to the ending of a previous friendship (a loss).
- 8) Tell students that if they are aware of the concept of loss aversion, they should be able to better understand how they react to gain and loss and make better informed decisions.

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SEGMENT TWO: ENDOWMENT EFFECT

- 9) Tell students that they will participate in an activity to learn about the “**endowment effect**,” another behavioral economics concept that may affect their lives. Distribute a new pencil to each student, alternating between two colors of the same pencil so that half the class receives each color. Tell students that the pencil they received is now theirs to keep and take home.
 - 10) Look at the remaining pencils and tell students that you have enough extra pencils in both colors, and that they may exchange their pencil with you for the alternate color, if they’d like.
 - 11) Using Visual 1, make any exchanges and keep track of the number of students who traded their pencil.
 - 12) Announce the total number of trades from Visual 1 and ask students if they expected the trades to be higher or lower than that number. *(Answers will vary. The number of trades should be less than 50 percent of the class.)*
 - 13) Tell students that the number of trades should be 50 percent of the class. Use the questions on Visual 1 to explain why 50 percent is the expected percentage:
 - a) If all students preferred color A, how many should trade? *(Since half received color B, half would trade.)*
 - b) If all students preferred color B, how many should trade? *(Since half received color A, half would trade.)*
 - c) If half of all students preferred color A, how many should trade? *(Half of this group, or 25 percent of the class, would have received color B and would trade.)*
 - d) If half of all students preferred color B, how many should trade? *(Half of this group, or 25 percent of the class, would have received color A and would trade.)*
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Teacher note: There are other fractional possibilities, but the total percentage that would change always equals 50 percent, no matter what proportion prefer A to B.

- 14) Use Visual 1 to figure the percentage of their pencil exchanges by dividing the number of trades by the number of students in class, then multiplying by 100 to get a percentage. Ask them to do the math with you to find the percentage. *(The percentage should be much lower than 50 percent, probably between 20-33 percent.)*
- 15) Explain to students that this activity has been done by economists before, and the results are usually similar, about 25 percent in exchanges. The reason the percentage is lower is the **endowment effect**, in which people become attached to the item they have and so are less likely to trade it. This concept says that possessing or owning an item makes it more valuable to the owner.
- 16) Tell students that it also has been found that owners want a larger payment for something they are selling than the amount they are willing to pay to buy similar items from someone else. Give the example of selling toys or games at a family garage sale. They may feel their used items are worth more than typical garage sale prices because they remember the fun they had playing with them. But they would be unwilling to pay more for similar toys at someone else’s garage sale. The concept of loss aversion (Segment 1) may add to the perceived value of items sold, and increase the selling price.

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- 17) As another example, ask students to think about items they have traded with others, such as collectables. Did they have a hard time making a trade because they felt their item was more valuable than what they were trading for? This would be an example of the endowment effect. Ask students to think of other possible examples. (*Answers will vary, but could include food exchanges at lunch, trading books to read, or any traded items that have sentimental value, such as gifts they had received in the past.*)
- 18) Tell students that if they are aware of the concept of endowment effect, it should help them think more logically about the value of their possessions in these situations.

SEGMENT THREE: MENTAL ACCOUNTING

- 19) Tell students that they will do an activity to learn about another behavioral concept called “**mental accounting**.” Distribute Handout 1 cards, one to each student. Explain that the amount on their card is their weekly allowance of \$10, which they are saving to buy a tablet that they really want. Tell them that some students received a bonus amount of \$5 listed on their card because of extra chores they completed. (*Teacher Note: Make sure about one-third of the class receives the \$5 Bonus cards.*)
- 20) Now tell students that everyone has the opportunity to buy a ticket to a new water park that just opened in their city. There is a discounted student price if they purchase the ticket by tomorrow. The discounted price is \$5, or half the regular \$10 admission. Many students in other classes already have purchased their tickets.
- 21) Explain that they have a decision to make: purchase a \$5 ticket out of their allowance money and delay buying the tablet, or choose not to purchase a ticket so they can buy their tablet sooner. Ask students to make their decision and write “spend \$5” or “save \$5” on their card. Collect all cards and tally the number that chose to save or spend in two columns on the board. Tally how many in the “spend” category received the \$5 bonus.
- 22) Explain that the concept of mental accounting says that income received in different ways is spent differently. Economists have found that money received as a bonus is more likely to be spent than money received as regular income. Since one-third of the cards had bonus money attached, this concept says that one-third of the students would be more likely to buy a water park ticket. Announce the final tallies to see if this concept held true.
- 23) Ask student volunteers who chose to buy water park tickets to explain the reason behind their choice. (*Answers will vary, but should include the idea that they had received “extra” money they weren’t expecting, so they chose to spend it on a ticket.*)
- 24) Brainstorm examples of how mental accounting might lead people to make illogical spending decisions. (*Answers will vary, but should include spending money they wanted to save, such as gift money, bonus money for a good report card or other award, or money they received unexpectedly.*)

