Peanut Butter & Cupcake
By Terry Border / ISBN: 978-0-399-16773-7

Lesson Author
Erin A. Yetter, Ph.D., Federal Reserve Bank of St. Louis–Louisville Branch

Standards and Benchmarks (see page 10)

Lesson Description
In this lesson, students hear a story about Peanut Butter, a slice of bread with peanut butter on it, who is looking for a friend. They are to listen for examples of substitutes and complements in the story. They then participate in a matching activity where they find a partner with the substitute or complement to the good they have. They conclude by singing a song about substitutes and complements.

Grade Level
1-3

Concepts
Complements
Substitutes

Objectives
Students will be able to
• define substitute and complement and
• identify complements or substitutes for a given good.

Essential Question
How are some goods related to other goods?
Lesson Plan Peanut Butter & Cupcake

©2016, Federal Reserve Banks of St. Louis and Philadelphia. Permission is granted to reprint or photocopy this lesson in its entirety for educational purposes, provided the user credits the Federal Reserve Bank of St. Louis, www.stlouisfed.org/education.

Time Required
60 minutes

Materials
- Handouts 1 and 3, one copy for each student
- Handout 2, printed on cardstock and cut apart (There are 12 sets of cards, for 24 students. Print additional cards as needed.)
- Optional: Small prizes for the students who match correctly during the activity.

Procedure
1. To begin the lesson, ask the students to imagine they are arriving home from school. Their grandmother has come to visit and has made some delicious chocolate chip cookies to eat as a snack. She offers a drink to go with the cookies. Then she brings a nice, tall, cold glass of…orange juice! Discuss the following:
   - Does orange juice sound good with chocolate chip cookies? (*Most students will likely say no.*)
   - Why not? (*Orange juice and chocolate chip cookies don’t go together.*)
   - What would you like instead? (*Most students will likely say milk.*)
   - Why would you want milk instead? (*Because chocolate chip cookies and milk go together; they are yummy to eat together.*)

2. Tell the students that goods used together are known as **complements**. In other words, when you use one good you almost always use its complement as well. For example, when you eat pancakes for breakfast, you put syrup on them. Pancakes and syrup are complements. When you play tennis, you need a tennis racket and a tennis ball. Tennis rackets and tennis balls are complements.

3. Ask the students to name some other goods that are complements and list them on the board. (*Answers will vary but might include hot dogs and hot dog buns, ice cream and chocolate syrup, crayons/pencils and paper, dolls and doll clothes, and trains and train tracks.*)

4. Now ask the students to imagine their grandmother planned to make chocolate chip cookies but discovered there were no chocolate chips in the house. She did see a jar a peanut butter, though. Discuss the following:
   - What type of cookies could she have made instead? (*Students will likely say peanut butter cookies.*)
• Can you name some other types of cookies? (Answers will vary but may include sugar, snickerdoodles, and so on.)

5. Tell the students that goods used in place of similar goods are known as substitutes. In other words, if the good you want to use is unavailable or too expensive, you could use a different good instead. For example, if you want apple juice to drink at lunch and apple juice isn’t available, you can buy orange juice. Orange juice and apple juice are substitutes. If your mom goes to buy American cheese and discovers it has doubled in price, she might buy cheddar cheese instead. American cheese and cheddar cheese are substitutes.

6. Ask the students to name some other goods that are substitutes and list them on the board. (Answers will vary but may include pencil or pen, crayon or markers, mittens or gloves, and apples or bananas).

7. Tell the students they are going to listen to a story about complements and substitutes, called Peanut Butter & Cupcake. Tell them the story is about Peanut Butter, who is searching for his complement. Read the story.

8. After the story, distribute Handout 1: Substitutes and Complements. Tell the students you are going to read the story again. They are to look at the pictures of substitutes and complements in Part A and listen for when they are mentioned in the story. When substitutes or complements are mentioned, the students should connect them with a line and then circle whether the goods are complements or substitutes. Read the story again.

9. After the story, instruct the students to complete Part B of the handout and then review the answers to both parts.

Handout 1—Answer Key

Part A

Pages 7-8: hot dog and hamburger—substitutes
Pages 9-10: cupcake and sprinkles—complements
Pages 13-14: spaghetti and meatballs—complements

Part B

Egg: bacon (complement); pancake (substitute)
French fries: cheeseburger (complement); potato chips (substitute)
Soup: crackers (complement); salad (substitute)
10. Give each student half of a card from *Handout 2: Matching Activity*. Explain the following:

- There are 24 (or the number you use) puzzle pieces in the room. Each puzzle piece will fit with one other puzzle piece.
- Each puzzle piece has a picture of a good and its name. You are to try to find the match to your puzzle piece by looking for its complement or substitute. For example, if you have bacon, you would want to look for an egg, which would be its complement, or a pancake, which would be its substitute.
- You will know if you have found the correct match if your puzzle pieces fit together to make a square.
- Once you have found your match, sit down with that person.
- We will review the complements and substitutes once all matches are found.

11. Tell the students to start to find their matches and then sit down with the person holding the matching card. Allow students 5 minutes or so for matching. (Note: You may offer a small prize to those who make a correct match.)

12. Once students are finished and seated, call on each pair to tell you the two goods, whether they think they are complements or substitutes, and why.

