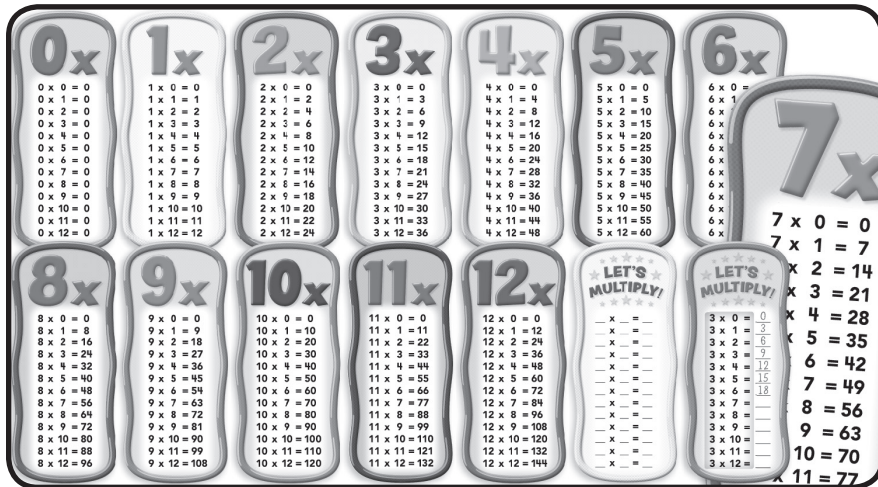


Multiplication Tables

A Teaching and Learning Bulletin Board

565364



Connections to the Common Core State Standards

The activities in this teaching guide align with the following Common Core State Standards for Mathematics. For more information, visit www.corestandards.org.

Operations and Algebraic Thinking

3.OA.1, 3.OA.3, 3.OA.4, 3.OA.7

4.OA.1, 4.OA.2, 4.OA.4

Number and Operations in Base Ten

3.NBT.3

MATH

Multiplication With Manipulatives

Provide students with a supply of manipulatives, such as counters, paper squares, or pennies. Then, as you introduce each multiplication table, ask students to group the manipulatives in a way that represents each problem. Point out that repeated addition gives the same result as multiplication. Demonstrate by adding the grouped manipulatives. After helping students understand the relationship between multiplication and addition, make up simple word problems involving the manipulatives and multiplication facts. Have students group and arrange the manipulatives to solve the problems. Finally refer them to the multiplication charts to check their answers.

Product Line-Up

Help students understand that the products of a specific multiplication table follow a continuum on a number line. First, prepare a number line using a series of 12 sentence strips. Label the strips with the numbers 0 to 144, spacing the numbers evenly apart and showing twelve numbers per strip. Laminate the strips and arrange them on a wall or clothesline to create one long number line. Then choose a multiplication table, such as "7x." Working with the whole class or in small groups, invite students to use a wipe-off pen to circle each multiple of that number on the number line (for example, 7, 14, 21, 28, and so on). When finished, encourage students to check their work by comparing the circled numbers to the products on the corresponding multiplication table. Finally, have students chorally skip count the multiples as you point to the circled numbers, in order, on the number line.

Mystery Factors

Select a multiplication table on the display. Trim self-sticking flags to cover a few of the factors (middle numbers) on that table. Then review the problems on the table one at a time. As you come to each problem with a hidden factor, challenge students to name the missing number and then remove the flag to check their response. As a variation, cover a

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Guide written by
Immacula A. Rhodes

few factors at the beginning of the problems and a few in the middle. Or randomly cover factors and products and have students find the missing numbers.

