



## **CONSTRUCTING TASK: HAPPY TO EAT HEALTHY**

### **STANDARDS FOR MATHEMATICAL CONTENT**

**MCC.3.NBT.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

**MCC.3.NBT.1** Use place value understanding to round whole numbers to the nearest 10 or 100.

### **STANDARDS FOR MATHEMATICAL PRACTICE**

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
8. Look for and express regularity in repeated reasoning.

### **BACKGROUND KNOWLEDGE**

Students will need to be able to use the associative property and other estimating strategies for flexibility with estimating and fact families to check their work.

This task reinforces important skills in addition to calculating amounts of money. Students will use reasoning, problem solving, checking, and organizing information to find several different solutions.

### **ESSENTIAL QUESTIONS**

- How can I use addition and subtraction to help me solve real world problems?
- What estimation and mental math strategies can I use to help me solve real world problems?
- How can I verify the results of an addition or subtraction word problem?

### **MATERIALS**

- Healthy Snack Pictures
- Healthy Snack Recording Sheets (3 versions)
- Calculators

### **GROUPING**

Individual/Partner Task

## **TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION**

Students use a menu to decide which items to purchase given a specific amount of money to spend. This task requires students to estimate and subtract in order to figure out what to buy as they get closer to the target amount.

### **Task Directions**

1. Begin by asking students what a healthy snack might consist of.
2. Pass out Student Work Sheet, Healthy Snack Guide, Grading Rubric, and Sample Table.
3. Go over directions with students.
4. Answer any questions.
5. Allow ample work time.
6. Select groups to share their results, explaining the steps they took to reach their answer.

## **FORMATIVE ASSESSMENT QUESTIONS**

- What is your plan for solving this problem?
- Do you think it's best to start out with smaller- or larger-priced items? Why?
- Do you think you can spend exactly \$4?
- How are you keeping track of the different combinations you are trying out?
- What strategies have you discovered while trying to solve this problem?
- Which of your three solutions would you probably select in real life? Why?

## **DIFFERENTIATION**

### **Extension**

- Have students choose the designated amount they “found” in their pocket to spend on lunch.
- Have students explain how to “best” spend their money in terms of a balanced lunch.
- Give students the price list and task requirements alone and have them create their own graphic organizer to solve the problem.

### **Intervention**

- Make several copies of the Healthy Snack Shopping Guide for the students to cut apart. This may help students better visualize the amounts they are estimating, adding, and subtracting. (Use task version 3 if students will cut and glue their choices on to the recording sheet.)
- Students who struggle with math problem solving will benefit from the teacher modeling an example of how an answer could be derived.
- Consider providing money for some students to check their work after they determine their combinations. Remember that this task reinforces important skills including reasoning, checking, and organizing information to find several different solutions. <http://insidemathematics.org/pdfs/third-grade/the-pet-shop/coreideas.pdf>

**TECHNOLOGY CONNECTION**

- [http://www.cdli.ca/CITE/math\\_problems.htm](http://www.cdli.ca/CITE/math_problems.htm) A source for teachers to get ideas for additional word problems for students



Name \_\_\_\_\_ Date \_\_\_\_\_

## Happy to Eat Healthy

(Version 1)

You walk up to the snack counter and dig in your pockets for the change you stuffed in them this morning before heading to the arcade. After carefully counting your change, you discover you have exactly \$3.55. Is this enough to buy yourself a healthy lunch?

Find at least three different ways to buy a healthy lunch. Choose your food item, estimate it, and see what other items you can still afford. Try to spend as much of your money as you can. Don't worry about sales tax for this activity.

### MENU

Baked chips 45¢	Milk 86¢
Hot chocolate 67¢	Frozen yogurt bar 39¢
Apple 52¢	Raisins 56¢
Low-fat hot dog 75¢	Veggie burger 99¢
Popcorn 49¢	Orange 62¢
Banana 87¢	Bottled water 99¢

#### **Combination #1**

Items purchased	Estimated Cost	Estimated Total: _____
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	
	Total: _____	

#### **Combination #2**

Items purchased	Estimated Cost	Estimated Total: _____
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	
	Total: _____	

#### **Combination #3**

Items purchased	Estimated Cost	Estimated Total: _____
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	
	Total: _____	

Name \_\_\_\_\_ Date \_\_\_\_\_

## Happy to Eat Healthy

(Version 2)

Your mother gave you \$3 for lunch. Use the Healthy Snack Guide to create three different combinations of items that you could purchase. Snack items can be used more than once. Use scratch paper or your journal for figuring. Then, show your results in the tables below.



**Combination 1**

Items	Price
<b>Total</b>	

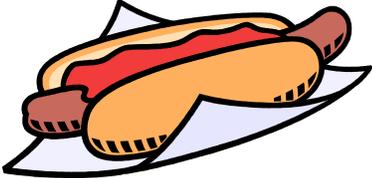
**Combination 2**

Items	Price
<b>Total</b>	

**Combination 3**

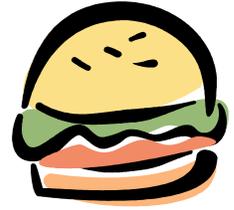
Items	Price
<b>Total</b>	

### Healthy Snack List

<p><b>Baked Chips 45¢</b></p> 	<p><b>Milk 86¢</b></p> 	<p><b>Hot Chocolate 67¢</b></p> 
<p><b>Apple 52¢</b></p> 	<p><b>Low-fat Hot Dog 75¢</b></p> 	<p><b>Veggie Burger 99¢</b></p> 
<p><b>Popcorn 49¢</b></p> 	<p><b>Orange 62¢</b></p> 	<p><b>Banana 87¢</b></p> 
<p><b>Bottle Water 99¢</b></p> 	<p><b>Frozen Yogurt Bar 39¢</b></p> 	<p><b>Raisins 56¢</b></p> 

Name \_\_\_\_\_ Date \_\_\_\_\_

## Happy to Eat Healthy (Version 3)



1. Cut out the snack items from the Healthy Snack List.
2. Find a combination of 3 or more items that you can purchase with \$4.
3. Glue the snack items you chose to the bottom of this page. Snack items can be used more than once.
4. Show all of your work.
5. Show your answer in the table below. Be ready to explain how you arrived at your answer.

Items	Price
<b>Total</b>	

**Georgia Department of Education**  
 Common Core Georgia Performance Standards Framework  
*Third Grade Mathematics • Unit 1*

**Healthy Snack Shopping Rubric**

<b>Elements</b>	<b>Meets Expectations</b>	<b>Progressing Toward Expectations</b>	<b>Does Not Meet Expectations</b>
<b>Completed Lists</b>	Three completed lists	Two completed lists	One completed list
<b>Calculations</b>	All lists are calculated with accuracy	Two lists are calculated with accuracy	One list is calculated with accuracy
<b>Presentation</b>	Communicates clearly and mathematically with numbers, symbols, and words	Communicates somewhat clearly and mathematically with some numbers, symbols, and words	Does not communicate clearly and mathematically with numbers, symbols, and words