*Handout 2: Matching Activity—Answer Key*

<table>
<thead>
<tr>
<th>Complements</th>
<th>Substitutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birthday cake and ice cream</td>
<td>Apple and orange</td>
</tr>
<tr>
<td>Cereal (box) and milk</td>
<td>Strawberry jelly and grape jelly</td>
</tr>
<tr>
<td>Paint and paint brush</td>
<td>Bagel and donut</td>
</tr>
<tr>
<td>Toothbrush and toothpaste</td>
<td>Apple juice and orange juice</td>
</tr>
<tr>
<td>Envelope and stamp</td>
<td>Magazine and comic book</td>
</tr>
<tr>
<td>Desk and chair</td>
<td>Rain coat and a poncho</td>
</tr>
</tbody>
</table>
Lesson Plan  
Peanut Butter & Cupcake

Closure

13. Tell the students you are going to teach them a new song. It is sung to the tune of “Where Is Thumbkin?” Sing each line in turn and have the students repeat it.

Complements and Substitutes (song)

♫ What are complements?
What are complements?
Goods we use together
Goods we use together
Can you name some complements?
Yes, I can, no problem
Peanut butter and jelly
Peanut butter and jelly

♫ What are substitutes?
What are substitutes?
Goods we use instead
Goods we use instead
Can you name some substitutes?
Yes, I can, no problem
Crayons and colored pencils
Crayons and colored pencils

Assessment

14. Distribute a copy of Handout 3: Assessment to each student. Read the directions to the students. Allow a few minutes for students to complete the handout and then review their answers.

Handout 3—Answer Key

Complement (☆): Petra’s Pretty Pencils
Explanation: Complements are goods used together. Pencils are used with pencil holders.

Substitute (✓): Pedro’s Pencil Pouches
Explanation: Substitutes are goods used in place of each other. A pencil pouch could hold pencils instead of a pencil cup holder.
**Handout 1: Substitutes and Complements**

**Part A**

Directions: As your teacher reads the story, draw a line between the substitute or complement for each good mentioned or shown in the illustrations. Then circle whether it is a complement or substitute.

![Complement](image1.png) ![Substitute](image2.png)

![Complement](image3.png) ![Substitute](image4.png)

![Complement](image5.png) ![Substitute](image6.png)

**Part B**

Directions: Some goods in the story did not have a complement or substitute mentioned. Circle the good you think could be each good’s complement or substitute.

<table>
<thead>
<tr>
<th>Good</th>
<th>Complement</th>
<th>Substitute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg</td>
<td>Bacon, Jelly</td>
<td>Pancake, Pizza</td>
</tr>
<tr>
<td>French fries</td>
<td>Pumpkin pie, Cheeseburger</td>
<td>Potato chips, Mayonnaise</td>
</tr>
<tr>
<td>Soup</td>
<td>Crackers, Turkey</td>
<td>Salad, Fish</td>
</tr>
</tbody>
</table>
Handout 2: Matching Activity (page 1 of 2)

Ice cream
Birthday cake
Cereal
Milk
Paint
Paint brush
Toothbrush
Toothpaste
Envelope
Stamp
Desk
Chair
Ice cream
Birthday cake
Cereal
Milk
Paint
Paint brush
Toothbrush
Toothpaste
Envelope
Stamp
Desk
Chair
Handout 2: Matching Activity (page 2 of 2)

- Apple
- Orange
- Bagel
- Donut
- Strawberry jelly
- Grape jelly
- Apple juice
- Orange juice
- Comic book
- Magazine
- Rain coat
- Poncho
Handout 3: Assessment

Your teacher has organized a student craft fair. Each student has made homemade crafts to sell to other students. You made pencil cups from tin cans. Below are the other crafts students have made to sell.

Part A
Directions: Put a star (☆) next to the good that complements yours. Put a check mark (✓) next to the good that is a substitute for yours.

<table>
<thead>
<tr>
<th>Kiara’s Kool Keychains</th>
<th>Bianca’s Bestie Bracelets</th>
<th>Suzie’s Super Stress Balls</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Keychains" /></td>
<td><img src="image2" alt="Bracelets" /></td>
<td><img src="image3" alt="Stress Balls" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bea’s Beautiful Barrettes</th>
<th>Sara’s Silly Snow Globes</th>
<th>Petra’s Pretty Pencils</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4" alt="Barrettes" /></td>
<td><img src="image5" alt="Snow Globes" /></td>
<td><img src="image6" alt="Pencils" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Carl’s Crafty Critters</th>
<th>Pedro’s Pencil Pouches</th>
<th>Pang’s Pet Rocks</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7" alt="Critters" /></td>
<td><img src="image8" alt="Pencil Pouches" /></td>
<td><img src="image9" alt="Pet Rocks" /></td>
</tr>
</tbody>
</table>

Part B
Directions: Write two sentences for each vocabulary word below. In the first sentence, define the word. In the second sentence, explain your answer from above.

Substitute

Complement
Standards and Benchmarks

Voluntary National Content Standards in Economics

Standard 8: Role of Prices. Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

  - Benchmark 1, Grade 12: Demand for a product changes when there is a change in consumers’ incomes, preferences, the prices of related products, or in the number of consumers in a market.

Common Core State Standards: English Language Arts

Reading: Literature

  - Key Ideas and Details
    CCSS.ELA-LITERACY.RL.1.1: Ask and answer questions about key details in a text.
    CCSS.ELA-LITERACY.RL.3.1: Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

  - Integration of Knowledge and Ideas
    CCSS.ELA-LITERACY.RL.1.7: Use illustrations and details in a story to describe its characters, settings, or events.
    CCSS.ELA-LITERACY.RL.2.7: Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

Speaking and Listening

  - Comprehension and Collaboration:
    CCSS.ELA-LITERACY.SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.