Number Stories

Reporting Category	Computation and Estimation
Topic	Creating and solving story problems, using basic addition facts
Primary SOL	1.6 The student will create and solve one-step story and picture problems, using basic addition facts with sums to 18 or less and the corresponding subtraction facts.
Related SOL	1.5

Materials
- Number story
- Bags
- Linking cubes in two different colors
- 11 x 18 inch construction paper
- A storyboard (11 x 18 inch construction paper) for each pair of students

Vocabulary
add, subtract, plus, minus, equal

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Share with students an appropriate number story that illustrates the concepts of adding and/or subtracting with sums up to 10 or less. (Work your way up to 18 only as students are ready.) As addition or subtraction occurs in the story, demonstrate the number concept with counters or cubes. After you have modeled two problems, allow students to come forward and demonstrate with the cubes a number problem as you read the story.

2. After the story, demonstrate a story problem that can be represented with the cubes on a storyboard (a sheet of 11 x 18 inch construction paper). For example, say, "Seven yellow fish and five red fish were swimming in a pond," and place the corresponding numbers of cubes on the storyboard. Ask students how many fish were in the pond. Continue making up various addition and subtraction problems and demonstrating them with the cubes until students are familiar with the process.

3. Discuss with students how to create a number problem within a story. Give each pair of students a storyboard and a bag containing up to 18 linking cubes in two different colors, and have them create and solve their own addition and/or subtraction stories. As students work, circulate and monitor the students' discussions and representations, checking to ensure that they are understanding the concepts and making appropriate representations.

4. After students have had extended practice with verbally creating and solving problems, have them begin recording the corresponding number sentences on paper or in their journals.

Assessment
- **Questions**
  - "What is a number story that uses 13 counters or cubes? How could you write and represent this story? How would your story change if you added one more cube? If you subtracted one cube?"
  - "How many subtraction number stories can you make for the number 8?"
- **Journal/Writing Prompts**
  - Distribute index cards containing number sentences. "Create a story problem that represents the number sentence on your card."
  - "Create a number story with illustrations, and write the corresponding number sentence under your story."
- **Other**
  - Place storyboards and plastic animals in the math center for students to create number stories.
  - Have students represent a few of their created number stories in their journals.

Extensions and Connections (for all students)
- As students become comfortable representing various number sentences, have them work with a fact family and create and represent stories, using manipulatives and/or drawings, that correspond with each fact.
- Encourage the use of numeration and number sentences whenever the opportunity presents itself. For example, when discussing and interpreting a graph, ask students to develop a number sentence about it. Have students act out seasonal favorite stories in which they present addition and subtraction sentences orally. Use students' favorite books with number themes to develop "Reader's Theatre" productions, and use these as springboards for class story problems. Have students develop recall of basic number facts by acting out number stories.

Strategies for Differentiation
- Begin working with a small number of cubes and increase the number as students demonstrate competency in handling larger numbers.
- Provide different manipulatives for students to create and solve number problems.
- Provide a story frame (e.g., "There were _____ frogs in the pond. _____ more frogs jumped in. Now, a total of _____ frogs are in the pond.") to support student's thinking, as needed. Provide a similar story frame for subtraction.