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LESSON PLAN 1: BASIC CONCEPT OF MULTIPLICATION

OBJECTIVE: Teach or review the basic idea of multiplication, a shortcut to adding the same number several times. Also, briefly cover 0s, 1s, 2s and 10s.

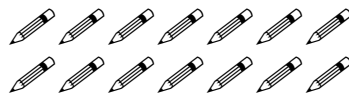
NOTE: Those groups are taught on pages 42-53 of *Math Phonics™—Multiplication*, and are usually fairly easy to learn. Many helpful memory tricks are given in that book. Refer to that book if students need help with those groups.

MATERIALS: activity page—Groups of 7 (page 11), overhead projector markers and page protectors (optional), Base 10 Counting Charts (page 12), Basic Facts Charts (page 13), worksheets (pages 14-17)

DEMONSTRATION:

1. Use page 11, Groups of Seven. (Sevens will be taught in detail in Lesson Plan 4. To reinforce them, we use them as an example here, also. Sevens are hardest for many students.)
2. Explain that 1×7 means 1 written 7 times and added, or one row of desks with seven in that row.
3. Have students write in the numbers 1 through 7 in the first row of boxes (think of them as desks) and in the blank, write $1 \times 7 = 7$.
4. In row two, they continue numbering the boxes 8 through 14 and write 14 in the blank for 2×7 .
5. Point out that 2×7 is the same as the doubles for addition $7 + 7$, two rows of desks with 7 in each row.

$$\begin{array}{r} 7 \\ + 7 \\ \hline 14 \end{array}$$



$$2 \times 7 = 14$$

6. Continue having them number the boxes and fill in the answers to the 7s multiplication facts.
7. Point out to them that the first four and a half rows are like a calendar. They can look at a calendar at the 7 and the first three numbers under it for the first four answers in the sevens.

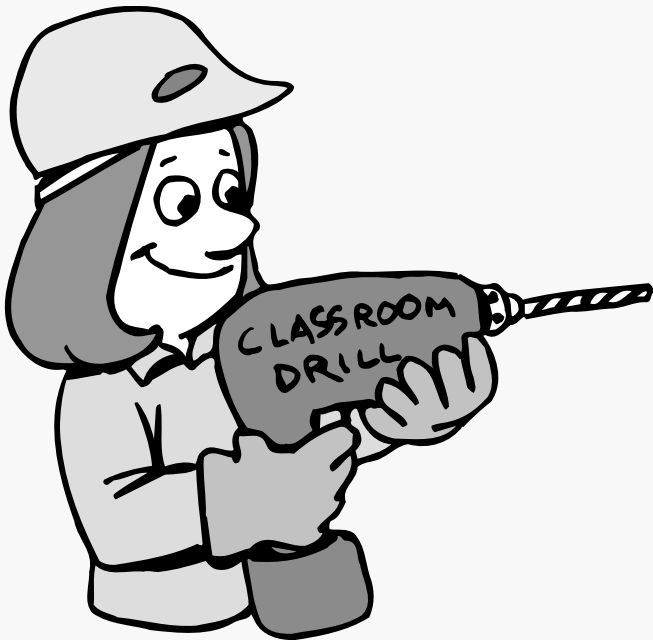
$$\begin{array}{l} 7 \times 1 = 7 \\ 7 \times 2 = 14 \\ 7 \times 3 = 21 \\ 7 \times 4 = 28 \end{array}$$

If some students need more help, use ideas on page 10 in *Math Phonics™—Multiplication* (hereafter referred to as MPM).

LESSON PLAN 1: CONTINUED

HANDOUT: Give each student a copy of page 12, containing four base 10 counting charts. To re-use the charts, give each student a vinyl page protector and overhead projector pen. Have them count 7 numbers and circle the 7, count 7 more and circle the 14 and so on. Use these for 2s and 10s and with later lesson plans in this book.

CLASSROOM DRILL: Have the class chant the 0s, 1s, 2s and 10s in unison. Also, have them chant the 7s. For those who need visual reinforcement, run off page 13 for a classroom poster or use it with the overhead projector.



WORKSHEETS: Students can do Worksheet A and then quiz each other verbally using the worksheet as a guide.

For Worksheet B, demonstrate 20×2 . This is the same as $20 + 20 = 40$. Also, think of 20 as 2 dimes and zero pennies. When you multiply 2×0 you get 0 in the 1s place for the pennies. 2×2 gives 4 dimes—put it in the 10s place. For 2×200 , multiply the non-zero numerals and add as many zeros to the answer as there are in the problem.

Worksheet C prepares students to multiply two numbers times two numbers. Show them that $1 \times 12 = 12$ when the 1 is in the 1s place and $10 \times 12 = 120$ when the 1 is in the 10s place.

$$\begin{array}{r} 12 \\ \times 11 \\ \hline 12 = (1 \times 12) \\ (10 \times 12) = \underline{120} \\ 132 \end{array}$$

Have students do one row and ask for the pattern for multiplying by 11. (Spread the two numbers apart and add the two numbers for the middle numeral.)

Worksheet D is a simple example of math art.

OPTIONAL: Flip folders can be made using instructions on page 7. Students write one group of facts on each page.

Each student should also have a math notebook. This can be purchased (a pocket folder) or made using instructions on page 7 of MPM. Students should keep page 11, Groups of 7, Base 10 Counting Charts and worksheets in the folder. Base 10 Counting Charts can be used with later groups of facts and worksheets can be used as study sheets.

Name _____



GROUPS OF 7



RECTANGULAR ARRAY

$1 \times 7 =$ _____

$2 \times 7 =$ _____

$3 \times 7 =$ _____

$4 \times 7 =$ _____

$5 \times 7 =$ _____

$6 \times 7 =$ _____

$7 \times 7 =$ _____

$8 \times 7 =$ _____

$9 \times 7 =$ _____

$10 \times 7 =$ _____