THINKING WITH NUMBERS

Lesson Descriptions

Separating With The Change Unknown

Some everyday situations involve separation, but you do not know how many were taken away. For example, suppose you had 6 cookies and your dog ate some of them. If you have 4 cookies now, you can figure out that the dog ate 2 cookies. This problem can be represented by 6 - __ = 4. These problems are difficult for children because they know to start with 6, but do not know what to subtract. This problem can also be represented by 6 – 4 = __. The relationship between the whole and a missing part can be represented by a change unknown or a result unknown. It also can be represented by 4 + __ = 6. 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.

part 1 + part 2 = whole
part 2 + part 1 = whole
whole – part 1 = part 2
whole – part 2 = 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 part situations in everyday life.