

Earth Day—Hooray!

By Stuart J. Murphy / ISBN: 0-06-000129-1

Lesson Author

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Standards and Benchmarks (see page 12)

Lesson Description

In this lesson, students listen to the book *Earth Day—Hooray!* They learn about Earth Day and how incentives change people’s behavior. The students learn how Ryan, Carly, and Luke, characters in the book, collect cans to sell to the recycling center and use the money they receive to buy flowers to plant in the park. In a classroom discussion of the story, students track the number of cans brought to school each day. Students evaluate scenarios to determine what behavior is being encouraged or discouraged and to identify whether the incentives are rewards or penalties.

Grade Level

2-4

Concepts

Incentives
Penalties
Rewards

Objectives

Students will

- define incentives, rewards, and penalties;
- give examples of rewards and penalties; and
- explain how incentives affect behavior.

Time Required

60 minutes

Materials

- *Earth Day—Hooray!* by Stuart J. Murphy (ISBN: 0-06-000129-1)
- Visual 1
- Handouts 1 and 3, one copy for each student
- Handout 2, printed on white card stock and cut apart
- Handout 2—Answer Key for the teacher

Procedure

1. Introduce the story by showing students the cover of the book and reading the title. Ask the following:
 - What do you think the story might be about? (*Answers will vary but students might say picking up cans, selling cans, or helping clean up the environment.*)
 - How many of you have seen someone picking up aluminum cans to sell at a recycling center? (*Answers will vary.*)
 - Why do people pick up cans and take them to the recycling center? (*They receive money from the recycling center for each can.*)
2. Tell the students they will listen to the story *Earth Day—Hooray!* Tell them to listen for clues about Carly, Luke, and Ryan’s problem. Begin reading *Earth Day—Hooray!* Stop at the end of page 6 and ask the following:
 - Why would the children want to clean up the park? (*The park is the sight of this year’s Earth Day celebration. The children want to make the park look nice. They are concerned about the environment.*)
 - What can the students do to make the park a nice place? (*Answers will vary but may include picking up trash, planting flowers, asking others to keep the park clean, and occasionally cleaning up the park so it will continue to look nice.*)
3. Explain that Earth Day was started to make people aware of the need to keep the earth clean. Earth Day was started to encourage people to change the way they treat the earth. Earth Day is a celebration that encourages people to help protect the earth.
4. Explain that **incentives** are benefits or costs that affect people’s choices and behavior. **Rewards** are positive incentives that make people better off. For example, say your mom decides that she wants you to study your spelling words for 15 minutes every day. She tells you that she will rent a special video for you if you get 100% on your next spelling test. The video is a reward (positive incentive) that encourages you to change your behavior—to encourage you to study your spelling words more. **Penalties** are negative incentives that make people worse off. For example, say your mother wants you to put your toys away when you are done playing with them. She tells you that if

the toys are not put away, she will not let you play with them for a week. Taking the toys away from you is a penalty (negative incentive) designed to change your behavior—to discourage you from leaving your toys laying around after you are done playing with them.

5. Finish reading the story to the children. Discuss the following:
 - Who were the characters in the story? (*Carly, Luke, Ryan, and their teacher, Mrs. Watson*)
 - What was the children's problem? (*The children wanted to buy flowers to make the park look nice, but they did not have any money.*)
 - What steps did the children take to solve their problem? (*The children made signs, flyers, and a cartoon to encourage people to save cans for them. They picked up cans. They went door-to-door passing out flyers to encourage people to save cans. They took bags to collect cans when they visited homes in their neighborhoods.*)
 - How did the children solve their problem? (*Carly, Luke, and Ryan bought flowering plants with the money they earned by selling aluminum cans that were collected at their school.*)
6. Explain that Carly, Luke, and Ryan had an incentive to collect cans. Explain that they wanted flowers to make their park look nicer. To buy flowers, they needed money. The children decided that collecting cans to sell to the recycling center would be a good way to make money for their park cleanup project. The money from the recycling center was a positive incentive for them.
7. Discuss the following:
 - Have you ever been given a positive incentive (reward) to encourage a specific behavior? (*Answers will vary but may include getting a dollar for helping around the house or getting to go to a movie for keeping their room neat.*)
 - Have you ever been given a negative incentive (penalty) to discourage a specific behavior? (*Answers will vary but may include not being able to play outside if toys are not put away or having to miss recess if homework isn't finished.*)
8. Display *Visual 1: Earth Day Sign* or write the information from Visual 1 on the board. Explain that the children in the story set a goal to collect 5,000 cans. To encourage others to save cans for them, the children put up a big sign like the one in Visual 1, created a flyer, and drew a cartoon. When Carly, Luke, and Ryan got to school the next day, 56 cans were in the barrel because of the things they had done to encourage others to bring cans to school. Write the number 56 on the sign to show the number of cans collected by the first day. Ask the following:

