

Sales Tax and Tip - A Co-Teaching Lesson Plan

Co-Teaching Approaches

A “(Y)” in front of the following list items indicates the approach is outlined in the lesson. A “(N)” in front of the following list items indicates the approach is not outlined in the lesson.

- (Y) Parallel Teaching
- (Y) Team Teaching
- (N) Station Teaching
- (N) One Teach/One Observe
- (N) Alternative Teaching
- (Y) One Teach/One Assist

Subject

Math 7-Calculating Sales Tax & Tip

Strand/Reporting Category

Computation and Estimation

Topic/Lesson

Services and Fees (Determining how much tax and/or tip to apply in real life situations)

Standards

SOL 7.3-The student will solve single-step and multistep practical problems, using proportional reasoning.

Lesson Outcomes

The student will be able to solve single-step and multistep practical problems, using proportional reasoning.

Materials

- Percent of a Number Review Sort & Key (attached)
- FRAMEing Routine (completed and blank attached)
- You Choose Menu Activity (attached)
- I Choose Menu Activity (attached)
- Exit Ticket

- Calculator

Vocabulary

- Percent
- Sales Tax
- Tip
- Total
- Subtotal

Co-Teacher Actions

Lesson Component	Co-Teaching Approach(es)	General Educator (GE)	Special Educator (SE)
Anticipatory Set This anticipatory set is designed to take approximately 10-15 minutes including brief review and sort.	Team	<ol style="list-style-type: none"> 1. Orally review with students the process for calculating the percent of a number using a few problems (no more than three) on the board. 2. Provide students with the “Percent of a Number” review sort and ask them to raise their hand once they have completed the activity. 3. Hand a blank FRAMEing routine handout to students who are finished with the sort and ask them to put their name on it and wait patiently for the rest of the students to finish the sort. 	<ol style="list-style-type: none"> 1. Assist General Educator with discussion and review of finding the percent of a number 2. Assist students and check student work as they work through the “Percent of a Number” review sort. 3. Hand a blank FRAMEing routine handout to students who are finished with the sort and ask them to put their name on it and wait patiently for the rest of the students to finish the sort.
Lesson Activities/ Procedures	One Teach/One Assist	<ol style="list-style-type: none"> 1. Guide students through completing the FRAME (attached) for calculating Tax and Tip. Explain that the third column will be used for Discount at a later date. 	<ol style="list-style-type: none"> 1. Assist students in recording/transferring notes from the board. 2. Interject (when appropriate) to assist with completing the “When would I” discussion.

Lesson Component	Co-Teaching Approach(es)	General Educator (GE)	Special Educator (SE)
		<ol style="list-style-type: none"> 2. Using the FRAME, activate student prior knowledge to ask “When would I” questions and record answers on the board (will vary by class). Supplement or guide student responses to include a variety of settings including, but not limited to, buying a car, eating at a restaurant (difference between sit down, delivery, and drive-thru), etc. 3. Review sample problems on the board (at least 5). 	
Guided/Independent Practice	Parallel	<ol style="list-style-type: none"> 1. Explain to students that they will be completing an activity based on real life situations to include tax and tip. 2. Provide students with menus from local or chain restaurants and ask them to complete the ‘You Choose’ Activity. <i>This may be completed as an independent or partner activity depending on teacher preference and student ability(ies).</i> 	<ol style="list-style-type: none"> 1. Explain to students that they will be completing an activity based on the “teacher’s” choice of menu items from the “I Chose” worksheet provided (attached). 2. Assist students as needed and, once section 1 of ‘I Chose’ is completed, as students to proceed to ‘You Choose’. Provide individual directions to students as they finish I Chose and move on to You Choose. <i>This may be completed as an independent or partner activity depending on teacher preference and student ability(ies).</i>
Closure	Team	<ul style="list-style-type: none"> • Ask students “How do you calculate tip?” and “How do you calculate tax?” • Ask students to describe how tax and tip are similar and how they are different (i.e. both added to a total, 	Same as GE.

Lesson Component	Co-Teaching Approach(es)	General Educator (GE)	Special Educator (SE)
		however, one is required and the other 'optional')	
Formative Assessment Strategies	N/A	<u>Exit Ticket:</u> One problem including tax & Tip with an additional challenge problem hinting at the idea of discount. (to be covered in the next lesson)	Same as GE.
Homework	Team Teaching	Ask students to determine the cost of a meal at their favorite restaurant OR a restaurant they would like to visit. Students should include a set tax amount (provided by the teacher) and also tip (provided teacher given percentage) if the restaurant offers sit-down service. **students who already did this on the You Choose worksheet can choose a new/different meal at the same or a different restaurant	Same as GE.