Computation Connections

Present word problems for students to solve to help them connect multiplication to real-life situations. To begin, choose items that are related to specific numbers (or units), such as two shoes in a pair, three corners in a triangle, four wheels on a car, five arms on a starfish, eight legs on a spider, or twelve eggs in a dozen. Then make up word problems about the items for students to solve using multiplication. For example: *Jess has three pairs of red shoes. A pair has two shoes. How many shoes does Jess have in all?* Or: *One starfish has five arms. How many arms do six starfish have in all?*

Fill It In

Use the blank multiplication table to give students additional practice in learning multiplication facts. Prepare the table as described below, then have students fill in the missing numbers. (Use a wipe-off pen.) Once finished, students can check their work against the corresponding table on the display.

- Write in some factors and some products on the table. To complete the table, students fill in the remaining factors and products.
- To encourage speed and fluency in multiplication, label the top of the two blank reproducible tables (page 3) with the same number. Provide students in a pair with a stopwatch and have them time each other as they take turns completing their table.

CLASSROOM MANAGEMENT

Goals and Rewards

Use the display to track students' progress toward achieving goals or completing assignments. First, establish criteria for a specific goal or assignment. For example, set a goal for students to read three books a week, or assign an activity that includes 12 math problems for students to complete. Label the multiplication table that corresponds to the related number with a description of that goal or assignment (for example, label the "3x" table with "Read three books" and the "12x" table with "Complete 12 problems"). As students meet the requirements, attach a self-sticking flag labeled with their name next to the products, starting at the top and moving down one row for each flag added. Periodically call students' attention to the charts and use multiplication to help them track the progress made, such as "Four students have now read three books each, so 12 books have been read in all." Once a sticky flag has been placed next to each product, present the students named on the flags with a special reward.

Using the Reproducibles

To extend learning opportunities and reward achievements, use the reproducible templates on pages 3 and 4 with these additional activities.

- ◆ Give students paper-and-pencil practice with the multiplication tables. First, fill in a number from 0 to 12 at the top of a copy of the blank multiplication table (page 3). Copy a class supply of the table and distribute to students. Have them complete the table by filling in the missing factors and products. (Remove or flip over the corresponding table on the display to discourage "peeking.") Alternately, you might program the tables by filling in some missing factors and/or products before making copies for students to complete. In addition to providing critical practice for building fluency, these fill-in-the-blank tables make ideal assessment tools.
- ◆ After students master each multiplication table, use a special award to boast about their accomplishment. Simply copy a supply of the ribbon (page 4) onto colored paper. Cut out and fill in an award with the student's name and which times table he or she has mastered. Then post the award on the display for all to see.
- ◆ Complete and present a copy of the certificate of achievement (page 4) to students as they show mastery of each times table. You might present the certificates during a class ceremony designed to celebrate students' accomplishments in multiplication.

Name: _____

X

x 0 = _____
x 1 = _____
x 2 = _____
x 3 = _____
x 4 = _____
x 5 = _____
x 6 = _____
x 7 = _____
x 8 = _____
x 9 = _____
x 10 = _____
x 11 = _____
x 12 = _____