- What happened next? (*Carly, Luke, and Ryan got permission to visit other classes to encourage other students in their school to save cans and bring them to school.*)
 - What did Carly, Luke, and Ryan say to the other students to encourage them to bring cans to school? (*They told the other students that the three of them had a goal to collect 5,000 aluminum cans to sell to the recycling center to get money to buy flowers for the park.*)
 - What was Carly, Luke, and Ryan's incentive to pick up cans on their way home from school? (*Their incentive was the money they would get when they collected and sold 5,000 cans to the recycling center.*)
9. Remind the students that when Carly, Luke, and Ryan counted cans the next day, they found that they had 635 more cans than the day before. Explain that you will now add the 635 cans to the 56 cans on the sign. Write the problem " $635 + 56 =$ " on the board. Solve the problem or ask a student to do so. (691) Erase the previous number and write 691 on the visual to show the number of cans collected by the end of the second day. Ask the following:
- How many cans do Carly, Luke, and Ryan need to collect now? Write the problem " $5,000 - 691 =$ " on the board. Solve the problem or ask a student to do so. (4,309)
10. Remind the students that when Carly, Luke, and Ryan came to school the next day, even more cans had been donated. The three students found that 1,483 cans had been added to the collection. Write the problem " $1,483 + 691 =$ " on the board. Solve the problem or ask a student to do so. (2,174) Ask the following:
- What does the number 1,483 represent? (*It represents the 1,483 cans that were collected on the third day.*)
 - What does the number 691 represent? (*It represents the number of cans that had already been collected before the third day.*)
 - Erase the previous number and write 2,174 on the visual to show the number of cans collected by the third day.
 - How many more cans did the children need to collect to reach their goal of 5,000 cans? Write the problem " $5,000 - 2,174 =$ " on the board. Solve the problem or ask a student to do so. (*2,826 cans still need to be collected to reach the goal of 5,000 cans.*)
 - What did Carly, Luke, and Ryan do to encourage people to collect cans for them? (*Luke put up signs. Members of the Save-the-Planet Club knocked on every door in their neighborhoods, handed out Ryan's flyer, and carried big bags for people's empty cans.*)
 - How many cans did Carly, Luke, and Ryan collect in the final part of the can collection drive? (2,852)

- Write the problem “ $2,174 + 2,852 =$ ” on the board. Solve the problem or ask a student to do so. (5,026) Erase the previous number and write 5,026 on the visual to show the total amount of cans collected.
11. Ask the following:
- How many cans did Carly, Luke, and Ryan have at the end of the can collection drive? (5,026)
 - Did the children reach their goal of collecting 5,000 cans? (Yes, they collected 26 more cans than their goal of 5,000 cans.)
 - What happened after Mrs. Watson took the cans to the recycling center? (Mrs. Watson then took the children to the plant nursery, where they picked out and bought flowers in their favorite colors. The first thing the children did at the Earth Day celebration was to plant the flowers.)
 - What incentive did the other students have for collecting cans? (They felt good about collecting cans to make money to help beautify the park.)
12. Give each student a copy of *Handout 1: Incentives—Penalties or Rewards?* Read the directions.
13. Show students the deck of cards cut from *Handout 2: Behavior Cards*. Tell them that the scenarios are on these cards. Shuffle the cards. Ask a student to select a card from the deck. Read the number on the card and the scenario. Discuss the questions on the card. Remind the students to draw the correct picture on the correct number on Handout 1. Use *Handout 2: Behavior Cards—Answer Key* to check students’ answers. Repeat step 13 until all of the cards are read and faces are drawn on Handout 1.

Closure

14. Review the important concepts taught in the lesson by asking students the following questions:
- What is an incentive? (An incentive is a benefit or cost that affects someone’s choices and behavior.)
 - What is a reward? (A reward is a positive incentive that makes someone better off.)
 - What is a penalty? (A penalty is a negative incentive that makes someone worse off.)
 - Give some examples of positive incentives (rewards). (Answers will vary but may include getting smiley faces for doing a good job on a class assignment, collecting cans to earn money to beautify a park, or getting paid to keep your room clean.)
 - Give some examples of negative incentives (penalties). (Answers will vary but may include fines for not putting trash in a trash can, losing recess time for misbehavior, or not being able to watch television until grades improve.)

