Unit II: Addition and Subtraction Within 20
Instructional Days 14-45
Enrichment Investigation #1

Common Core State Standard(s):	Standard(s) for Mathematical Practice:
1.OA.1 1.OA.5 1.OA.6	1. Make sense of problems and perseverein solving them 2. Reason abstractly and quantitatively 4. Model with mathematics

Materials Needed:
- Blackline Masters:
  - *Movie Madness poster*
  - *Movie Madness worksheet*
  - *Movie Madness Reflection*
- Optional:
  - Manipulatives
  - dollar bills from math kit
  - paper to solve problems

Instructions:
1. Give students a copy of the *Movie Madness Poster* and *Worksheet*. Depending on their reading level, students may need someone to read the directions.
2. Using the poster, students will calculate the cost to see various movies with different combinations of adults and children with a limit of $20. They must also calculate any leftover money they have.
3. You may wish to give the students multiple copies of the worksheet to discover all possible combinations.
4. Once finished, students should use *Movie Madness Reflection* sheet to reflect by sharing the strategies used to calculate the different combinations and any leftover money. They can write or discuss findings and the reflection questions.

Sources:
- None

Movie Madness Poster

Now Showing:

Cats and Dogs   Terrific Trucks

Our Planet (3D)   School's Cool (3D)

Price of Admission:

Early Bird (before 2:00 pm)			
Adult $4	Adult 3D $6	Child $2	Child 3D $4
Matinee (2:00 pm - 6:00 pm)			
Adult $5	Adult 3D $7	Child $3	Child 3D $5
Evening (after 6:00 pm)			
Adult $6	Adult 3D $8	Child $4	Child 3D $6

Name _____

Movie Madness Worksheet

Your grandma has sent you $20 for your birthday! You want to use the money to see a new movie. Using the Movie Madness poster, choose what movie you want to see, how many people you want to take, what time you will see It, and how much it will cost. How many combinations can you come up with? What strategies did you use to solve each addition and subtraction equations? Don't forget, you only have $20 to spend!

Movie	Time	Adults		Children		Total Cost	Left Over Money
		#	$	#	$		
School's Cool (3D)	Matinee	1	$7	2	$10	$17	$3

Name _____

Movie	Time	Adults		Children		Total Cost	Left Over Money
		#	$	#	$		

Movie Madness Reflection

Answer the following reflection questions.   Complete this independently or with a partner. Be sure to write your answers below.

1. What strategy did you use to add in order to determine the total cost of the movie? Why did you use this strategy?

2. What strategy did you use to find any leftover money?

3. What other strategies could you use?

4. Which combination do you feel is the best? Why?

5. On the back, create a word problem for one of your scenarios.

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Enrichment Investigation #2

Common Core State Standard(s):	Standard(s) for Mathematical Practice:
1.OA.2 1.OA.5 1.OA.6	1. Make sense of problems and perservere in solving them 2. Reason abstractly and quantitatively 4. Model with mathematics

Materials Needed:
- Blackline Masters:
  - *Chores Galore Chore Chart* (completed chart or blank chart, depending on time)
  - *Chores Galore Monthly Plan Sheets*
  - *Chores Galore Question Sheet*
- Optional:
  - Manipulatives
  - dollar bills from math kit
  - paper for solving scenarios

Instructions:
1. Give students a copy of the *Chores Galore Chore Chart* and *Monthly Plan Sheets*. Depending on their reading level, students may need you to read the directions.
2. If they have time, students will first need to complete the blank *Chores Galore Chore Chart* with a list of possible chores and the amount they might earn for each chore, staying between $1 and $5. If you are trying to save time, simply give students a copy of the completed chore chart.
3. Using the chore chart, students will fill in a monthly plan sheet with what chores they might do each weekday. They will then calculate how much they will earn each week.
4. Students will complete the Chores Galore question sheet, which requires students to subtract from their weekly total.
5. Once completed, students can share their findings and discuss which combination of chores they feel is the best and why.

Sources:
- none

Chores Galore Chart

Chore	Amount Earned
Dust family room	$1
Sweep the floor	$4
Wash dishes	$3
Take out trash	$2
Clean bathroom	$5
Fold clothes	$2
Put toys away	$4
Make bed	$1

Name _____

Chores Galore Chart

Now that you're in first grade, you have to start doing chores at home! First, fill in the chore chart with chores you can do at home and how much you can earn for each chore. You can earn between $1 and $5 for each chore.

Chore Chart

Chore	Amount Earned
Dust your bedroom	$2

Chore Galore Monthly Plan Sheet

Name _____ Fill in the monthly calendar using your chore chart. Decide which chores you will do each day. Add the amounts to find how much you earn each week.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Total Earned
Week 1 Chores	*Put toys away*					Week 1 Total:
$	*$4*					
Week 2 Chores						Week 2 Total:
$						
Week 3 Chores						Week 3 Total:
$						
Week 4 Chores						Week 4 Total:
$						

Name _____

Chores Galore Question Sheet

Oh no, you made some bad choices and have lost part of your chore money! Answer the following questions to find your new total. What strategies can you use to solve?

