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| Standard: | **3.0A.3** **Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.1****1See Common Core State Standards, Glossary, Table 2** |
| Domain:  | Operations and Algebraic Thinking | Cluster:  | Represent and solve problems involving multiplication and division. | Grade:  | 3rd Grade | Target Type:  | R |
| Make sense of problems and persevere in solving them. | Reason abstractly and quantitatively. | Construct viable arguments and critique the reasoning of others. | Model with mathematics. | Use appropriate tools strategically. | Attend to precision. | Look for and make use of structure. | Look for and express regularity in repeated reasoning. |

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| Knowledge Target(Prerequisite Skill or Underpinning) | Reasoning Target(Mastery) | Performance Skill Target(Mastery) | Product Target |
| Multiply and divide within 100. | Solve word problems in situations involving equal groups, arrays, and measurement quantities.Represent a word problem using a picture, an equation with a symbol for the unknown number, or in other ways. |  |  |
| **Formative Pre-assessment** | **Student Learning Target** | **Formative Assessment** |
| 1. There are 3 rows of apples with 6 apples in each row. How many apples are there?
2. If 18 apples are arranged into equal rows of 6 apples. How many rows will there be?
 | 1. I can multiply within 100.(K)
2. I can divide within 100(K)
3. I can solve word problems involving equal groups, arrays, and measurement quantities.(R)
4. I can identify key words in word problems (multiplication).(K)
5. I can solve a word problem using a picture.(R)
6. I can solve a word problem with an equation with a symbol for the unknown number.(R)
7. I can identify key words to solve a division problem.(K)
8. I can identify the variables in an equation.(R)

I can draw arrays.(S) | 1. Tim’s class has 5 groups of desks. Each group has 4 desks. Write the multiplication equation that illustrates this and solve.
2. Draw a 4×9 array. Write one of the related division equations for this array.
3. There are 14 customers standing in 2 checkout lanes. Each lane had the same number of customers. How many customers are in each lane? Write the related equation.
4. Alex is a dog that gets in trouble 3 times a day. At the end of the week, how many times does he get in trouble? Write the related equation. Highlight the key words in the problem.
5. Illustrate and solve the following:
* Sara has planted a flower garden. She has 3 rows with 4 flowers in each row. How many flowers altogether?
1. There are some students at recess. The teacher divides the class into 4 lines with 6 students in each line. Write a division equation to determine how many students are in the class (? ÷ 4= 6).
2. There are 4 bananas, 3 pears, and 5 apples. If an equal number of fruit is placed in 4 baskets, how many pieces will be in each basket?
3. An ostrich egg weighs 4 pounds. The total weight of the eggs in a nest I 28 pounds. Write an equation using a variable and solve to determine the number of eggs in the nest.
4. Use an array to solve the following: there are 3 spiders. Each has eight legs. How many legs are there in all?
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| **Critical Content Vocabulary** | **Suggested Strategies/Activities** | **Instructional Resources** |
| Dividend Variable Multiply (multiplication) Product Divisor Array Divide (division) Quotient Factor Fact Family  | * Students work in small groups, using manipulatives, to act out multiplication/division situations. Students draw pictures to represent the actions and record the equations.
* Students use colored dot labels to illustrate and solve multiplication/division word problems. Then write the corresponding equation to show the solutions.
* Roll two number cubes and write multiplication equation (roll 3 & 2; write 3 × 2 = 6). Then write the related division fact (6 ÷ 3 = 2).
 | * Colored dot stickers
* Number cubes
* [www.knowledgeadventure.com](http://www.knowledgeadventure.com)
* [www.ixl.com/math](http://www.ixl.com/math)
* [www.math-aids.com](http://www.math-aids.com)
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