Assessment

15. Give each student a copy of *Handout 3: Reward or Penalty? Assessment*. Have the students complete the handout independently. After all the students have finished, read the statements and discuss the correct answers with the students.

Handout 3: Reward or Penalty? Assessment—Answer Key

1. Reward
2. Reward
3. Penalty
4. Penalty
5. Reward
6. Reward
7. Reward
8. Reward

Visual 1: Earth Day Sign

Earth Day—Hooray!

Cans recycled so far:

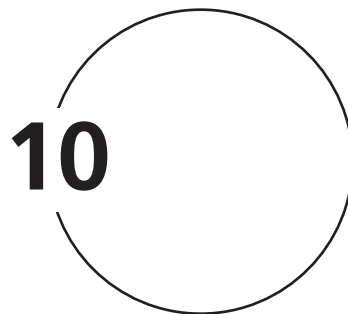
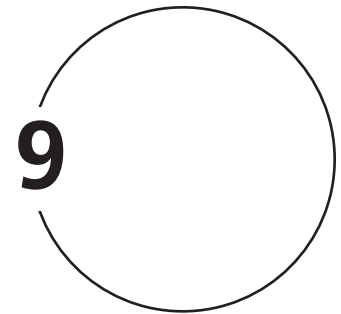
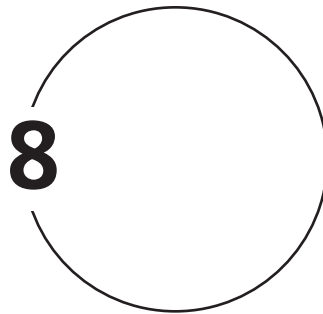
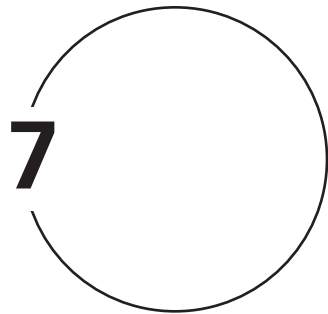
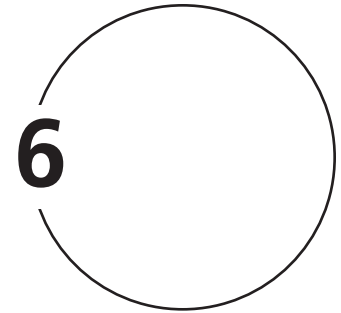
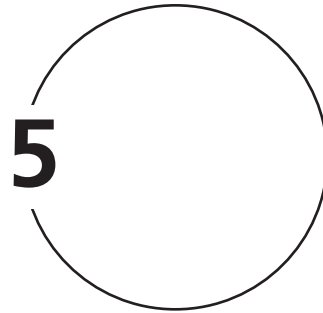
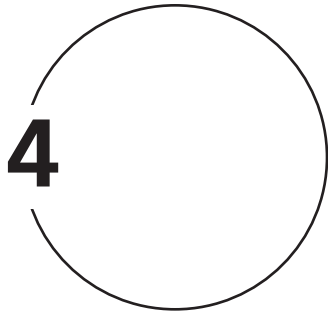
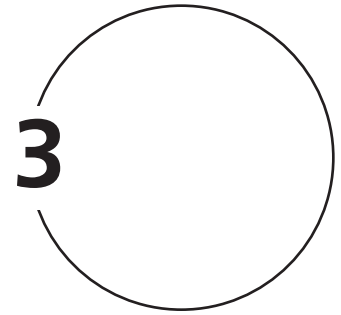
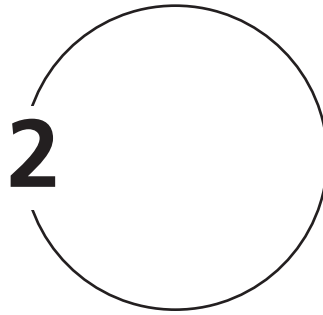
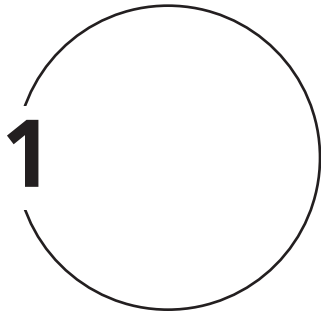
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Help us reach our goal of collecting 5,000 cans, exchanging them for money at the recycling center, and buying and planting flowers in Gilroy Park.

