imagine plus math

Learning Organizer

Lesson _____ Activity _____ Page # _____

Directions: In the top boxes, write important words, numbers, or strategies to help you understand and solve the problem. Draw a picture or diagram to model your thinking. In the bottom boxes, solve the problem and check your work to make sure your answer makes sense.

1. Understand. Write important words, numbers, or strategies.	2. Draw a visual model or diagram.
3. Solve. Show your work.	**4. Check your work.**

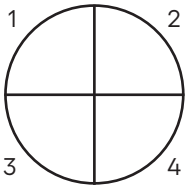
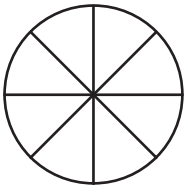
imagine learning

imagine plus math

Learning Organizer — Example

Lesson Add and Subtract Fractions: Like Denominators Activity Guided Learning Page # 1

Directions: In the top boxes, write important words, numbers, or strategies to help you understand and solve the problem. Draw a picture or diagram to model your thinking. In the bottom boxes, solve the problem and check your work to make sure your answer makes sense.

1. Understand. Write important words, numbers, or strategies.	2. Draw a visual model or diagram.
$\frac{n}{d}$ same = 1 whole Equivalent means equal in value. Add or subtract fractions to find the expression that equals 1.	 1 2 3 4 5 6 $= \frac{6}{6} = 1$  1 2 3 4 $= \frac{4}{4} = 1$  $= \frac{8}{8} = 1$
3. Solve. Show your work.	**4. Check your work.**
$\frac{5}{6} - \frac{1}{6} = \frac{4}{6}$ $\frac{2}{8} + \frac{5}{6} = \frac{7}{8}$ $\frac{1}{4} + \frac{3}{4} = \frac{4}{4} = 1$	 $\frac{1}{4}$ +  $\frac{3}{4}$  $\frac{4}{4}$ same = 1

imagine learning

imagine plus math

Problem Solving Reflection

Lesson _____ Activity _____ Page # _____

Problem: _____

Directions: Explain your reasoning. Include an explanation of the problem-solving strategy you used and describe how it helped you answer the question. Use math words and phrases and any of these sentence frames in your response.

- The solution to the problem is . . .
- My main reason for thinking so is . . .
- An important part of the solution to the problem is . . .
- A model that might represent the solution is . . .
- The problem-solving strategy I used was . . .
- To solve this problem, first I . . .
- This strategy was effective for the problem because . . .
- This strategy showed me that . . .

imagine learning

imagine plus math

Problem Solving Reflection — Example

Lesson Operations with Whole Numbers — Mixed Practice Activity Practice Page # 3

Problem: Bottled water comes in cases of 24 bottles. You need 150 bottles of water for a school event. How many cases of water do you need to buy?

Directions: Explain your reasoning. Include an explanation of the problem-solving strategy you used and describe how it helped you answer the question. Use math words and phrases and any of these sentence frames in your response.

- The solution to the problem is . . .
- My main reason for thinking so is . . .
- An important part of the solution to the problem is . . .
- A model that might represent the solution is . . .
- The problem-solving strategy I used was . . .
- To solve this problem, first I . . .
- This strategy was effective for the problem because . . .
- This strategy showed me that . . .

The problem-solving strategy I used was "Write an Equation." To solve this problem, first I drew a model to help me analyze the problem and see how the numbers related. Then I was able to write this relationship as an equation:

number of cases = total bottles ÷ bottles per case

Finally, I solved the equation by substituting in the known numbers from the problem and computing:

number of cases = 150 ÷ 24

number of cases = 6.25

However, an important part of the solution to this problem was thinking about the problem and making sure that the answer made sense. Although the solution to the equation was 6.25, it didn't make sense to buy 6.25 cases of water bottles. It also didn't make sense to round to the nearest whole number (which would be 6 cases), because there wouldn't be enough water for everyone. I had to round up to 7 cases to find the solution to the problem.

imagine plus math

End of Lesson Organizer

Lesson _____ ☐ Passed ☐ Not Passed

Directions: Reflect on the lesson. Use math words and phrases in your responses.

1. Math Words and Phrases Write at least one important math vocabulary word or phrase that was used in this lesson. For each word or phrase, write the definition in your own words and draw a visual representation.	**2. Problem-Solving Strategies** Write at least one strategy that you used in this lesson and describe how you used it.
3. Growth Write about something mathematical that you learned, perhaps from a mistake you made, that you could apply to future problems.	**4. Continued Learning** Write about questions you still have or something you want to learn more about.

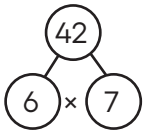
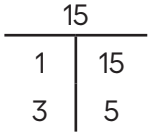
imagine learning

imagine plus math

End of Lesson Organizer — Example

Lesson Relate Factors and Multiples II ☑ Passed ☐ Not Passed

Directions: Reflect on the lesson. Use math words and phrases in your responses.

1. **Math Words and Phrases** Write at least one important math vocabulary word or phrase that was used in this lesson. For each word or phrase, write the definition in your own words and draw a visual representation.	2. **Problem-Solving Strategies** Write at least one strategy that you used in this lesson and describe how you used it.
Factor Pair: Two whole numbers that you can multiply together to get another number. One factor pair of 42 is 6 and 7.  Composite number: A number with more than two factors. 15 is a composite number.  Multiple: Any number you get when you skip-count by a certain number. Here are the first six multiples of 8: 8, 16, 24, 32, 40, 48	Two problem-solving strategies I used in this lesson were Making a Chart or Organized List and Guess and Check. Whenever I had to find the factors of a number, I first wrote it down in a T-chart. Then I tried dividing the other numbers into it, starting with 2 and working up. The numbers that divided evenly I circled in my chart as factors. Whenever I had to find the multiples of a number, I skip-counted by that number and wrote them down in an organized list. On some problems I had to find the answer that was both a factor of one number and a multiple of another, so I checked each answer choice to see if it was in my chart and list.
3. Growth Write about something mathematical that you learned, perhaps from a mistake you made, that you could apply to future problems.	**4. Continued Learning** Write about questions you still have or something you want to learn more about.
On some problems, I got confused by the difference between multiple factors and factors. I learned that to find "multiples" of a number, you have to "multiply" the number by another number. Consequently, the multiples of a number are greater than or equal to that number. To find the "factors" of a number, you have to "divide" it by other numbers. As a result, the factors of a number are less than or equal to that number.	I noticed that some numbers have more factors than other numbers. For example, the number 12 has 6 factors, while the number 7 has only 2 factors. I wonder, what number has the most factors? Furthermore, I wonder if the multiples of a number just keep going to infinity. I think they do, becaues finding multiples is like skip-counting, and you can always just keep counting forever.

imagine learning