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LESSON PLAN 1: ADDITION—11 & 12

OBJECTIVE: Show students an easy way to memorize number pairs for 11 and 12. (For this demonstration, number pairs for 11 will be used. Any other group can be explained the same way.)

MATERIALS: wall-size movable number line using counters 1 through 11 or 11 students lined up at the front of the room. This lesson plan will be written for using the students. Laminated ruler-sized counting line or 12-inch ruler for each student (page 11), rainbow activity pages (pages 12-13), worksheets (pages 14-16)
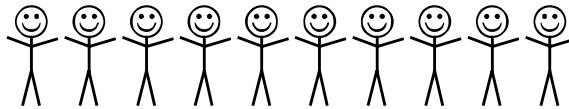
DEMONSTRATION: Arrange students or numbers on a movable number line as shown above. Ask the rest of the class to make an addition fact about the students and write on the board: 1 + 10 = 11

Now have one of the students move from the right to the left and again ask for an addition fact:
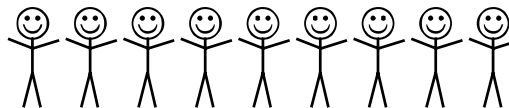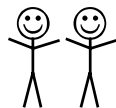
Below the first fact write: 2 + 9 = 11

Next have another student move from right to left and ask for the addition fact:
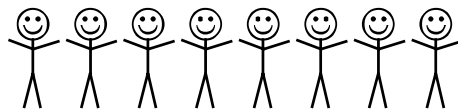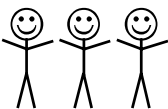
Below the first two facts write: 3 + 8 = 11

Have one more student move from the right to the left and ask for that addition fact:
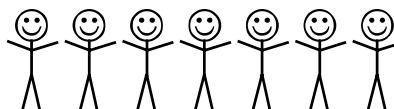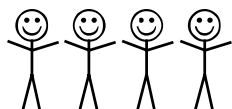
4 + 7 = 11

Have one last student move from the right to the left and write the last fact:

5 + 6 = 11

You should now have this set of facts on the board:

$$1 + 10 = 11$$
$$2 + 9 = 11$$
$$3 + 8 = 11$$
$$4 + 7 = 11$$
$$5 + 6 = 11$$

Give each student a ruler-sized number line (page 11). Now have the students find 1 and 10 on the ruler-sized number line by putting their left index finger below the 1 and their right index finger below the 10. Next, have them find the next number pair by moving each finger one number toward the center and say that number pair. Continue until they have reached 5 + 6.

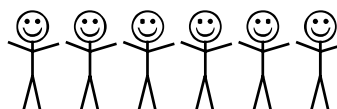Point out to students that the numbers in the left column are getting larger each time and the numbers in the center column are getting smaller each time. Students should be able to give number pairs without the ruler after a little practice. (Note: Always put the smaller number on the left so that numbers are being given in the left to right order that they are on the ruler.)

HANDOUT: Give each student two copies of page 12. Show them how to make a "rainbow" of number pairs for 11—see page 13 for an illustration. After making the rainbow, they list the number pairs at the top of the page.

If necessary, repeat the process for the number pairs for 12.
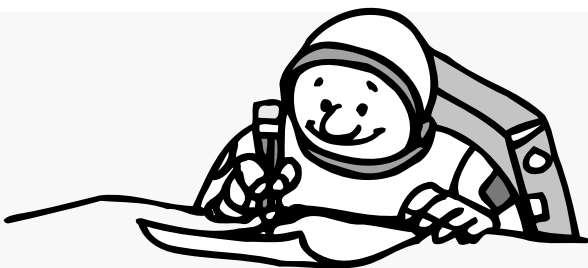
CLASSROOM DRILL: Have the class give you the number pairs one at a time for each group. For the 11s, write on the board: 1 + 10 = 11.

Write the 2 under the 1 and ask for the next pair. Write the rest of that fact. Write the 3 under the 2 and ask for the next pair. Continue.

Have the class chant the entire group in unison while looking at the list.

$$1 + 10 = 11$$
$$2 + 9 = 11$$
$$3 + 8 = 11$$
$$4 + 7 = 11$$
$$5 + 6 = 11$$

Now cover the list and have the class chant the number pairs again.

Repeat for the 12s.

WORKSHEETS: The lower group of problems on Worksheet A is practice for subtraction. For Worksheet B, have students do the first problem. Then count out the next problem on a base 10 counting chart (page 94). Show them that they can regroup the one group of 10 into the 10s column. That is easier than using a counting chart. The problems are in groups of four with each one having the same answer in the 1s place. (Note: Refer to pages 82-83 in *Math Phonics™—Addition* for additional worksheets to practice these facts.)

If you are using this as a review for your students, use the notes on page 88 in *Math Phonics™—Addition* and page 15 in *Math Phonics™—Subtraction*.

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10