Let's make a difference this Earth Day!

Handout 1: Incentives—Penalties or Rewards?

Directions: After listening to each scenario, draw a happy face in the circle if the scenario describes a positive incentive (a reward) or a sad face in the circle if the scenario describes a negative incentive (a penalty).



Handout 2: Behavior Cards

<p>1. Luke’s mom wants him to spend more time reading. She tells him that for every page he reads she will give him a penny.</p> <p>What is the behavior Luke’s mother wants to encourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>	<p>2. Susan forgets to shut down her computer when she is finished using it. Her father says the next time he finds it left on, Susan won’t be able to use it for a week.</p> <p>What is the behavior Susan’s father wants to discourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>
<p>3. Ryan missed the bus three times this week because he wasn’t ready when the bus came. His father tells him that if he misses the bus again, he will be grounded for a week.</p> <p>What is the behavior Ryan’s father wants to discourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>	<p>4. Sam does not like to eat cabbage. His grandmother says she will give him 15 extra minutes to play outside if he eats the cabbage on his plate.</p> <p>What is the behavior Sam’s grandmother wants to encourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>
<p>5. Carly needs extra piano practice. Her mom tells her that for every extra half hour she practices the piano, Carly can play an extra half hour of video games.</p> <p>What is the behavior Carly’s mom wants to encourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>	<p>6. Mary’s mom wants her to stop biting her fingernails. Mary’s mom says that if Mary stops biting her fingernails, Mary can get a manicure.</p> <p>What is the behavior Mary’s mom wants to discourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>
<p>7. Mrs. Watson drinks a lot of beverages that come in plastic bottles, but she doesn’t always return them to the store for recycling. The store has started paying five cents per plastic bottle returned to the store for recycling.</p> <p>What is the behavior the store wants to encourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>	<p>8. Dave likes to ride his bicycle without wearing a helmet. His dad says that the next time Dave rides his bike without a helmet, he will take Dave’s bike away from him for two days.</p> <p>What is the behavior Dave’s dad wants to encourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>
<p>9. Barbara has not been studying her multiplication tables. Her sister promises to let Barbara choose a DVD to watch if she gets a 100% on her next math test.</p> <p>What is the behavior Barbara’s sister is wants to encourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>	<p>10. Tim’s mom wants him to go to bed at 9 PM on school nights. She says that he can stay up until 11 PM on Friday nights if Tim is in bed by 9 PM every night during the week.</p> <p>What is the behavior Tim’s mother wants to encourage?</p> <p>What is the incentive?</p> <p>Is this incentive a reward or a penalty?</p>

