

# Slide-n-Glide into Subtraction

**Grade Level or Special Area:** 1<sup>st</sup> Grade

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**Length of Unit:** Nine 30 – 45 minute Lessons and one culminating activity

## I. ABSTRACT

This unit was written to help first graders learn subtraction. It will give students hands on experience with the idea of “take away” in contrast to “adding” and teach the difference between sum, using addition sentences; and difference, using subtraction sentences. These subtraction activities will include using concrete objects and pictures to find out “how many are left.” The concept of subtraction would be introduced and mastered before first graders could move on to knowing subtraction facts to twelve, two-digit subtraction problems and mentally subtracting 10 from two-digit numbers. These three concepts would be covered later in the school year.

## II. OVERVIEW

- A. Concept Objectives:
  - 1. The student will become familiar with steps involved in subtraction.
- B. Content from the *Core Knowledge Sequence*:
  - 1. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
  - 2. Know the meaning of the minus sign (-). [p. 36]
  - 3. Know what a “difference” is. [p. 36]
  - 4. Know how to write subtraction problems horizontally and vertically. [p. 36]
  - 5. Solve basic one step story and picture problems. [p. 36]
  - 6. Solve simple equations in the form of  $\_\_\_ - 2 =$ ;  $5 + \_\_\_ = 7$ . [p. 36]
- C. Skill Objectives from the Edmond Public Schools Math Skills Curriculum:
  - 1. Develop and apply the concept of subtraction. (1.0)
  - 2. Use models to construct subtraction facts (i.e. Counters, cubes, etc.) (1.1)
  - 3. Perform subtraction by separating and comparing sets of objects. (1.2)
  - 4. Demonstrate with fluency basic subtraction facts. (1.3)
  - 5. Write addition and subtraction sentences for problem-solving situations. (3.0)

## III. BACKGROUND KNOWLEDGE

- A. For Teachers:
  - 1. Colarusso, R. P., Schultz, K. A., Strawderman, V.W., *Mathematics for Every Young Child*. Columbus, Ohio: Merrill Publishing Company, 1989. 0-675-20425-9.
  - 2. Hirsch Jr., E. D. *What Your First Grader Needs to Know*, Core Publications, Inc., 1998. 0-385-31987-8.
  - 3. Kami, C. & Lewis, B. “Single-Digit Subtraction with Fluency.” *Teaching Children Mathematics*. Reston, VA: National council of Teachers of Mathematics, December 2003.
  - 4. Maletsky, E. M. *Harcourt Math Textbook*. Orlando, Florida: Harcourt, 2004. 0-15-338287-2.
- B. For Students:
  - 1. Add and subtract to ten, using concrete objects. [p. 17]
  - 2. Subtraction: the concept of “taking away”; recognize the meaning of the minus sign (-). [p. 17]

#### IV. RESOURCES

- A. Lankford, Mary D. *Is It Dark? Is It Light?* New York: Alfred A Knopf, Inc., 1991, 679-91579-6.
- B. Mandel, Peter *Red Cat White Cat*. New York: Henry Holt and Company, 1994, 0-8050-2929-X.
- C. Masurel, Claire *Ten Dogs In the Window*. New York: North-South Books, Inc., 1997, 0-15-329350-0.
- D. McGrath, B.B. *The M&M's Counting Book*. Watertown, MA: Charlesbridge Publishing, 1994, 0-88106-853-5.
- E. Murphy, S. J. *Elevator Magic*. New York: Scholastic, Inc. 1997, 0-590-51235-8.
- F. Pallotta, J. *Hershey's Kisses Subtraction Book*. New York: Scholastic, Inc. 2002, 0-439-33779-8.

