

Shoes in the Closet Prompt Follow Up Lesson
Fourth Grade Math
Higher Order Thinking (H.O.T.) Lesson 1

Day 1 – Monday, September 10, 2007

This lesson followed up the administration of the original prompt. A modified prompt is attached to this lesson.

Learning Objectives:

The student will be able to –

1. Independently devise strategies to solve the real-world problem.
2. Determine mathematical difficulties encountered when solving the real-world problem independently.

Language Objectives:

The student will be able to –

1. Read the real-world problem independently.
2. Select unfamiliar phrases or words from the real-world problem.
3. Use prior knowledge to make sense of unfamiliar words.

Materials:

1. Open-ended prompt: *Shoes in the Closet*
2. scrape paper
3. reflection sheet
4. pencil
5. book

Procedures:

1. Ask students to get a silent reading book from their desk or pick one out from class library to read if they finish assignment early.
2. Explain to students that they will be taking an open-ended prompt and we first want to see how they do without any help.
 - Tell students to do their best but that none of the teachers can really answer any questions today.
 - Explain that we would like to see ALL WORK.
 - We want to see all your thinking even if you're not sure about how to finish the problem.
 - Students will write about what was confusing or difficult after they finish the prompt.
 - Tomorrow we will work on the prompt together.
3. Distribute scrape paper and prompt. Give students about 30 minutes to work independently on the prompt. Document any questions students might have but do not answer questions.
4. When students are finished, they fill out reflection sheet. Collect all materials. When all students have completed the prompt and reflection sheet, move on to *Everyday Math* material.

Closure:

Ask students orally – what did you think of the prompt? What was difficult about it? What do you think would make the problem easier to solve?

Assessments:

1. Observations
2. Notes of questions students asked during prompt
3. Ideas written on scrape paper and prompt
4. Reflection sheet
5. Final answers written on prompt (scored against a rubric)

**Fourth Grade Math
Higher Order Thinking (H.O.T.) Lesson 1**

Day 2 – Tuesday, September 11, 2007

Learning Objectives:

The student will be able to –

1. Read through a real-world problem and determine what the problem is asking.
2. Explain to peers the approach(es) used to solve a real-world problem.
3. With a partner, use manipulatives to represent solutions to a real-world problem.

Language Objectives:

The student will be able to –

1. Read through a real-world problem carefully and identify unfamiliar vocabulary.
2. Select key words that will help solve the real-world problem.
3. Give concrete examples of “twice as many,” “in all” and “two more than.”

Materials:

1. Objectives written in student friendly language
2. Open-ended prompt (clean copy): *Shoes in the Closet*
3. Open-ended prompt from yesterday with no teacher markings
4. Bag of manipulatives (1 per pair/trio)
5. Think cards (total of 3)
6. Pre-assigned pairs/trios
7. Class chart to display solutions
8. Exit slip
9. Pencil
10. Scrape paper
11. Sentence strips with problem’s constraints

Procedures:

1. Review lesson objectives with class. Students take out math journals. Hand back student work from yesterday. (3 min)
2. Students read through problem aloud. Talk about key words that will help solve the problem. Put up each sentence strip on the board and talk about what each constraint means. Help students see the ‘whole picture.’ (10 min)
3. Students open math journal and restate problem in own words. After, students turn and talk with their group about what they think the problem is asking. (5 min)

4. Students underline words they are unsure about. Make a list on board. Work as a class to construct definitions. Ask students to think about real-life examples that will help define the words. Students record in math journal. (10 min)
5. Hold up manipulatives and explain how these can be used to help solve the problem. Tell students they will work with a partner (or two) and use the manipulatives to come up with two solutions to the problems. Call off pair/trio assignments. Distribute clean copy of prompt and manipulatives. (5 min)
6. Students have 15 minutes to work with partner to come up with two solutions. Students also answer the following questions during these 15 minutes:
 - a. Make sure both of you can explain how you used the manipulatives to come up with solutions. What method(s) did you use?
 - b. Write down in your math journal what you and partner did.
 - c. When you feel confident with your solutions put up *one* on the chart.
 - d. Can you come up with more than two ways?Walk around and monitor the pairs work. If students are stuck, provide them with a think card to get them started. (15 min)
7. Regroup whole class. Whole-class discussion:
 - a. How did you use the manipulatives?
 - b. What did you and your partner talk about? (7 min)Ask a couple of pairs to explain how they came up with their solutions. (5 min)
8. Hand out exit slip and have students independently reflect on lesson. (6 min)
9. Transition into math quiz game show. Ask students to think of real-life examples to help define a word if they are unsure of it.

Closure:

Students independently complete exit slip.

1. Do you have a better understanding of how to solve this problem? Why?
2. What did you learn from today?
3. What is still confusing about this problem?

Assessments:

1. Observations
2. Pairs work using manipulatives
3. Oral explanations by students
4. Class discussion (examples of mathematical vocabulary, definitions)
5. Chart of solutions
6. Exit slip – reflection

Name _____
Solving

Grade 4 Problem




Shoes in the Closet

Geno's mother has 5 kinds of shoes in her closet

There are:

- sneakers, flip-flops, boots, dress shoes, and clogs
- 18 pairs of shoes in all
- 3 pairs of sneakers
- 3 pairs of boots
- twice as many pairs of flip-flops as pairs of boots
- 2 more pairs of clogs than pairs of boots

Use the information above to show how many pairs of each kind of shoe Geno's mother has in her closet. Fill in the table below with your answer.

Kind of Shoe	Number of Shoes
 Sneakers	
 Flip-flops	
 Boots	
 Dress Shoes	
 Clogs	
Total	