Handout 2: Behavior Cards—Answer Key

<p>1. Luke's mom wants him to spend more time reading. She tells him that for every page he reads she will give him a penny.</p> <p>What is the behavior Luke's mother wants to encourage? (<i>More reading</i>)</p> <p>What is the incentive? (<i>A penny a page</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Reward</i>) ☺</p>	<p>2. Susan forgets to shut down her computer when she is finished using it. Her father says the next time he finds it left on, Susan won't be able to use it for a week.</p> <p>What is the behavior Susan's father wants to discourage? (<i>Leaving the computer on</i>)</p> <p>What is the incentive? (<i>Not using the computer for a week</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Penalty</i>) ☹</p>
<p>3. Ryan missed the bus three times this week because he wasn't ready when the bus came. His father tells him that if he misses the bus again, he will be grounded for a week.</p> <p>What is the behavior Ryan's father wants to discourage? (<i>Missing the bus</i>)</p> <p>What is the incentive? (<i>Being grounded for a week</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Penalty</i>) ☹</p>	<p>4. Sam does not like to eat cabbage. His grandmother says she will give him 15 extra minutes to play outside if he eats the cabbage on his plate.</p> <p>What is the behavior Sam's grandmother wants to encourage? (<i>Eating cabbage</i>)</p> <p>What is the incentive? (<i>15 extra minutes of outdoor play</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Reward</i>) ☺</p>
<p>5. Carly needs extra piano practice. Her mom tells her that for every extra half hour she practices the piano, Carly can play an extra half hour of video games.</p> <p>What is the behavior Carly's mom wants to encourage? (<i>Practicing piano</i>)</p> <p>What is the incentive? (<i>Playing an extra 30 minutes of video games</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Reward</i>) ☺</p>	<p>6. Mary's mom wants her to stop biting her fingernails. Mary's mom says that if Mary stops biting her fingernails, Mary can get a manicure.</p> <p>What is the behavior Mary's mom wants to discourage? (<i>Nail biting</i>)</p> <p>What is the incentive? (<i>A manicure</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Reward</i>) ☺</p>
<p>7. Mrs. Watson drinks a lot of beverages that come in plastic bottles, but she doesn't always return them to the store for recycling. The store has started paying five cents per plastic bottle returned to the store for recycling.</p> <p>What is the behavior the store wants to encourage? (<i>Recycling</i>)</p> <p>What is the incentive? (<i>5 cents per bottle</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Reward</i>) ☺</p>	<p>8. Dave likes to ride his bicycle without wearing a helmet. His dad says that the next time Dave rides his bike without a helmet, he will take Dave's bike away from him for two days.</p> <p>What is the behavior Dave's dad wants to encourage? (<i>Wearing a helmet</i>)</p> <p>What is the incentive? (<i>Losing the bike for two days</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Penalty</i>) ☹</p>
<p>9. Barbara has not been studying her multiplication tables. Her sister promises to let Barbara choose a DVD to watch if she gets a 100% on her next math test.</p> <p>What is the behavior Barbara's sister is wants to encourage? (<i>Studying multiplication tables</i>)</p> <p>What is the incentive? (<i>Watching a DVD</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Reward</i>) ☺</p>	<p>10. Tim's mom wants him to go to bed at 9 PM on school nights. She says that he can stay up until 11 PM on Friday nights if Tim is in bed by 9 PM every night during the week.</p> <p>What is the behavior Tim's mother wants to encourage? (<i>Going to bed at 9 PM on school nights</i>)</p> <p>What is the incentive? (<i>Staying up until 11 PM on Friday</i>)</p> <p>Is this incentive a reward or a penalty? (<i>Reward</i>) ☺</p>

Handout 3: Reward or Penalty? Assessment

Directions: Read each statement below. If the statement describes a reward, circle "reward" below the statement. If the statement describes a penalty, circle "penalty" below the statement.

1. Ryan picks up his toys and puts them away every night. As a result, he gets an allowance on Friday.
Reward Penalty
2. Carly practiced her speech to encourage students to bring cans to school for the can collection drive. After listening to Carly's speech, her fellow students brought in 300 cans the next day.
Reward Penalty
3. Luke was caught chewing gum in class. As a result, he had to write a story about the class rules.
Reward Penalty
4. Jim did not finish his math homework, so he had his recess time taken away from him.
Reward Penalty
5. Sam brought 100 cans in for the can collection drive and was given a sticker that said, "I donated cans."
Reward Penalty
6. Jill got a 100% on her spelling test, so Mrs. Watson put an "A" on her paper.
Reward Penalty
7. Mrs. Watson gave Susan a new pencil with hearts on it for doing a good job writing a nice story.
Reward Penalty
8. Mrs. Watson's students collected cans and sold them to the recycling center. With the money they received, they were able to buy flowering plants, which they planted in the park to make it look pretty.
Reward Penalty

Standards and Benchmarks

National Standards in Economics

Standard 4: People usually respond predictably to positive and negative incentives.

- **Benchmark 1, Grade 4:** Rewards are positive incentives that make people better off.
- **Benchmark 2, Grade 4:** Penalties are negative incentives that make people worse off.
- **Benchmark 3, Grade 4:** Both positive and negative incentives affect people's choices and behavior.

Common Core State Standard: English Language Arts Standards, Grades 2-4

Reading: Literature

- **Key Ideas and Details**

RL.2.1, RL.3.1, RL.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RL.2.2, RL.3.2, RL.4.2: Determine a theme of a story, drama, or poem from details in the text; summarize the text.

RL.2.3: Describe how characters in a story respond to major events and challenges.

Speaking and Listening

- **Comprehension and Collaboration**

SL.2.2, SL.3.2: Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

Common Core State Standard: Mathematics, Grades 3-4

Numbers and Operations in Base Ten

- **Use place value understanding and properties of operations to perform multi-digit arithmetic.**

3.NBT.2, 4.NBT.4: Fluently add and subtract multi-digit whole numbers using the standard algorithm.