1. What is the total amount you earned doing chores this month? _____

2. During the first week you didn't clean your room! You must subtract $8 from your first week. What is your new total for the first week? _____

3. You left your toys outside during the second week. Subtract $3 from your second week total. How much do you have left for the second week? _____

4. Oh no, you forgot to do your homework! You must subtract $5 from your third week. What is your new total for the third week? _____

5. Poor dog, you didn't feed her one day during the fourth week! Subtract $5 from your fourth week. How much money do you have left for the fourth week? _____

6. How much money did you lose this month for making bad choices? _____

7. What is your new monthly total for doing chores? _____

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Enrichment Investigation #3

Common Core State Standard(s):	Standard(s) for Mathematical Practice:
1.OA.1 1.OA.5 1.OA.6	1. Make sense of problems and perseverein solving them 2. Reason abstractly and quantitatively 4. Model with mathematics

Materials Needed:
- Blackline Masters
  - *Movie Madness Part 2 Direction Sheet*
  - *Movie Madness Part 2 Movie Poster*
  - *Snack Station Chart*
  - *Chore Chart*
  - *Movie/Snack Planning Sheet*
  - *Chores Planning Sheet*
- Optional:
  - Manipulatives
  - dollar bills from math kit
  - paper for solving problems

Instructions:
1. Give students a copy of all required sheets. Depending on their reading level, students may need you to read the directions.
2. Students will choose their movie and snack preferences to complete the *Movie/Snack Planning Sheet*. They will go to the movies 4 different times.
3. Using the *Chore Chart,* students will select chores they must do earn enough money for their movie and snack choices. This will be recorded on the *Chores Planning Sheet.* Then, students must calculate if they will have any leftover money.
4. Once completed, students should reflect on the activities using *Movie Madness Part 2 Reflection Sheet*, focusing on the strategies they used to add and subtact.

Sources:
- none

Name _____

Movie Madness Part 2 - Direction Sheet

New movies have just come out that you really want to see! You must use your own money from doing chores to see a movie and buy snacks.

1) Use the Movie Madness poster to choose what movie you want to see, what time you will see, it and how much it will cost. You <u>must</u> take 1 adult and <u>can</u> take 1 friend. Be sure to record the movie and costs on your Movie/Snack Planning Sheet.

2) Use the Snack Station Poster to choose what snacks you would like, and how much it will cost. You may choose <u>2</u> snacks for you and your friend to share. Be sure to include the type of snacks you want and costs on your Movie/Snack Planning Sheet.

3) Use the chore chart to determine what chores you will need to do for the week to have enough money for the movie and snacks. Record your choices on the Chore Planning Sheet.

4) Using the Movie Madness Part 2 Reflection sheet, reflect on this activity independently or with a partner.

Movie Madness Part 2 Poster

Now Showing:

Frank the Fish   Best Friends Forever

Zoo Mania! (3D)   The Secret (3D)

Price of Admission:

Early Bird (before 2:00 pm)			
Adult $4	Adult 3D $6	Child $2	Child 3D $4
Matinee (2:00 pm - 6:00 pm)			
Adult $5	Adult 3D $7	Child $3	Child 3D $5
Evening (after 6:00 pm)			
Adult $6	Adult 3D $8	Child $4	Child 3D $6

Snack Station

Popcorn

small $4   medium $5   large $6

Soft Pretzel

plain $3   with cheese $4

Sour Chewies

regular $2   extra large $4

Chocolate Crunch

regular $3   extra large $5

Soda

small $3   medium $4   large $5

Super Slush

small $5   medium $6   large $7

Chore Chart

Chore	Amount Earned
Dust family room	$1
Sweep the floor	$4
Wash dishes	$3
Take out trash	$2
Clean bathroom	$5
Fold clothes	$2
Put toys away	$4
Make bed	$1

Movie Madness Part 2 – Movie/Snack Planning Sheet

Name _____

Movie	Time	Adults #	$	Children #	$	Total Movie Cost	Snack 1	Snack 2	Total Snack Cost
1.									
2.									
3.									
4.									

Movie Madness Part 2 – Chores Planning Sheet

Name _____

	Total Movie Cost	Total Snack Cost	Movie + Snack Cost	Weekly Chores	Money from Chores	Left Over Money
1.						
2.						
3.						
4.						

Movie Madness Part 2 Reflection

Think about the following questions. Then write your own reflections for each.