#### V. LESSONS

##### **Lesson One: Subtraction is the opposite of Addition**

- A. *Daily Objectives*
  - 1. Concept Objectives
    - a. The student will become familiar with the steps involved in subtraction.
  - 2. Lesson Content
    - a. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
    - b. Know the meaning of the minus sign. (-) [p. 36]
    - c. Know what a difference is. [p. 36]
  - 3. Skill Objectives
    - a. Develop and apply the concept of addition and subtraction. (1.0)
    - b. Use models to construct subtraction facts (i.e. Counters, cubes, etc.) (1.1)
- B. *Materials*
  - 1. Books: *Red Cat White Cat* and *Is It Dark? Is It Light?*
  - 2. Manipulatives
  - 3. Pencil and paper.
- C. *Key Vocabulary*
  - 1. opposite – completely different
  - 2. addition – the opposite operation of subtraction
  - 3. subtraction – math operation that “takes away” a part of the whole
- D. *Procedures/Activities*
  - 1. The teacher will read the two books: *Red Cat White Cat* and *Is It Dark? Is It Light?*
  - 2. The students and teacher will engage in a discussion of things that are opposite.
  - 3. If the students do not mention or bring up the opposite of addition, the teacher will ask the students, “What is the opposite of addition?”
  - 4. The teacher will demonstrate with manipulatives addition problems, i.e.  $3 + 2 = 5$ , if we take one of the addends away, what part of the whole is left.
  - 5. The teacher will repeat several examples as mentioned above until most students have a grasp of the concept that subtraction is the opposite operation of addition.
  - 6. The teacher will then demonstrate with manipulatives more math sentences as above and have the students write on paper the opposite operation – subtraction!
- E. *Assessment/Evaluation*
  - 1. The teacher will observe and monitor the children as they participate in the group activity.
  - 2. The teacher will visually check their papers on practicing writing math sentences.

##### **Lesson Two: Introduction to Subtraction**

- A. *Daily Objectives*
1. Concept Objectives
    - a. The student will become familiar with the steps involved in subtraction.
  2. Lesson Content
    - a. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
    - b. Know the meaning of the minus sign. (-) [p. 36]
    - c. Know what a difference is. [p. 36]
  3. Skill Objectives
    - a. Develop and apply the concept of subtraction. (1.0)
    - b. Use models to construct subtraction facts (i.e. Counters, cubes, etc.) (1.1)
- B. *Materials*
1. Book: *The M&M’s Counting Book*.
  2. M&M’s for each student (colors as mentioned in above book).
  3. Chalk & chalkboard
- C. *Key Vocabulary*
1. minus – symbol used to denote “take away.”
  2. difference – the solution/answer to a subtraction sentence.
- D. *Procedures/Activities*
1. The teacher will read the book: *The M&M’s Counting Book*.
  2. The teacher will distribute individual M&M’s to children exactly as in the book: one blue, two green, three orange, four yellow, five red, and six brown.
  3. The teacher will re-read the book as the students “act it out” with their M&M’s.
  4. The teacher will call on volunteers to write the subtraction sentences on the chalkboard as they act it out.
  5. The teacher will also demonstrate the subtraction sentences on the overhead projector.
- E. *Assessment/Evaluation*
1. The teacher will informally observe the students as they recreate the M&M Counting Book.
  2. The teacher will informally observe the students as they write the subtraction sentences on the chalkboard.

**Lesson Three: Slide-n-glide into subtraction**

- A. *Daily Objectives*
1. Concept Objective:
    - a. The student will become familiar with the steps involved in subtraction.
  2. Lesson Content
    - a. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
    - b. Know the meaning of the minus sign. (-) [p. 36]
    - c. Know what a difference is. [p. 36]
  3. Skill Objectives
    - a. Develop and apply the concept of subtraction. (1.0)
    - b. Use models to construct subtraction facts (i.e. Counters, cubes, etc.) (1.1)
- B. *Materials*
1. Book: *The Hershey’s Kisses Subtraction Book*.
  2. Large bag of Hershey’s Kisses.
  3. Pencil and paper.
  4. Pair of dice (teacher made – one large with the “big numbers” and one small with the “small” numbers written on it). I just used wooden cubes for the large dice and wrote numbers: 10, 9, 8, & 7 on the sides; for the small dice, you could use

the store purchased dice with numbers: 6, 5, 4, 3, 2, & 1 on it which are smaller than the wooden cubes.

