Grade Level	Content Area	Course Title *(For 9-12 Samples Only)*	Unit Title
Grade 1	Mathematics		Addition and Subtraction

Length of Unit	Time of Year Taught	Expected Prior Knowledge
12 days	Fall Quarter	Write numbers 0 – 100; Count from 0 – 100 by ones, fives, twos, tens; identify more and less

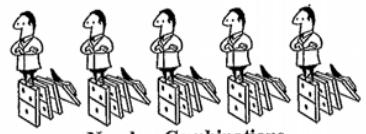
Unit Description The children will discover how to solve word problems and mathematical equations through hands-on manipulatives. These resources can be used as class starters, sponge activities, and as an aid to reinforce concepts. They are very versatile and highly motivating and can be used individually, in groups, or with an entire class.

Standards: Common Core State Standards for Mathematics	**Domain:** Operations and Algebraic Thinking **Cluster:** Represent and solve problems involving addition and subtraction **Standard**: #1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.(2. See Glossary, Table 1.)
Summative Assessment *In addition to the description, include a copy of the summative assessment in the application package.*	In this addition and subtraction grade 1 assessment, students answer 10 multiple choice questions using drawings.
Scoring for Summative Assessment *In addition to the description, include a copy of the answer key and scoring rubric (if applicable) for the summative assessment in the application package.*	Mastery is set at 80%. Each answer is worth 10 points for a total of 100 points. Students must answer 8 out of 10 questions correctly for mastery.
Materials/Resources Needed *Include all items for the entire unit.*	Domino Addition and Dealing With Addition by Lynette Long, Subtraction Action by Loreen Leedy, buckets of foam dice; buckets of dominoes; decks of cards; overhead projector; VCR; KWL template; number mats (A1); Minus This, Minus That Worksheet; Individual Student whiteboards; *Fun with Fact Families and Fun with Fact Families* handouts; Base-ten blocks; Place Value Mat (G1); *Sum It Up* handouts; straws

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Instruction and Timeline	**What is the Sum?** (3 hours over a 3-day period) Key Vocabulary: 1. Addition/adding/add 2. Plus sign 3. Equal 4. More/less 5. Sum Introduction: Complete a KWL chart about what the students know about addition, what they want to learn about addition. Read Domino Addition aloud to students and discuss. Return to KWL chart and have students fill in what they learned after listening to and discussing the book. Using overhead projector and a domino, ask one student to come up and circle the dots on one side of the domino. Then ask another student to come up and circle the dots on the other side of the domino. Allow a third student to come up and count the total amount of dots on the large domino. Have a fourth student come up and write the addition problem under the domino. Allow students to practice several more problems using the giant dominoes. Give directions for partner activity: Students will work with their partner to count the dots, find the sum, and write the addition problem. Each pair will receive a small bag of dominoes and number mats (A1)	**What is the difference?** (3 hours over a 3-day period) Key Vocabulary: 1. Subtraction/take away/minus 2. Minus sign 3. Equal Sign 4. Less 5. Cross Out 6. Difference Introduction: Complete a KWL chart about what the students know about subtraction, and what they want to learn about subtraction Read Subtraction Action aloud to students and discuss. Return to KWL chart and have students tell what they learned after listening to and discussing the book. Using the white board, draw a certain amount of objects on the board. Allow a student to come up and write down the number of objects. Then have another student come up and take away some of the objects (cross them out.) Allow a student to come up and write down the number of objects that were crossed out along with the minus sign. Choose a student to come up and count the amount that is left and record it on the board. Explain to students that the answer is called the difference and that they will be looking for the difference between two numbers whenever they do a subtraction problem. Go over the subtraction sentence/problem with the	**Addition and Subtraction Relationships** (3 hours over a 3-day period) Key Vocabulary: 1. addition/adding/sum/total 2. subtraction/take away/minus/ difference 3. Minus sign 4. Equal sign 5. Fact family 6. Largest number 7. Related numbers Intro- Ask students how are people in a family related? What makes someone related to another person? Allow students to answer and discuss. Inform students that today we are going to talk about how some addition and subtraction facts are related just like people in a family are related. Read Dealing with Addition aloud to students and discuss. Discuss how some addition facts can be switched around to make another problem that is related. Write a problem on the board to show students (3+2=5 and 2+3=5.) Inform students that the way to write a related addition fact is to switch the two numbers that are being added together around and keep the same answer. Tell students there can be some subtraction problems made from the two addition problems that you wrote on the board. Write these two subtraction problems on the board (5-3=2 and 5-2=3.) As you write them on the board	**Lesson Four: Place Value** (2 hours over a 2-day period) Key Vocabulary 1. Place value 2. Ones 3. Tens 4. Base ten blocks Introduction: Write a number on the board (Ex. 42.) Ask students if there is a certain order to how you should write a number? Inform students that today we are going to talk about how each number has a certain place that it has to be in and that each place has a name. Show students how to show that number using the place value mat (G1). Write the words ones, tens, and hundreds on the board. Write the number 37 on the board. Tell students that the number 7 is in a certain place called the ones place. Tell the students that the 3 is in a special place called the tens place. Write several more numbers on the board and explain to the students which number is in the tens spot and which number is in the ones spot. Using base ten blocks on the overhead projector, show students how to represent the tens using the tens stick base ten block and how to represent the ones using the ones block. Show students how to represent numbers using the base ten blocks. Show them how to make these numbers (33, 24, 56, 13, 18, 39, and 50) and also how to write the number word out to the side of the numbers. Allow several	**Introduction to Playing Cards: How to use them?** (1 hour session) Tell students that over the course of the school year, during math, they will begin to use two manipulatives throughout many of their paired activities and center activities. The manipulatives that we will be using are playing cards and dominoes. We will use other manipulatives throughout the year but today we are going to discuss how to use playing cards. Make sure that the students are sitting in groups of four. Read the book *Dealing with Addition.* Stop on each page and discuss the page with the students. Allow the students to pull out the cards and look at them. For example the first page explains to the students about the different cards. Allow the students to pull out those cards and look at them as you read about the different cards. Go through the whole book like this allowing the students to do the different activities in the books using the cards. This will allow the students to become comfortable with using playing cards. Some pages even ask the students to add the numbers on the cards. This is just like the game they will play in this lesson. After completing this book allow the students to discuss with their group what they learned about playing cards and dominoes. Choose someone