Specially Designed Instruction

- Students who require additional support in the area of calculating percent of a number may be paired with a partner or provided more direct instruction/assistance within a small group setting for the sort
- Teach students who to compute percent of a number with the calculator, but also model how to check and see the amount makes sense using number sense and benchmark percents (10%, 25%, 50%).

Accommodations

- Students requiring a copy of class notes may be provided with completed notes and/or slot notes in place of completing the FRAME.
- Students may highlight key words and/or amounts in each problem
- Allow use of calculator

Modifications

- For those students requiring a modified curriculum, content could be changed so that students are finding totals/subtotals not including the tip.
- Students could focus on benchmark percents (10%, 25% 50%)

Notes

- “Special Educator” as noted in this lesson plan might be an ELL Teacher, Speech Pathologist, or other specialist co-teaching with a General Educator.
- The co-teachers who developed this lesson plan received required professional development in the use of specialized instructional techniques which combine an explicit instructional routine with the co-construction of a visual device (graphic organizer). The *Framing Routine* used in conjunction with the “Frame” helps to develop understanding of information and procedures by associating their main ideas and details. These Content Enhancement Routines were developed at the Center for Research on Learning at the University of Kansas. [Link: http://www.kucrl.org/sim/brochures/CEoverview.pdf](http://www.kucrl.org/sim/brochures/CEoverview.pdf)
- Other graphic organizers should be used by teachers who have not received professional development in the (name of routine[s]). If Virginia teachers would like to learn Content Enhancement Routines, contact your regional TTAC.

Note: The following pages are intended for classroom use for students as a visual aid to learning.

<p>41.4 is what percent of 90?</p> <p>a</p>	<p>22%</p> <p>1</p>
<p>a \$14 tip on a \$50 bill is what percent?</p> <p>b</p>	<p>25%</p> <p>7</p>
<p>You pay \$5.50 in tax on a \$25 purchase. What is the tax percent?</p> <p>c</p>	<p>28%</p> <p>6</p>
<p>2 is what percent of 8?</p> <p>d</p>	<p>46%</p> <p>2</p>

<p>9 is what percent of 120?</p> <p>e</p>	<p>20%</p> <p>3</p>
<p>An \$8 tip on a \$25 bill is what percent?</p> <p>f</p>	<p>115%</p> <p>8</p>
<p>You pay \$6 in tax on a \$30 purchase. What is the tax percent?</p> <p>g</p>	<p>32%</p> <p>4</p>
<p>163.3 is what percent of 142?</p> <p>h</p>	<p>7.5%</p> <p>5</p>

KEY

Number-Letter

Letter-Number

1a	a1
2D	B7
3E	C6
4G	D2
5H	E3
6C	F8
7B	G4
8F	H5

The FRAME Routine

Key Topic Tax, Tip, and Discount

is about...

The amount of money we add to or subtract from goods and services.

Main idea

Tax

Main idea

Tip

Main idea

Discount

Essential details

Added to the total

Often Required

Added to the cost of goods

Total, total bill, tax amount, cost, etc

Essential details

Added to the total

Often Optional/Voluntary

Added to the cost of services

Total, total with tip, tip amount, gratuity, etc

Essential details

Subtracted from the total

Offered by stores, restaurants, and other providers of goods and services

Subtracted from the cost of goods or services.

Sale Price, discount amount, new total, etc.

So What? (What's important to understand about this?)

The amount we pay for items and services depends on tax, tip, and discount amounts.

The FRAME Routine

Key Topic

is about...

Main idea

Main idea

Main idea

Essential details

Essential details

Essential details

So What? (What's important to understand about this?)

