

# Getting Ready

**OBJECTIVE:** Student will solve multiplication problems with factors 6-9, using • and X to denote multiplication.

## Materials

### Warm Up

- Vocabulary card (*solve problem*)
- Index card
- Numeral cards
- GO-Chart Grid
- All-Turn-It spinner

### Explore

- poster (At Home)
- straws
- calculator

## Warm Up

### A. VOCABULARY REVIEW: *solve problem*

Show/give Concrete Connection: Write  $2 \times 5 = ?$  on index card. Cross off ? with red marker and write 10. Label “*solve problem*”.

Show “*solve problem*” Vocabulary card. Say “**Read** it.”

Students **locate** and **show** examples of “*solving problems*” using past work, pictures from home or books from media center.

### B. FUN & GAMES: Spin and Skip

#### PREPARATION

Fasten Numeral cards 2, 5 and 10 to All-Turn-It spinner. Place remaining Numeral cards through 9 on table. Draw point chart on board and display GO-Chart Grid.

#### DIRECTIONS

Player **spins** for amount and **chooses** card from table. Write equation (spinner amount first) and draw X's in GO-Chart Grid for an array (number in row x rows). Point to each row as student **skip counts**. Write total on point chart. When numbers on table are gone, add points to determine winner.

## Explore

### A. POSTER: At Home

Point out things you see in the kitchen in larger quantities, such as dishes and silverware. Talk about what is stored behind the cupboard doors.

**Discuss** multiplying larger numbers and personal experiences; use information from home.

### B. TOOLS & MANIPULATIVES

Say “Let’s **explore** multiplying with larger numbers and sets.”

Use straws to make larger sets to multiply. Make 6-9 sets of 2’s, 5’s and 10’s and skip count them. Enter  $2 + 2$  on calculator and press = repeatedly. Record skip counting on Step- by-Step.

Students **hold** and **explore** straws and tools.

## OBJECTIVE

Student will solve multiplication problems with factors 6-9, using  $\bullet$  and X for multiplication.

## Materials

### Introduce

- poster (At Home)
- Vocabulary card (multiply with  $\bullet$  sign)
- index card

### Teach

- poster (GO-Chart Grid)
- hundreds chart (CD)
- calculator
- blank hundreds grid (CD)

- paper tiles
- Step-by-Step
- 10 clear bags or rubber binders
- cubes
- straws

## Introduce and Connect

### A. EXPLORE POSTER: At Home

Show/give student(s) Concrete Connections: Write  $3 \times 2 = 6$  and  $3 \bullet 2 = 6$ . Label “multiply.” Model using  $\bullet$  symbol in an equation for multiplication with items on the poster. Direct students to **point** to  $\bullet$  symbol and a set to multiply on poster, e.g. multiply 2 sets of bananas pictures using  $\bullet$  sign.

### B. SHOW & TELL

Ask, “What do you know about  $\bullet$  symbol and X symbol ?” Students **tell** what they **see** on the poster and what they know. Write student comments on Number Notes poster with numbers, math symbols, words, pic-symbols, and objects. Use past student work or items from home when possible. *Note: objects or pictures can be fastened to the Number Notes poster.*

### C. VOCABULARY: multiply (with $\bullet$ sign)

Show “multiply” ( $\bullet$  sign) Vocabulary card.

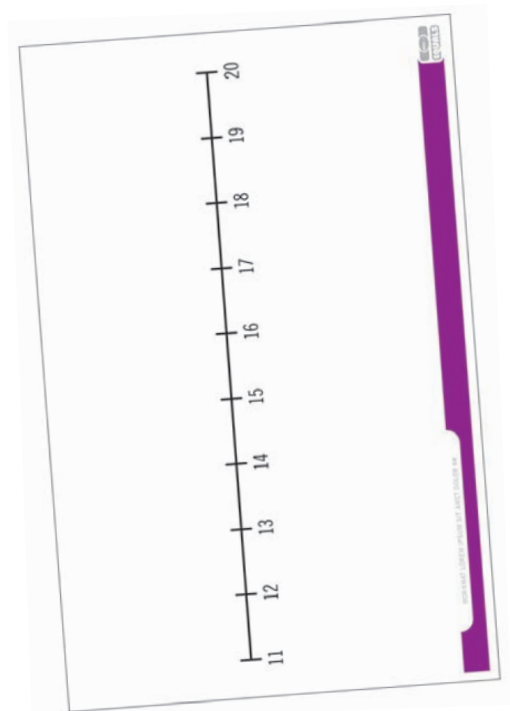
Say, “This says times. **Read** it.”

Students **say** times three times.

We say “times” when we see  $\bullet$  in a multiplication equation.

Times means multiply.

### W Workmat 27



## Sensing Math

- Place even amounts of small colored candies on workmat in an array to multiply. **Write** equation and count total.
- Play single tones in sequence on keyboard or xylophone as students **place** small manipulatives on workmat 4 to **build** an array, one item in each square for each tone. **Write** equation (rows x columns) and solve for the total.

### Level Guide

**1** Level = Severe

**2** Level = Moderate

**3** Level = Mild

## Teach

### A. VISIBLE THINKING

Use straws, GO-Chart Grid, Workmats 1 and pic-symbols to show what you are thinking. Fasten workmats together to make 1-20 number line. *Demonstrate each CSA level twice.*

**C** Write  $6 \bullet 3 = \underline{\quad}$  and  $6 \times 3 = \underline{\quad}$ . Count 3 sets of 6 straws on workmat 1. Count total straws. Write total.