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
	Ask students to think about ways to make sums of 3, 4, 5, 6, 7, 8, 9, and 10. List on board. Assessment/evaluation: Students will solve four basic addition equations and one word problem using objects.	students and how to write a subtraction sentence. Tell students to always begin with the total amount of objects when writing their problem. Then write the amount taken away after the minus sign and then write the amount that is left after the equal sign. Allow students to practice. Show students a deck of cards. Discuss with students how to use the cards. Explain that we will not use any face cards (King, Jack, or Queen.) Explain to students that they will be only looking at the numbers on the cards when they do the next activity. Pair students up with a partner to solve subtraction problems using the decks of cards. Allow them to play the game Minus This, Minus That (Appendix C1) The teacher will monitor and assist the groups of students. Before assessing, ask the students to discuss some of the problems they completed and the differences Evaluation/assessment: Four basic subtraction equations will need to be solved by each student and one word problem using objects to create subtraction equations, for a total of five subtraction problems.	tell students how to write the related subtraction facts. Tell students to always choose the answer from the related addition problems to begin the related subtraction facts. Then you choose one of the other numbers to place after the minus sign (Ex. 5-3=) and then choose the remaining number to be the answer (Ex. 5-3=2.) For the next subtraction problem choose the answer of the addition problems to be first. Then choose the first number of the other addition problem to place after the minus sign (Ex. 5-2=) and then choose the remaining number to be the answer. Use whiteboards to allow students to practice writing related addition and subtraction problems (fact families.) The teacher should monitor and assist the groups of students during student activities. Before assessing, ask the students to discuss some of the fact families they completed. Evaluation/assessment: The teacher will walk around and observe students and give feedback. The sheet that the students recorded their related facts (fact families) will be checked for understanding. Follow-up activities – Play *Fun with Fact Families*	students to come up and show some more numbers using the base ten blocks. The teacher should monitor and assist the groups of students during activity. Before assessing, ask the students to discuss some of the numbers that the students rolled with their dice. Allow them to come to the board and show what they did by going to the board and writing their number down and showing it using base ten blocks. Assessment/Evaluation The teacher will walk around and observe students and give feedback. The sheet that the students record their numbers on will be checked for understanding. Follow-up activities – The learner will use straws to show tens and ones. Give students a number and allow them to use a bundle of straws to represent the tens and use individual straws to represent the ones.	from the group to show the rest of the class what they learned while using the cards and dominoes. *Assessment/Evaluation:* 1. The teacher will walk around and observe students and give feedback. 2. The teacher will also listen to the group discussion and presentation to check for understanding.