Name: _____

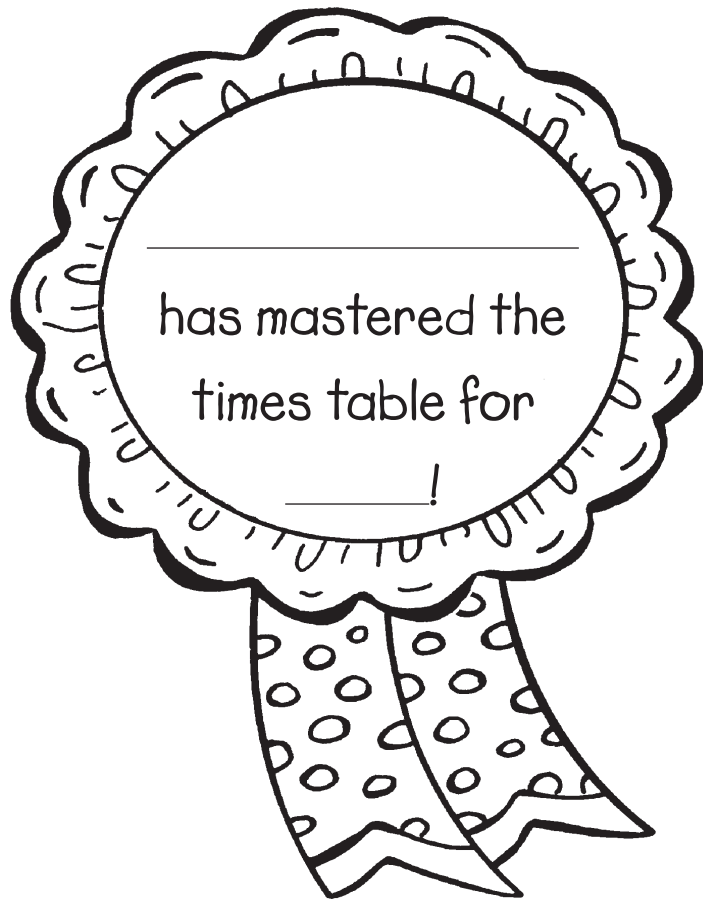
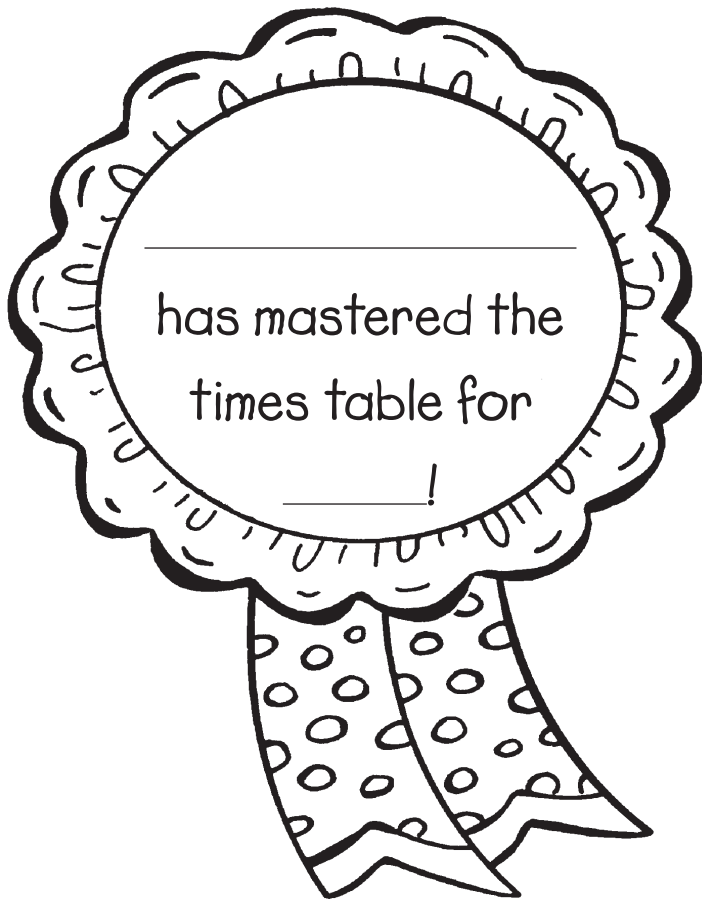
X

x 0 = _____
x 1 = _____
x 2 = _____
x 3 = _____
x 4 = _____
x 5 = _____
x 6 = _____
x 7 = _____
x 8 = _____
x 9 = _____
x 10 = _____
x 11 = _____
x 12 = _____

Name: _____

X

x 0 = _____
x 1 = _____
x 2 = _____
x 3 = _____
x 4 = _____
x 5 = _____
x 6 = _____
x 7 = _____
x 8 = _____
x 9 = _____
x 10 = _____
x 11 = _____
x 12 = _____



Certificate of Achievement



presented to _____
Student

for mastering the times table for _____
Number

Teacher Date