



Title - Word Problems

Primary Subject - Math

Grade Level - 1-2

Learning Standards:

1.2 Relate problem situations to number sentences involving addition and subtraction.

1.4 Ask and answer simple questions related to data representations.

1.1 Write and solve number sentences from problem situations that express relationships involving addition and subtraction.

1.3 Create problem situations that might lead to given number sentences involving addition and subtraction.

Summary of the Lesson:

This lesson is a hands-on math lesson that is meant to stimulate critical thinking as well as reinforce vocabulary that is necessary for creating and solving word problems both on paper, on their KwikChek dry erase Paddle Boards at their desk, and in groups in front of the class. Students will use appropriate mathematical analysis to pose questions, seek answers, and develop solutions.

Major Objectives:

1. Students will be able to generate and utilize a list of math vocabulary words by identifying which operations they represent and by using them when they create their own word problems together in the group.
2. Students will be able to “act-out” a number sentence verbally, using the KwikChek dry erase Paddle Boards, with their group.
3. Students will be able to work cooperatively with a partners or a group to participate in creating their own word problems and showing the work to the class.

Objective and its Purpose:

- The students benefit from these ongoing experiences by developing a mastery of math vocabulary words.
- The students enjoy creating their own word problems and are challenged to not only use math skills, but to also use language skills in this activity.
- It is important to remember that these activities focus on vocabulary and its use. This is a stepping stone for our next unit which involves larger number values.

Grade Level: Summary of the Students:

This is a small group setting of second graders that have scored low in the area of math. The focus of this group is to build skills that are necessary to understand mathematical concepts.

Instructional Plan/Procedure:

1. Brainstorm

Develop and review a list of vocabulary words that we have been learning, to use in our equations. (more, less, equals, add, subtract, take away, added to, sum, total) The words will be split into two categories: addition, and subtraction. The students will be prompted to give an example to show “why” the word belongs in that column. The students will brainstorm as many words as they can remember. If not all words are remembered by the student, the teacher may also write a vocabulary word on their KwikChek paddle and ask student(s) to place it in the correct column.

2. Warm-Up

Next, the children will participate in a “warm-up” activity. Teacher will model an example, assign jobs and pair the students up for the following activity.

- Hand out a number sentence to each group face down.
- Pair-up and assign each child a job. One student will be a “story teller” and one student will be a “problem solver”.
- Using the vocabulary that we have just reviewed, the story teller will tell a story using the number sentence card. The story teller should not solve the problem, only present it. If you have 4 pennies and you find 6 more pennies , how many pennies will you have in all?

- The problem solver will then solve the problem, using the KwikChek Paddle, and repeat the number sentence. (Ex: $4+6=10$)
- Each pair will present to the other groups until each group gets a turn. If some kids don't get it right, try adding manipulatives and try again until you have it? Discussion can occur with the whole group after the exercise on what worked for each group.

3. Activities and Procedures: "Making Math Sentences"

The students will continue to work with their partner to create their own word problems.

Guided Practice: First, teacher models an example of a word problem. Ask 5 students come up to the front of the class Ex: Two dogs are playing in the park. One **more** dog joins them. What is the **sum** total of dogs playing in the park now?

Have one student write the first number (2) on their paddle, have another student write the appropriate symbol (the (+) sign) and a third student write the second number (1). The fourth student will write an (=) symbol and the last student will leave their paddle blank. Have the class write the number sentence on their own paddles. Have everyone solve the work problem and hold it up for the teacher to see. Now have the 5th student write the answer on their paddle and show the class the answer. Continue the exercise by asking the children to come up with a few more word problems to solve.

Independent Practice: Give students a paper and pencil. Have them write down 3 word problems of their own, three number sentences that go with the word problems and then have them solve the problem.

The students word problems will be graded for credit and used for review and testing.

Materials:

- KwikChek Dry-Erase Paddle Board with attached marker and eraser
- Subtraction/Addition Vocabulary Words (on index cards)
- Number Sentence examples
- Various Manipulatives- if needed
- Addition/Subtraction/Blank Story Starters

Follow-Up/Extension:

- The students will look over this presentation when we review for our next test or summarize the chapter.
- The students will have homework that relates to this activity so they can follow through at home.

Assessment:

- Assessing group through observation.
- With interactive learning, a teacher is not just looking for an answer, but looking for an explanation of "why". The students will continue to not only verbalize, but to show their work on their dry-erase boards without fear of failure.

Time Required:

This project will be completed in about 2 phases (class time of 45 minutes) this will include presentation time.

©KleenSlate 2008