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Student Activities and Timeline	Each student takes one domino and names the number combination represented by the dots. The student then places their domino in the star with the corresponding sum. Students continue taking turns until all of the dominoes are sorted on the number mat. Once the dominoes are sorted, each student will write an addition sentence on the recording sheet for each domino. Assessment Students will solve four basic addition equations and one word problem using objects	Students will practice subtraction problems using various objects drawn on the whiteboard. Students can even draw circles, squares, triangles, or any other object by coming up to the board. Each pair of students should have a deck of cards, counters, and some paper and a pencil. Place the cards in an even stack of two. One student will choose a card from each stack and ask themselves "Is my first card more or less than my second card?" If the card is more the student will then ask themselves, how much more and write the problem down on paper. (For example if they pull a 10 and a 7, they will write 10-7=3.) They can use counters to help them answer the problem. The next partner will then have a chance to pull cards and complete a problem. Assessment: The student will complete four basic subtraction equations and one word problem using objects to create subtraction equations, for a total of five subtraction problems.	Students will use individual whiteboards to practice writing related addition and subtraction problems (fact families.) Students will practice by choosing what problems are needed to complete a fact family. For example you write 6+2= 8, and 2+6=8 on the board. Students will take turns writing the subtraction problems that go along with this fact family. (The students should write 8-6=2 and 8-2=6) Students will pair up with a partner to play *Fun with Fact Families*. Give each group a set of dominoes, handout Appendix E1, and a pencil. (See Appendix E for game instructions.) Explain to students that they will choose a domino and count the dots on one side and then write that number down and a plus sign after the number. Then they will count the dots on the other side and write that number down after the plus sign. Then they will count how many dots in all and write that number down after the equal sign. (Ex. 4+3=7) Next the student will write the other related addition and subtraction facts. (The facts in the same family.) Each partner will take turns choosing a domino and writing the related addition and subtraction facts. When each section of their paper is filled up they must allow their partner to check their answers to make sure they wrote the correct problems.	Students will pair off with a partner. Give each pair some dice, base ten blocks, place value mats, Appendix G1, recording sheet, and a pencil.	The students will be practicing using cards throughout the lesson. Students will play "Sum It Up" (Appendix B and B1) **AnswersKey** **1. C** **6. C** **2. A** **7. D** **3. B** **8. A** **4. D** **9. D** **5. C** **10. B** **Each answer is worth 10 points for a total of 100 points**

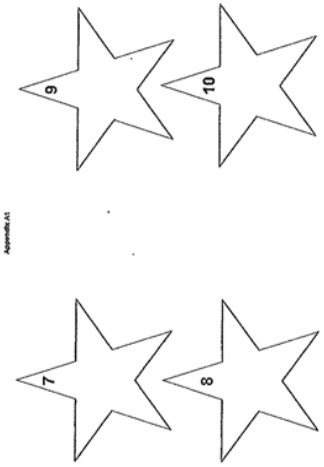


Number Combinations

Appendix A1

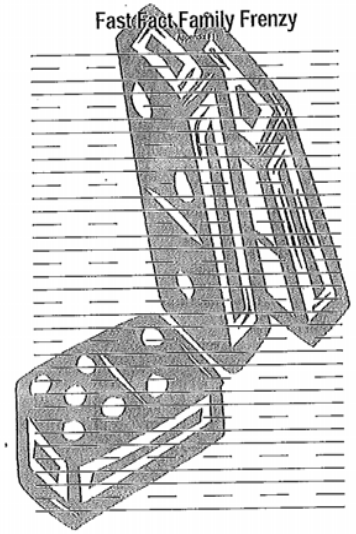
Number Combinations

Appendix A1



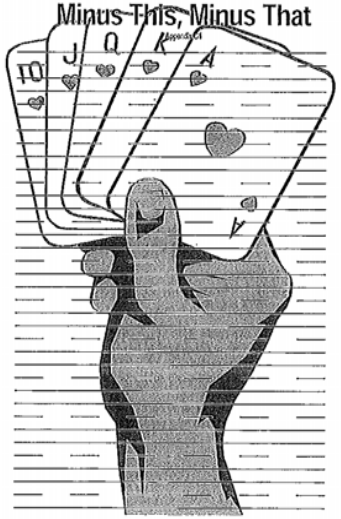
Fast Fact Family Frenzy

Appendix A1



Minus This, Minus That

Appendix A1



Approved 03/14/2011

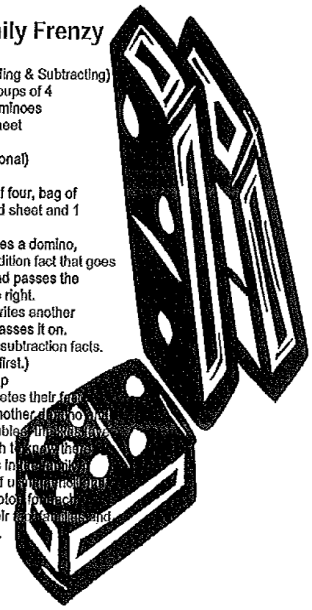
Appendix G1

Tens	Ones

Fast Fact Family Frenzy

Appendix F

Skill: Fact Families (Adding & Subtracting)
Number of Players: Groups of 4
Materials: Bucket of Dominoes
Recording Sheet
Pencils
Laptops (optional)



1. Give each group of four, bag of dominoes, 1 record sheet and 1 pencil.
2. One person chooses a domino, writes down an addition fact that goes with the domino and passes the record sheet to the right.
3. The next person writes another addition fact and passes it on. And so on, for two subtraction facts. (We try it together first.)
4. Each time the group successfully completes their four families they get another domino and start over. (For doubles, the kids have being smart enough to know there were only two facts in the family.)
5. *Optional:* Instead of using paper and pencil, provide paper place one laptop for each group to type in their fact families and print when finished.

