

THINKING WITH NUMBERS

Lesson Descriptions

Separating With The Start Unknown

Some everyday situations involve separation, but you do not know how many you started with. For example, suppose you had some money in your wallet. If you spend \$6 and later find that you still have \$3, you can figure out that you started with \$9. This problem can be represented by $__ - 6 = 3$. These problems are difficult for children because they know it is subtraction, but do not know where to start. The solution process, although there is separation, is an addition process because you know both parts and are trying to find the whole. This problem can also be represented by $6 + 3 = __$. Children will recognize that counting up, using ten, or using known facts are often more efficient than counting to find the answer. These problems are a perfect opportunity for children to recognize relationships among parts and the whole and between addition and subtraction.

$$\text{part 1} + \text{part 2} = \text{whole}$$

$$\text{part 2} + \text{part 1} = \text{whole}$$

$$\text{whole} - \text{part 1} = \text{part 2}$$

$$\text{whole} - \text{part 2} = \text{part 1}$$

Expected content outcomes include helping children learn:

- to recognize separating can be represented by subtraction, but also by addition,
- to use numbers, the plus or minus sign, and equals signs to represent a separating situation with both addition and subtraction number sentences,
- to recognize these missing whole situations in everyday life.