5. Pipe cleaners
  6. Pony beads
- C. *Key Vocabulary*
1. minus – symbol used to denote “take away.”
  2. difference – the solution/answer to a subtraction sentence
- D. *Procedures/Activities*
1. The teacher will read the book: *The Hershey’s Subtraction Book*.
  2. The teacher will act out the story with the Hershey’s kisses.
  3. The teacher will distribute individual teacher-made slide-n-glides. (Slide-n-glides are a pipe cleaner with ten beads in the center and two beads wrapped at the end to keep the ten from coming off when using to find the difference.)
  4. The teacher will demonstrate how to use the “slide-n-glide to find the difference.
  5. The students will practice finding the difference on the slide-n-glide with teacher directed/demonstrated subtraction facts (by rolling the dice to create new subtraction sentences.)
  6. The students will practice writing subtraction sentences by rolling the dice (the big number will be the first number – the number to be subtracted from, and the small dice will be the number to “take away” from the big number.) The student will roll the dice ten times to create ten subtraction sentences.
  7. The student will use the slide-n-glide to help them find the difference.
- E. *Assessment/Evaluation*
1. The teacher will informally observe the students as they use the slide-n-glide.
  2. The teacher will collect and formally assess their written subtraction sentences. The teacher will expect 8/10 for 80% correct answers.

#### **Lesson Four – Subtracting is as easy as riding an elevator**

- A. *Daily Objectives*
1. Concept Objectives
    - a. The student will become familiar with the steps involved in subtraction.
  2. Lesson Content
    - a. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
    - b. Know the meaning of the minus sign. (-) [p. 36]
    - c. Know what a difference is. [p. 36]
    - d. The student will know how to write subtraction problems horizontally and vertically. [p.36]
  3. Skill Objectives
    - a. Develop and apply the concept of subtraction. (1.0)
    - b. Use models to construct subtraction facts (i.e. Counters, cubes, etc.) (1.1)
    - c. Perform subtraction by separating and comparing sets of objects. (1.2)
- B. *Materials*
1. Book: *Elevator Math*.
  2. Egg carton with manipulatives in the compartments of egg carton. I use this activity in a center so I only have 4 – 5 egg cartons, but if you want to use it whole class, you need one for each student
  3. Pencil and paper.
  4. Pair of dice (teacher made – one large with the “big numbers” and one small with the “small” numbers written on it.) I use this activity in a center so I only have 4 – 5 sets, but if you want to use it whole class, you need a set for each student.

- C. *Key Vocabulary*
1. minus – symbol used to denote “take away.”
  2. difference – the solution/answer to a subtraction sentence.
  3. horizontal and vertical – up and down & across subtraction sentences.
- D. *Procedures/Activities*
1. The teacher will read the book: *Elevator Math*.
  2. The teacher will retell the story using the egg carton/manipulatives to show the students how to get the “difference.”
  3. The students will act roll the dice to get subtraction sentences and use the egg carton/manipulatives to get the difference as well as writing the subtraction sentences both vertically and horizontally. (I do this in a center, but could be done whole class)
- E. *Assessment/Evaluation*
1. The teacher will informally observe the students will find the difference by rolling the dice to get subtraction sentences, writing them vertically and horizontally, and using the egg carton/manipulatives.
  2. The teacher will evaluate the students understanding by giving them subtraction sentences individually and observe how they use the manipulatives to come up with the difference.