JOE'S EAT AND GO

Name: _____

HOT EATS

- HOT DOG.....\$1.50
- HOT DOG (WITH CHILI)\$2.00
- HAMBURGER \$2.50
- CORN DOG \$2.50
- FRIES(SM) \$1.50 (LG) \$2.00
- TOTS.....(SM) \$1.50 (LG) \$2.00

COOL TREATS

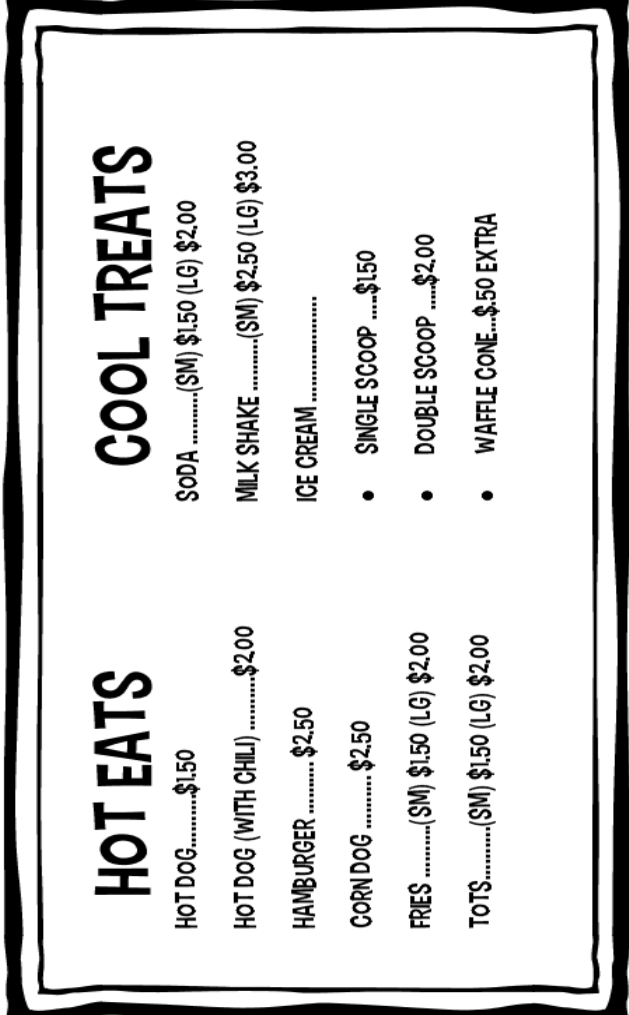
- SODA(SM) \$1.50 (LG) \$2.00
- MILK SHAKE(SM) \$2.50 (LG) \$3.00
- ICE CREAM
- SINGLE SCOOP\$1.50
- DOUBLE SCOOP\$2.00
- WAFFLE CONE...\$.50 EXTRA

I CHOSE JOE'S



JOE'S EAT AND GO IS A RESTAURANT WHERE CUSTOMERS CAN TAKE THEIR ORDER TO GO OR BE WAITED ON AT THEIR TABLES BY A WAITER OR WAITRESS.

FOR ONE WEEK, I CHOSE TO EAT AT JOE'S. SOME DAYS I ATE INSIDE AND OTHER DAYS I TOOK MY ORDER TO GO! FIND OUT HOW MUCH MONEY I SPENT EACH DAY BY CALCULATING MY ORDER TOTALS BELOW.



QTY	ITEM	PRICE	TOTAL
2	Hot dogs		
1	Large Fry		
1	Small Soft Drink		

SUBTOTAL:

TAX(5%):

SUBTOTAL:

TIP

TOTAL:

MONDAY

(Takeout)

QTY	ITEM	PRICE	TOTAL
2	Hamburgers		
2	Small Tots		
2	Large milkshakes		

SUBTOTAL:

TAX(5%):

SUBTOTAL:

TIP(20%):

TOTAL:

TUESDAY

(Dine-in)

QTY	ITEM	PRICE	TOTAL
1	CORn dog		
1	Large tot		
1	Small soda		
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP			
TOTAL:			

WEDNESDAY

(Takeout)

QTY	ITEM	PRICE	TOTAL
1	Hamburger		
1	CORn Dog		
2	Small Fries		
2	Large Soft Drinks		
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP			
TOTAL:			

THURSDAY

(Takeout)

QTY	ITEM	PRICE	TOTAL
1	Large Tot		
1	Large Fry		
2	Large Shakes		
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP(20%):			
TOTAL:			

FRIDAY

(Dine-in)

QTY	ITEM	PRICE	TOTAL
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP(20%):			
TOTAL:			

YOU CHOOSE!