**S** Write  $6 \bullet 3 = \underline{\quad}$  and  $6 \times 3 = \underline{\quad}$ . Draw an array of 3 rows of 6 x's in each row. Count x's for total.

**A** Write numbers 0-20 on GO-Chart Grid. Write  $6 \bullet 3 =$  and  $6 \times 3 =$ . Count 3 groups of 6 on chart. Keep track of each group by writing 6 on board each time group of six is counted. Show last number and write in answer space.

### B. TRY IT: Skill Drill Worksheet

Students **record** meaning of  $\bullet$  by choosing an x when it appears.

## Problem Solving

### A. DEMO: Problem Solving Steps poster, GO-chart Grid

Jarol bought 4 packs of pop. There are 6 cans in a pack. How many cans of pop were there? Place Math Tools on table. GO-Chart Grid. Place workmat, objects, array, and hundreds chart on table.

### B. SOLVE IT

The lunch cooks at school ordered 9 boxes of fries. There were 7 bags of fries in each box. How many bags of fries were there? Place math tools, straws, and 10 plastic bags on table. Write equation  $7 \times 9 =$  and  $7 \bullet 9 =$

**1 Level** Record 1-7 on Step-by-Step. Say "Count to 7, 9 times." Point to straws as students **count** to 7. Place in bag. Repeat. Students **skip count** with calculator (enter 7). Show 63, 63, 1 on sticky notes. Students **record**.

**2 Level** Students **draw** 9 rows of 7 x's in an array. Students **count** total and checks by **skip counting** using calculator (enter 7). Students **record**.

**3 Level** Students **circle** 9 sets of 7 on hundreds chart and **record** last number. Students **record** on worksheet.

### C. TRY MORE: Problem Solving Worksheet

Students **choose** method to solve multiplication problems in equations, arrays and/or multiple sets.

## Close

### A. SHOW ME, SHOW OTHERS: I Learned...

Review what students have learned. Ask students to demonstrate skill, share their worksheets or read their Number Notes. It is essential that students have a meaningful way to communicate what they have learned.

### B. NUMBER NOTES

Model writing vocabulary "*multiply,  $\bullet$* " on Teacher Number Notes. Students **write** "*multiply,  $\bullet$* " in Number Notes using numbers, math symbols, words, pic-symbols, or objects. Option: place math pics on Number Notes page and circle or stamp the pic-symbols that represent what you have learned.

# Follow Up

**OBJECTIVE:** Student will solve multiplication problems with factors 6-9, using  $\bullet$  and X to denote multiplication.



## Real Life Problem Solving

**CLASSROOM:** Students **gather** and **create** sets of 6-9 using classroom materials. Write equation to match using  $\bullet$  and X. Students **choose** equation, **choose** the sets to match and solve the problem.

**CALENDAR:** **Count** sets of 7 days on calendar and write an equation ( $7 \times 4$  and  $7 \bullet 4$ ). Solve by counting number of days in four weeks.

**COMMON:** Practice **counting** by 5's to solve multiplication problems with factor of 5 and a second factor of 6-9. Use fingers to count number of sets by 5's. When return to classroom, write the equations with  $\bullet$  and x for students to solve with their hands. Option: Send equations home for an assignment.

## Workstations

### MATERIALS / PREPARATION

Place Multiplication template, hundreds chart (CD), calculator, and writing tools in work station. Level 1: Write equation with either sign,  $6 \times 8$  or  $6 \bullet 8$ , on workmat 2, one number/sign per circle.

- 1 **Level** Students work with partner. Place workmat 2 on table. Enter  $6 + 6 =$  on calculator. Partners say "1", **counting** as students **press** = 8 times. Partners **record** answer. Repeat with new equation.
- 2 **Level** Write equations with factors 6-9 using x and  $\bullet$ . Students **draw** 8 rows of 6 x's in an array. Students **count** total. Students check by skip **counting** using calculator (Enter  $6 + 6 =$  on calculator. Say 1. Press = and continue to count to 8.)
- 3 **Level** Write equations with factors 6-9 using x and  $\bullet$ . Students **circle** 8 sets of 6 on hundreds chart and **record** last number.

## Games

### A. VOCABULARY: Spinning for Multiply ( $\bullet$ )

#### MATERIALS / PREPARATION

Place At Home game board on table. Place pic-symbols (multiply,  $\bullet$ , blanks) on All-Turn-It spinner. Give each student a pawn.

#### GAME DIRECTIONS

Player **spins** All-Turn-It spinner. Player **reads** symbol and **moves** pawn to next space. **Spinning** a blank means skip a turn.

### B. SKILL: Multiply It

#### MATERIALS / PREPARATION

Fasten Numerals 0-9 on All-Turn-It spinner. Write numbers 0-100 on GO-Chart Grid. Split into teams. Draw T chart for point on board. Place Math Tools on table.

#### GAME DIRECTIONS

Player **spins** twice. Write equation on point chart. Team uses calculator (for repeated addition), straws and Workmat 17, 27 or **circling** sets on hundreds chart to solve. Write total in points chart. After 5 turns, team with single highest product wins.