### **Lesson Five – Subtracting behind your back**

- A. *Daily Objectives*
1. Concept Objective
    - a. The student will become familiar with the steps involved in subtraction.
  2. Lesson Content
    - a. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
    - b. Know the meaning of the minus sign. (-) [p. 36]
    - c. Know what a difference is. [p. 36]
    - d. The student will know how to write subtraction sentences horizontally and vertically. [p. 36]
  3. Skill Objectives
    - a. Develop and apply the concept of subtraction. (1.0)
    - b. Use models to construct subtraction facts (i.e. Counters, cubes, etc.) (1.1)
    - c. Perform subtraction by separating and comparing sets of objects. (1.2)
- B. *Materials*
1. Twelve unifix cubes.
  2. Pencil and paper.
- C. *Key Vocabulary*
1. minus – symbol used to denote “take away.”
  2. difference – the solution/answer to a subtraction sentence.
  3. horizontal and vertical – up and down & across subtraction sentences.
- D. *Procedures/Activities*
1. The teacher will demonstrate how to “subtract” behind your back. Hold 12 (11, 10, 9, etc.) unifix cubes behind your back and randomly break them in two. The subtraction sentence is:  $12 - \underline{\quad} = \underline{\quad}$  (depending how they were broken in two.)
  2. The teacher will demonstrate on the board (or overhead projector) how to write these subtraction sentences horizontally and vertically.
  3. The children will then create subtraction sentences in the same manner the teacher demonstrated, writing their subtraction sentences on a blank piece of paper.

- E. *Assessment/Evaluation*
1. The teacher will informally observe the students as they subtract behind their backs.
  2. The teacher will collect and formally assess their written subtraction sentences. The teacher will expect 8/10 for 80% correct answers.

### **Lesson Six: Hop to the Left**

- A. *Daily Objectives*
1. Concept Objective
    - a. The student will become familiar with the steps involved in subtraction
  2. Lesson Content
    - a. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
    - b. Know the meaning of the minus sign. (-) [p. 36]
    - c. Know what a difference is. [p. 36]
    - d. The student will know how to write subtraction sentences vertically and horizontally.
  3. Skill Objectives
    - a. Develop and apply the concept of subtraction. (1.0)
    - b. Use models to construct subtraction facts (i.e. Counters, cubes, etc.) (1.1)
    - c. Perform subtraction by separating and comparing sets of objects. (1.2)
    - d. Demonstrate with fluency basic subtraction facts. (1.3)
- B. *Materials*
1. Number line. (I do this in a center so I only need 4 or 5; but if you want to do it whole class, you will need one for each student.)
  2. Pencil and paper.
  3. Frog manipulative. (I do this in a center so I only need 4 or 5; but if you want to do it whole class, you will need one for each student.)
  4. Subtraction sentences (see Appendix A).
- C. *Key Vocabulary*
1. minus – symbol used to denote “take away.”
  2. difference – the solution/answer to a subtraction sentence.
  3. horizontal and vertical – up and down & across subtraction sentences.
- D. *Procedures/Activities*
1. The teacher will remind students how they learned to add on a number line.
  2. The teacher will demonstrate (with Mr. Frog) how to hop to the left on a number.
  3. The students will get individual number lines, frog manipulatives, and subtraction sentences.
  4. The students will practice using the number line to find the difference to ten subtraction sentences.
- E. *Assessment/Evaluation*
1. The teacher will informally observe the students as they use a number line to find the difference to ten subtraction problems.
  2. The teacher will formally evaluate the student’s answers to the subtraction papers. The students will be expected to get 8/10 answers correct for 80%.

### **Lesson Seven: Take Away One**

- A. *Daily Objectives*
1. Concept Objective
    - a. The student will become familiar with the steps involved in subtraction.
  2. Lesson Content