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SEGMENT FOUR: BANDWAGON EFFECT

- 25) Tell students that the last behavioral economics concept they will learn about is the “**bandwagon effect.**” Distribute Handout 2, one to each student. Explain that the class will help decide which candidate to elect for student council at a local middle school.
- 26) Introduce the two candidates running for student council by reading the information on Handout 2 aloud to students:
- Candidate #1 is an “A” student and has good communication skills. This candidate promises to get the opinions of each class before setting up school events, such as talent shows and assemblies. This candidate’s ideas for service-learning projects for the school include making gifts and cards for veterans or senior citizens.
 - Candidate #2 is an “A” student with good speaking skills. This candidate promises to truly listen to students’ ideas and work to stop bullying in school. This candidate’s ideas for service-learning projects include making blankets and care packages for pets at the animal shelter.
- 27) Ask students to think about the two candidates’ promises and mark their ballot with their choice for student council. Tell students not to discuss their choice with anyone or let others see their ballot.
- 28) Explain to students that the class will now discuss their votes and reasons for their student council choices. Ask for a student volunteer who felt strongly about voting for Candidate #1 to discuss their reasoning. (*Reasons will vary, but may include the facts that this candidate communicates well, will get opinions before working on fun school events, and has service-learning projects that appeal to the voter.*) Ask other students who agree with this choice to raise their hands. Ask for a volunteer who felt strongly about voting for Candidate #2 to discuss their reasoning. (*Answers will vary, but may include the facts that this candidate speaks well, is a good listener, will work to stop bullying, and has service-learning projects that appeal to the voter.*) Ask other students who agree with this choice to raise their hands.
- 29) Now tell students that they will take a final group vote by raising their hand for the candidate of their choice. Explain that they can vote for the original candidate they marked on their ballot, or change to the alternate candidate. Count the number of votes for each candidate and write the totals on the board.
- 30) Ask students to raise their hands if they changed their vote after they heard their classmate speak about the alternate candidate and saw how many hands were raised in support of the candidate. (*Numbers will vary, but several students should have made this change.*)
- 31) Tell students that this is evidence of the bandwagon effect, which is doing something because others are doing it, regardless of your own opinions. Most people want to agree with the majority of people in their beliefs and actions. Economists call this “group think,” or seeing a desirable group and wanting to belong to it. They may ignore their own opinions or feelings to be a part of the larger group.

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- 32) Discuss with students that another example of bandwagon effect is buying items that others have purchased to “fit in” with the group. Ask them to give examples of brands of jeans, electronics and athletic shoes that students choose to buy. Tell them that others may want to buy similar items to be a part of their peer group, or conform. Commercials and advertisements for these items may help promote group think by convincing students they need these items to be one of the group.
- 33) Tell students that social media can also promote the bandwagon effect. Students can “like” others’ posts, retweet comments and agree with reviews.
- 34) Ask students to give examples of other bandwagon situations in their lives. (*Answers will vary, but may include liking the same music, following the same fad or trend in clothing and participating in the same sports or leisure activities.*)
- 35) Explain to students that the problem with the bandwagon effect is that they may choose to go against their beliefs and values to be like others. This can lead to illogical decision making or buying items they can’t afford. Stress that it’s important to stay true to yourself and your opinions without being influenced by others.

CLOSURE

- 36) Review the key concepts of the lesson by asking the following questions:
- What is behavioral economics? (*Behavioral economics uses economic assumptions to explain and predict behavior.*)
 - Why is it important to understand how behavioral economics affects our decisions? (*If you are aware of how these concepts affect behavior and decision making, you can make an effort to think more logically in these situations.*) **Note: Accept all reasonable answers.**
 - Explain **loss aversion** and give an example. (*Loss aversion is when the negative feeling from a loss is stronger than the positive feeling from a gain. Therefore, people avoid and fear loss. An example might be that it hurts more to lose money than it feels good to find/win money.*) **Note: Accept all reasonable responses.**
 - Describe **endowment effect** and give an example. (*The endowment effect is when people become attached to the items they have and are less likely to trade them away. They feel these items have more value because they possess them. An example might be receiving an item as a gift and not trading it for a similar item in a more desirable color.*) **Note: Accept all reasonable responses.**
 - Discuss **mental accounting** and give an example. (*Mental accounting is when income received in different ways is spent differently. If the money is a gift or unexpected, it may be spent more quickly than regular income would be. An example might be that bonus money is spent more easily than regular income because it is “extra” money.*) **Note: Accept all reasonable responses.**
 - Explain **bandwagon effect** and give an example. (*Bandwagon effect is when people do something because others are doing it, regardless of their opinions. Most people want to agree with the majority of others in their beliefs and actions. This can be referred to as “group think.” An example might be voting for a candidate because the majority of people are voting for that person.*) **Note: Accept all reasonable responses.**