1. What is the cheapest you could go to the movies? How do you know?

2. What is the most expensive movie/snack combination you could have? Prove it with pictures, words, or equations.

3. What strategies did you use to add?

4. What strategies did you use to subtract?

5. Create a word problem with one of your scenarios.

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Enrichment Investigation #4

Common Core State Standard(s): 1.OA.2 1.OA.5 1.OA.6	Standard(s) for Mathematical Practice: 1. Make sense of problems and perservere in solving them 2. Reason abstractly and quantitatively 4. Model with mathematics

Materials Needed:
- Blackline Masters
  - *Toy Catalog Sheet*
  - *Chore Chart*
  - *Toy Store Shopping Spree Planning Sheet*
- Optional:
  - Manipulatives
  - dollar bills from math kit
  - paper to complete calculations

Instructions:
1. Give students a copy of the *Toy Catalog Sheet* and *Chore Chart*.
2. Using the toy catalog and chore chart, students will fill in a toy store shopping plan sheet with what chores they might do to pay for each toy. They will then calculate how much the total earned from the chores and how much money they will have left over, if any, after purchasing the toy.
3. You may wish to give the students multiple copies of the worksheet to discover all possible combinations.
4. Once completed, students can share their findings and discuss which combination of chores they feel is the best and why.

Sources:
- none

Toys!

Blocks $14

Dominoes $12

Ball $13

Action Figure $17

Volcano Kit $19

Kite $15

Jump Rope $10

Checkers $18

Chore Chart

Chore	Amount Earned
Dust family room	$1
Sweep the floor	$4
Wash dishes	$3
Take out trash	$2
Clean bathroom	$5
Fold clothes	$2
Put toys away	$4
Make bed	$1

Toy Store Shopping Spree Planning Sheet

Name _____

Name of Toy and Cost	Chores needed to buy the toy	Total earned from chores	Money left over

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Enrichment Investigation #5

Common Core State Standard(s): 1.OA.1 1.OA.2 1.OA.5 1.OA.6	Standard(s) for Mathematical Practice: 1. Make sense of problems and persevere in solving them 2. Reason abstractly and quantitatively 4. Model with mathematics

Materials Needed:
- Blackline Masters
  - *Magic Squares Parts 1-4*
- Optional
  - Manipulatives
  - paper for solving

Instructions:
1. Give students copies of Magic Squares Parts 1-4.
2. Students will be adding and subtracting to determine sums and differences in Magic Squares.
3. During Part 4, students are asked to create their own Magic Squares. You may wish for students to complete multiple pages, depending on time.
4. Once completed, students should complete the reflection.

Sources:
- Adapted from
  - http://www.mamaslearningcorner.com/2011/08/commutative-squares-magic-squares-sums-to-10/
  - http://www.kidzone.ws/math/winter/index.htm#WORKSHEETS
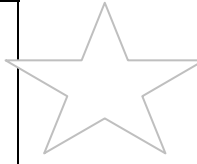
Magic Squares Part 1

1. **Add** each row across and write the **sum** in the box on the right.
2. **Add** each column down and write the **sum** in the bottom box.
3. The star box will equal the **sum** of the bottom row and right column!

1	3	
5	4	
		☆

5	3	
3	8	
		☆

6	2	
3	7	
		☆

9	2	
5	4	
		☆

Name _____

Magic Squares Part 2

1. **Subtract** each row across and write the **difference** in the box on the right.
2. **Subtract** each column down and write the **difference** in the bottom box.
3. The star box will equal the **difference** of the bottom row and right column!

17	4	
5	3	
		☆

15	8	
10	8	
		☆

16	7	
3	2	
		☆

19	2	
6	0	
		☆

Name _____

Magic Squares Part 3

1. **Add** each row across and write the **sum** in the box on the right.
2. **Add** each column down and write the **sum** in the bottom box.
3. The star box is the **sum** of the bottom row and right column!

3	2	1	
1	5	4	
5	1	3	
			☆

6	2	1	
4	0	3	
1	5	2	
			☆

Name _____

Magic Squares Part 4

1. Make your own magic squares! Put numbers between 0 and 10 in the four boxes of the top left corner.
2. Have a friend add the numbers across and down to find the totals.
3. Check your friends work!

Challenge: Write a word problem for the equations in each row and column for one of your Magic Squares.

Magic Squares Answer Key

Part 1

1	3	**4**
5	4	9
6	**7**	**13** ☆

5	3	**8**
3	8	11
8	**11**	**19** ☆

6	2	**8**
3	7	**10**
9	**9**	**18** ☆

9	2	**11**
5	4	9
14	**6**	**20** ☆

Part 2

17	4	**13**
5	3	**2**
12	**1**	**11** ☆

15	8	**7**
10	8	**2**
5	**0**	**5** ☆

16	7	**9**
3	2	**1**
13	**5**	**8** ☆

19	2	**17**
6	0	**6**
13	**2**	**11** ☆

Magic Squares Answer Key Continued

Part 3

3	2	1	**6**
1	5	4	**10**
5	1	3	**9**
9	**8**	**8**	**25**

6	2	1	**9**
4	0	3	**7**
1	5	2	**8**
11	**7**	**6**	**24**

Part 4

(answers will vary)