- a. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
  - b. Know the meaning of the minus sign. (-) [p. 36]
  - c. Know what a difference is. [p. 36]
  - d. The student will know how to write subtraction sentences horizontally and vertically. [p. 36]
  - e. Solve basic one-step story and picture problems.
3. Skill Objectives
- a. Develop and apply the concept of subtraction. (1.0)
  - b. Use models to construct subtraction facts (i.e. Counters, cubes, etc.) (1.1)
  - c. Perform subtraction by separating and comparing sets of objects. (1.2)
  - d. Write addition and subtraction number sentences for problem-solving situations.
- B. *Materials*
- 1. Book: *Ten Dogs In the Window*
  - 2. Manipulatives
  - 3. Pencil and Paper
  - 4. Crayons
- C. *Key Vocabulary*
- 1. minus – symbol to denote “take away”
  - 2. difference – the solution/answer to a subtraction sentence.
  - 3. equation – a math sentence
- D. *Procedures/Activities*
- 1. The teacher will read the book once for sheer enjoyment to the class.
  - 2. The teacher will re-read the book suggesting to the students they think about equations to go with the story.
  - 3. The children will volunteer to be a dog in the story and the people who get dogs from the pet store.
  - 4. The children will write the subtraction equation on the chalkboard to go along with the story as the students act it out.
  - 5. The children will write their own page and the teacher will combine each student’s page to make a book like the story we just read. The children can choose any pet from the pet store to “take away” we will compile the book at the end, read it to the class, then share it with the Library at school for other students to enjoy.
  - 6. Students will read the book to each other and enjoy in the class library as well.
- E. *Assessment/Evaluation*
- 1. The teacher will monitor and correct the recording of subtraction sentences on the chalkboard
  - 2. The teacher will monitor the participation/completion of the acting out and writing of the individual page for the class book.
  - 3. The teacher will assess student’s understanding of take away by the student completing the book page.
  - 4. Peers will self assess while reading the book to one another.

**Lesson Eight: It does matter which number is first...in subtraction**

- A. *Daily Objectives*
- 1. Concept Objectives
    - a. The student will become familiar with the steps involved in subtraction.
  - 2. Lesson Content

- a. Know the relation between addition and subtraction; understand that subtraction means “take away.” [p. 36]
  - b. Know the meaning of the minus sign. (-) [p. 36]
  - c. Know what a difference is. [p. 36]
  - d. Solve basic one-step story and picture problems. [p. 36]
  - e. Solve simple equations in the form of  $\_\_\_ - 2 = 7$ ;  $5 + \_\_\_ = 7$
3. Skill Objectives
- a. Develop and apply the concept of subtraction. (1.0)
  - b. Use models to construct subtraction facts (i.e. counters, cubes, etc.) (1.1)
  - c. Perform subtraction by separating and comparing sets of objects. (1.2)
  - d. Demonstrate with fluency basic subtraction facts. (1.3)
  - e. Write addition and subtraction number sentences for problem-solving situations.
- B. *Materials*
- 1. Manipulatives.
  - 2. Number dice.
  - 3. Paper and Pencil.
  - 4. Students.
- C. *Key Vocabulary*
- 1. commutative property – it does not matter what order you add (i.e.  $2 + 1 = 3$  &  $1 + 2 = 3$ )
  - 2. minus – to take away
  - 3. difference – answer to a subtraction sentence
  - 4. equations – math sentences
  - 5. story problems – math problems using words and problem solving strategies
- D. *Procedures/Activities*
- 1. The teacher will demonstrate with manipulatives and rolling the dice that it does not matter in which order you add two numbers.
  - 2. The teacher will demonstrate with manipulatives and rolling the dice that it DOES matter the order in subtraction.
  - 3. The teacher will demonstrate making up story problems using manipulatives and students to prove that you cannot take any number away from a lesser number. The math sentences will come from rolling the dice.
  - 4. The teacher will demonstrate writing these “story problems” on the chalkboard several times until she feels the students are grasping the concept of writing story problems.
  - 5. The teacher will make sure to create some story problems with a missing factor, i.e.,  $7 - \_\_\_ = 3$ .
  - 6. The children will practice writing story problems making sure the number they are taking away is smaller/less than the number taken away from.
  - 7. The teacher will put students into pairs and challenge them to come up with a story problem to share with the class. The teacher will be sure to put strong writers with less confident writers so that one can be the “scribe.”
  - 8. The students will then share their story problem and the rest of the class will solve their story problem with equations.
- E. *Assessment/Evaluation*
- 1. The teacher will informally assess the children as they work in pairs noting that each student is participating according to their ability.
  - 2. The teacher will observe the participation of the other students while the pairs are presenting their story problem.

