

THINKING WITH NUMBERS

Lesson Descriptions

The Number Line

The number line is more than a sequence of numbers. It is constructed with a starting point, zero, and a unit of length that represents one. Each number is one unit from the previous number; that is, 3 is 3 units from zero and 4 is 4 units from zero. By including distance in the representations of numbers, the knowledge about which numbers are close can be used in many ways. For example, using nice numbers that are close makes it easier to solve problems; estimating is making use of numbers that are close. These lessons also encourage children to make sense of the number line as a way to represent addition and subtraction with lengths. The number sequence and benchmark numbers, like multiples of ten, will help them expand their knowledge of number relationships to tens and beyond. Two more than 8 is ten, but two more than 58 is 60; two more than 98 is 100; two more than 138 is 140.

Expected content outcomes include helping children learn:

- to recognize numbers on the number line,
- to understand the unit length between each number,
- to understand how numbers are related to benchmark numbers,
- to represent addition by putting parts (lengths) together to make a whole, and
- to represent subtraction by decomposing the whole into parts (lengths).

