

## Number Path Pocket Chart

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Research has shown that number lines may be conceptually too difficult for young children to understand and that educators should consider using number paths until a child is in 2nd grade (Fuson, et.al., 2009). A number path is a counting model; the numbers are defined by rectangles and each rectangle can be counted. A number line is a length model like a ruler, where the numbers are defined as their length from zero. Number lines make it difficult for young children to see the units. On a number path the units are simple to recognize. Sometimes when young children use a number line, they start their count with zero and then are off by one, or they count the spaces between numbers and when they end their count their finger is between two numbers and they do not know which number to use. These errors do not happen when using a number path.

Counting models should help build understanding and fluency with ease. As a counting model, the Number Path Pocket Chart supports math goals, including the development of number sense, fluency with small numbers, subitizing, and making tens. The Number Path Pocket Chart is an excellent tool to support the following math fluencies in each grade.

*This kit includes 50 cards depicting 5 representations of the numbers 1–10.*

Grade Level	Fluency Reached by End of Grade
Kindergarten	Add/subtract within 5
Grade 1	Add/subtract within 10
Grade 2	Add/subtract within 20 <sup>1</sup>
	Add/subtract within 100 (pencil and paper)

<sup>1</sup> By end of year, know from memory all sums of two one-digit numbers.

### Sample Activities

#### Number Path Creation

(PK.CC.2) (PK.CC.3) (PK.CC.5) (K.CC.2) (K.CC.3)

Start with an empty Number Path Pocket Chart. Build it each day with the students. For example, on the first day, ask “What number do we start with?” On the second day, ask “What comes next?” This provides an opportunity to have a focused conversation about each number. Some guiding questions could be:

What numbers combine to make this number?

Use the number in a sentence. How many more do I need to make 5 or 10?

#### Number of the Day

(PK.CC.1) (PK.CC.2) (K.CC.4)

Choose a number for the day. Using the number path as a reference, ask:

What is greater than our number?

What is less than our number?

What two numbers could represent our number?

#### Create a Story

(1.OA.1), (1.OA.2), (2.OA.2)

After the number path is built, have the students create a story problem with the numbers that are on the pocket number chart. Have students work in pairs and share their story problems.

#### How Many Do I Have?

(PK.OA.1) (K.CC.5) (K.CC.6)

Show a picture of a number of objects. Have students come up and put the number into the pocket chart on the number path.

Show two groups of objects. Have students compare the numbers using the number path and explain their reasoning.

#### Guess My Number

(PK.CC.5) (K.CC.4), (K.CC.6)

Have students place a marker on a number on their number paths that is (choose from the following):

less than 10

half of 8

less than 5

greater than 4

Ask students to share their answer and tell the number sentence that makes it true. Using the pocket chart version of the number path, follow along with the student’s explanation or have the student share on the ActivBoard.

#### Number Talk

Materials: Dot images

Briefly show the class a dot image from 1 to 10 and then ask students to place the number in the appropriate place on the pocket chart. Then talk about what number it is and how they recognized it.