3. The teacher will assess whether the students accomplished their goal of coming up with a story problem that is understood/makes sense to the audience.
4. The teacher will observe to see that each student participates as the audience.
5. The students will evaluate by “heads down/eyes closed” thumbs up or thumbs down as to their own story problems as well as their peers.

**Lesson Nine: Which number is on top? (Con’t from previous day)**

**A. Daily Objectives**

1. Concept Objectives
  - a. The student will become familiar with the steps involved in subtraction.
2. Lesson Content
  - a. Know the relation between addition and subtraction; understand that
  - b. subtraction means “take away.” [p. 36]
  - c. Know the meaning of the minus sign. (-) [p. 36]
  - d. Know what a difference is. [p. 36]
  - e. Solve simple equations in the form of  $\_\_\_ - 2 = 7$ ;  $5 + \_\_\_ = 7$
3. Skill Objectives
  - a. Develop and apply the concept of subtraction. (1.0)
  - b. Use models to construct subtraction facts (i.e. counters, cubes, etc.) (1.1)
  - c. Perform subtraction by separating and comparing sets of objects. (1.2)
  - d. Demonstrate with fluency basic subtraction facts. (1.3)

**B. Materials**

1. Manipulatives.
2. Dominoes.
3. Paper and Pencil

**C. Key Vocabulary**

1. commutative property – it does not matter what order you add (i.e.  $2 + 1 = 3$  &  $1 + 2 = 3$ )
2. minus – to take away
3. difference – answer to a subtraction sentence
4. equations – math sentences

**D. Procedures/Activities**

1. The teacher will draw out a domino from the box (you should take out all the doubles before you begin this activity.)
2. The teacher will say, “if we want to make a subtraction sentence with these two numbers, which one should we start with/go on top?”
3. The children will all say, “the largest number” hopefully! If not, the teacher will direct and remind them of yesterday’s lesson.
4. The teacher will write the subtraction sentence on the chalkboard. She will repeat this process until she feels the students are comfortable/familiar with this activity.
5. The teacher will put the students into groups (this could be 2 – 5 students, depending on your class size) and have the students perform the activity independently.
6. The teacher will then ask for volunteers to share one of their examples.
7. The teacher will say what if we didn’t know one of the numbers? Review missing factors and then with the student’s domino math sentences, make a problem with a missing factor. For instance, if a student shared  $8 - 5 = 3$ , the teacher would write on the chalkboard  $8 - \_\_\_ = 3$ ; the students would practice using manipulatives to find the answer to the equation.
8. The teacher would then take ten of the students’ equations and adjust them to have a missing factor.

9. The students would work them independently (using any manipulative they choose) to get the answers.
  10. The teacher would collect the papers after the children were finished with the ten problems.
- E. *Assessment/Evaluation*
1. The teacher would observe and informally assess the students participation in small groups.
  2. The teacher would monitor and correct the student's math sentences as they volunteer for them to be used for the activity.
  3. The teacher would formally assess the individual pencil paper activity finding the missing factor with the expectation of 80% accuracy.
  4. The students would access the activity at the end with thumbs up/down as to whether they enjoyed the activity and enjoyed the activity – two votes.

## VI. CULMINATING ACTIVITY – Subtraction Satisfaction

- A. Set up five centers using five of the previous days activities and manipulatives (M&M's, slide-n-glides, egg carton/manipulatives, unifix cubes, and number lines with Mr. Frog) in which the students would rotate through in small groups to practice their subtraction sentences using all varieties of hands on, concrete manipulatives. The students will complete the self-evaluation checklist after each center. (See Appendix B)
- B. Challenge Center – this would be a center the children could go to only if they want to; at this center is a worksheet (Appendix C) with subtractions sentences with missing factors and story problems (Appendix D) using the names of actual students in our class and pertinent to those students – you will want to modify it to your classroom and students. There would be a variety of manipulatives for the students to use if they want/need to use them.