JOE'S EAT AND GO

Name: _____

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 HOT DOG (WITH CHILI)\$2.00
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 MILK SHAKE(SM) \$2.50 (LG) \$3.00
 ICE CREAM
 • SINGLE SCOOP\$1.50
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I CHOSE JOE'S



QTY	ITEM	PRICE	TOTAL
2	Hot dogs	\$1.50	\$3.00
1	Large Fry	\$2.00	\$2.00
1	Small Soft Drink	\$1.50	\$1.50

MONDAY (Takeout)

SUBTOTAL:	\$6.50
TAX(5%):	.33
SUBTOTAL:	\$6.83
TIP	N/A
TOTAL:	\$6.83

QTY	ITEM	PRICE	TOTAL
2	Hamburgers	\$2.50	\$5.00
2	Small Tots	\$1.50	\$3.00
2	Large milkshakes	\$3.00	\$6.00

TUESDAY (Dine-in)

SUBTOTAL:	\$14.00
TAX(5%):	.70
SUBTOTAL:	14.70
TIP(20%):	2.94
TOTAL:	\$17.64

QTY	ITEM	PRICE	TOTAL
1	Corn dog	\$2.50	\$2.50
1	Large tot	\$2.00	\$2.00
1	Small soda	\$1.50	\$1.50

WEDNESDAY (Takeout)

SUBTOTAL:	\$6.00
TAX(5%):	.30
SUBTOTAL:	6.30
TIP	N/A
TOTAL:	\$6.30

QTY	ITEM	PRICE	TOTAL
1	Hamburger	\$2.50	\$2.50
1	Corn Dog	\$2.50	\$2.50
2	Small Fries	\$1.50	\$3.00
2	Large Soft Drinks	\$2.00	\$4.00

THURSDAY (Takeout)

SUBTOTAL:	\$12.00
TAX(5%):	.60
SUBTOTAL:	12.60
TIP	N/A
TOTAL:	\$12.60

QTY	ITEM	PRICE	TOTAL
1	Large Tot	\$2.00	\$2.00
1	Large Fry	\$2.00	\$2.00
2	Large Shakes	\$3.00	\$6.00

FRIDAY (Dine-in)

SUBTOTAL:	\$10.00
TAX(5%):	.50
SUBTOTAL:	10.50
TIP(20%):	2.10
TOTAL:	\$12.60

QTY	ITEM	PRICE	TOTAL

YOU CHOOSE!

SUBTOTAL:	
TAX(5%):	
SUBTOTAL:	
TIP(20%):	
TOTAL:	

Name: _____

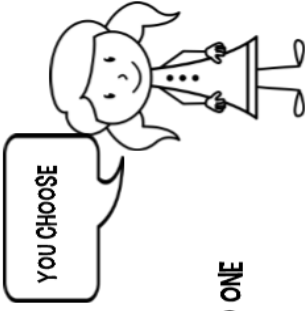
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JOE'S EAT AND GO IS A RESTAURANT WHERE CUSTOMERS CAN TAKE THEIR ORDER TO GO OR BE WAITED ON AT THEIR TABLES BY A WAITER OR WAITRESS.

FOR ONE WEEK, YOU HAVE CHOSEN TO EAT AT JOE'S. SOME DAYS YOU ATE INSIDE AND OTHER DAYS YOU TOOK YOUR ORDER TO GO! FIND OUT HOW MUCH MONEY YOU SPENT EACH DAY BY CALCULATING MY ORDER TOTALS BELOW.

YOU SHOULD ORDER AT LEAST ONE FOOD ITEM AND ONE DRINK/ COLD TREAT PER ORDER.

DO NOT ORDER THE EXACT SAME THING EACH DAY!

QTY	ITEM	PRICE	TOTAL
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP			
TOTAL:			

MONDAY (Takeout)

QTY	ITEM	PRICE	TOTAL
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP(20%):			
TOTAL:			

TUESDAY (Dine-in)

QTY	ITEM	PRICE	TOTAL
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP			
TOTAL:			

WEDNESDAY

(Takeout)

QTY	ITEM	PRICE	TOTAL
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP			
TOTAL:			

THURSDAY

(Takeout)

QTY	ITEM	PRICE	TOTAL
SUBTOTAL:			
TAX (5%):			
SUBTOTAL:			
TIP(20%):			
TOTAL:			

FRIDAY

(Dine-in)

QTY	ITEM	PRICE	TOTAL
SUBTOTAL:			
TAX(5%):			
SUBTOTAL:			
TIP (20%):			
TOTAL:			

YOUR FAVORITE!

Calculate your order total based on your favorite meal at your favorite RESTAURANT.