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ASSESSMENT

After reviewing the four behavioral concepts, distribute Handout 3 and ask students to complete, following directions.

EXTENSION ACTIVITY

Divide students into four groups and assign a behavioral concept to each group. Ask each group to develop a skit about their behavioral concept, showing an event where the concept occurs and how students become aware of the concept and think through the situation logically.

CONTENT STANDARDS

NATIONAL STANDARDS IN ECONOMICS

- **Standard 2:** Students will understand that effective decision making requires comparing additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something; few choices are all-or-nothing decisions.
- **Standard 4:** Students will understand that people usually respond predictably to positive and negative incentives.
 - Grade 8, Benchmark 2: Changes in incentives usually cause people to change their behavior in predictable ways.

COMMON CORE STANDARDS

English Language Arts Standards: History/Social Studies Grades 6-8

- **Craft and Structure**

CCSS.ELA-LITERACY.RH.6-8.4

Determine the meaning of words and phrases as they are used, including vocabulary specific to domains related to history/social studies.

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VISUAL 1: PENCIL EXCHANGE

Number of students in class:

Number of pencil exchanges:

Ask these questions to show 50 percent should be the expected percentage:

- a) If all students preferred color A, how many should trade? *(Since half received color B, half would trade.)*
- b) If all students preferred color B, how many should trade? *(Since half received color A, half would trade.)*
- c) If half of all students preferred color A, how many should trade? *(Half of this group, or 25 percent of the class, would have received color B and would trade.)*
- d) If half of all students preferred color B, how many should trade? *(Half of this group, or 25 percent of the class, would have received color A and would trade.)*

Teacher note: There are other fractional possibilities, but the total percentage that would change always equals 50 percent, no matter what proportion prefer A to B.

Our pencil exchange in percentages:

$$\frac{\text{Number of pencils exchanged}}{\text{Number of students}} \times \frac{100}{1} = \text{percentage \%}$$

$$\frac{\text{_____}}{\text{_____}} \times \frac{100}{1} = \text{\%}$$

HANDOUT 1A: ALLOWANCE CARDS

<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>	<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>	<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>
<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>
<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>
<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>
<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>	<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>	<p>Weekly Allowance \$10</p>

HANDOUT 1B: ALLOWANCE CARDS

<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>	<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>	<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>
<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>
<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>
<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>	<p>Weekly Allowance \$10</p>
<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>	<p>Weekly Allowance \$10 Plus \$5 Bonus!</p>	<p>Weekly Allowance \$10</p>

HANDOUT 2: STUDENT COUNCIL ELECTION

You are voting for a student council representative for your classroom. Read the description of the two candidates below and make your voting decision.

- Candidate #1 is an “A” student and has good communication skills. This candidate promises to get the opinions of each class before setting up school events, such as talent shows and assemblies. This candidate’s ideas for service-learning projects for the school include making gifts and cards for veterans or senior citizens.
- Candidate #2 is an “A” student with good speaking skills. This candidate promises to truly listen to students’ ideas and work to stop bullying in school. This candidate’s ideas for service-learning projects include making blankets and care packages for pets at the animal shelter.

I WILL VOTE FOR CANDIDATE _____.

Listen to the class discussion about the candidates. You will have a chance to vote again as a group after the discussion.

HANDOUT 3: ASSESSMENT

Match the behavioral economics concept to the correct example by placing the concept letter in front of the example.

- A. Bandwagon Effect
- B. Endowment Effect
- C. Loss Aversion
- D. Mental Accounting

___ 1. You decide to sell one of your video games to get some cash. You're selling it for more than garage sale cost because it's a fun game to play.

___ 2. You're playing in your team's soccer tournament finals. You are dreading the final game because the opposing team is really good.

___ 3. You just received extra cash for a babysitting job, and decide to spend it immediately.

___ 4. All your friends have the newest style in boots. You want a pair just like theirs.