## VII. HANDOUTS/WORKSHEETS

Appendices A, B, C, and D

## VIII. BIBLIOGRAPHY

- A. Books:
  1. Hirsch, Jr. E. D. *What Your First Grader Needs to Know*. New York: Dell Publishing, 1998, 0-385-31987-8.
  2. Lankford, Mary D. *Is It Dark? Is It Light?* New York: Alfred A Knopf, Inc., 1991, 679-91579-6.
  3. Mandel, Peter *Red Cat White Cat*. New York: Henry Holt and Company, 1994, 0-8050-2929-X.
  4. Masurel, Claire *Ten Dogs In the Window*. New York: North-South Books, Inc., 1997, 0-15-329350-0.  
Publishing, 1994, 0-88106-853-5.
  5. McGrath, B. B. *The M&M's Counting Book*. Watertown, MA: Charlesbridge., 1994, 0-88106-583-5
  6. Murphy, S. J. *Elevator Magic*. New York: Scholastic, Inc. 1997, 0-590-51235-8.
  7. Pallotta, J. *Hershey's Kisses Subtraction Book*. New York: Scholastic, Inc. 2002, 0-439-33779-8.

## Appendix A

Name \_\_\_\_\_

1.  $5 - 2 = \underline{\quad}$

2.  $3 - 2 = \underline{\quad}$

3.  $6 - 3 = \underline{\quad}$

4.  $4 - 4 = \underline{\quad}$

5.  $7 - 3 = \underline{\quad}$

6.  $4 - 2 = \underline{\quad}$

7.  $8 - 2 = \underline{\quad}$

8.  $7 - 2 = \underline{\quad}$

9.  $5 - 2 = \underline{\quad}$

10.  $4 - 3 = \underline{\quad}$

Appendix B  
Slide-n-Glide into Subtraction

Name \_\_\_\_\_

Date \_\_\_\_\_

## Subtraction Satisfaction

### Self Evaluation Checklist

<b>M &amp; M's Center</b>	<b>Slide-n- Glide Center</b>	<b>Egg Carton Center</b>	<b>Unfix Cube Center</b>	<b>Number Line Center</b>
I worked quietly in the center. <b>Yes No</b>				
I finished all of the assignment. <b>Yes No</b>				
I liked the way I worked in this center. <b>Yes No</b>	I liked the way I worked in this center. <b>Yes No</b>	I liked the way I worked in this center. <b>Yes No</b>	I liked the way I worked in this center. <b>Yes No</b>	I liked the way I worked in this center. <b>Yes No</b>
<b>Challenge Center</b>	I worked quietly in the center. <b>Yes No</b>	I finished this entire center. <b>Yes No</b>	I liked the way I worked in this center. <b>Yes No</b>	Teacher comments:

My favorite center was \_\_\_\_\_.

### Appendix C

Name \_\_\_\_\_

1.  $12 - \underline{\quad} = 10$

2.  $6 - \underline{\quad} = 8$

3.  $9 - \underline{\quad} = 6$

4.  $11 - \underline{\quad} = 9$

5.  $8 - \underline{\quad} = 4$

6.  $7 - \underline{\quad} = 2$

7.  $\underline{\quad} - 4 = 7$

8.  $\underline{\quad} - 2 = 3$

9.  $\underline{\quad} - 0 = 11$

10.  $\underline{\quad} - 5 = 12$

## Appendix D

Name \_\_\_\_\_

\*Be sure to write a subtraction sentence to show your answer

1. Adam had ten marbles. He gave Anna four marbles. Now how many marbles does Adam have?
2. Trey and Ryan were playing basketball. They scored eight points. Ryan scored four points, how many points did Trey score?
3. Ashlie and Cassidy collect dolls. They have nine dolls. Ashlie has three, how many dolls does Cassidy have?
4. Merideth and Marisa are girl friends. They have eleven girl friends in class in all. How many more friends do they have in class?
5. Ben and Braden collect Alien cards. They have 15 cards in all. How many cards does Ben have if Braden has five?
6. Courtney, Daniel, Emily, and Jackson have ten erasers. The boys have four, how many do the girls have?

7. Jacob, Jessica, John, and Kennedy, Lynnea, and Maddie are friends. Three of them have names that begin with J, how many do not?