Fun with Fact Families Appendix E1 Name _____

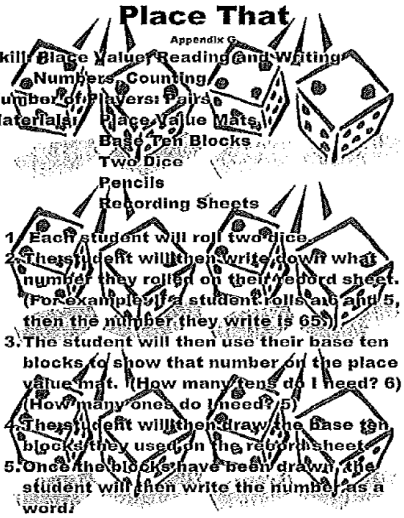
A	B
1.	1.
2.	2.
3.	3.
4.	4.

C	D
1.	1.
2.	2.
3.	3.
4.	4.

Place That

Appendix G

Skill: Place Value: Reading and Writing Numbers, Counting
Number of Players: Pairs
Materials: Place Value Mats
Base Ten Blocks
Two Dice
Pencils
Recording Sheets



1. Each student will roll two dice.
2. The student will then write down what number they rolled on their record sheet. (For example, if a student rolls a 6 and 5, then the number they write is 65.)
3. The student will then use their base ten blocks to show that number on the place value mat. (How many tens do I need? 6) (How many ones do I need? 5)
4. The student will then draw the base ten blocks they used on the record sheet.
5. Once the blocks have been drawn, the student will then write the number as a word.
6. The game continues until the student has drawn five different problems each.

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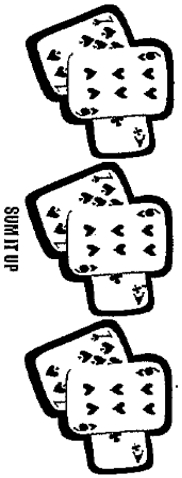

SUM IT UP
Appendix A

Sum It Up
Appendix B

Teachers: Remove all face cards and aces from the deck of cards.

Skill: Addition
Number of Players: 4
Materials: Deck of Playing Cards
Calculators
Pencils
Recording Sheets

1. Place all the cards face down in the middle of the playing surface.
2. Each child draws two cards and lays them face up in front of them.
3. After each child draws their cards, they will add the two numbers on the cards together and record their results on their record sheet.
4. The children will each announce their sum to the group and the group will then check that student's answer with their calculator.
5. To complete the round, the remaining players repeat this process.
6. At the end of the round, students will determine who had the highest sum and the lowest sum.
7. Game continues for as many rounds as desired or until all cards have been used in the middle.
8. As students become more proficient, challenge them to select three, four, five, or six cards from the pile and add the numbers together.

Assessment:

Name: _____ Grade: 1 Date: 5/19/2011

Instructions:
Answer the following questions.

Question 1
How many more blue crayons are there than the red crayons?

A. 5 **B.** 6
C. 7 **D.** 8

Question 2
How many more squares are there than the triangles?

A. 3 **B.** 2
C. 4 **D.** 5

Question 3
7 - 0 = ?
A. 0 **B.** 7
C. 2 **D.** 3

Question 4
Which is the correct addition sentence for the picture?

A. 4 + 3 = 7 **B.** 6 + 5 = 11
C. 6 + 0 = 0 **D.** 4 + 6 = 10

Question 5
9 − 8 = ?
A. 3 **B.** 2
C. 1 **D.** 4

Question 6
How many more blue cups are there than the orange cups?

A. 2 **B.** 4
C. 3 **D.** 6

Question 7
Billy had 9 stickers. He gave 2 stickers to Nate. How many stickers does he have left?
A. 9 + 2 = 11 **B.** 6 + 3 = 9
C. 9 - 5 = 4 **D.** 9 - 2 = 7

Question 8

$$\begin{array}{r} 10 \\ -\ 7 \\ \hline ? \end{array}$$

A. 3 **B.** 2
C. 4 **D.** 1

Question 9
Which number will make the number sentence TRUE?
9 − ? = 4
A. 4 **B.** 3
C. 6 **D.** 5

Question 10
There were 10 children on the climbing bars. Four children left. How many children are on the bars now?
A. 5 **B.** 6
C. 4 **D.** 3

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