

3-5 Strategies for Developing Fact Fluency and Number Sense

Some upper grade elementary students need the opportunity to develop strategies to identify, represent, and explain numbers to develop fact fluency. The more experiences they have working with numbers the better!

Fluency with Numbers

Ten-Frames	Show students a ten-frame for a few seconds. Ask: How many did you see? How did you see this number?
Ten-Frames to 20	Show students a ten-frame for a few seconds. Ask: How many did you see? How did you see this number?

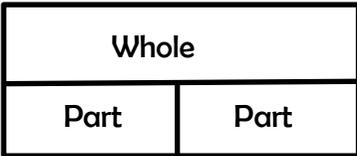
Common Tools/Strategies for Addition/Fact Fluency 3-5

Ten-Frames for Making Tens	Show students a five-frame or ten-frame for a few seconds. Ask: How many did you see? How did you see this number? How many more do you need to make ten?	<ol style="list-style-type: none"> 1. Students may begin by counting all circles. 2. Students will move on to use one quantity and count on.
Ten-Frames for Making Twenty	Show students a set of two ten-frames for a few seconds. Ask: How many did you see? How did you see this number? How many more do you need to make twenty?	<ol style="list-style-type: none"> 1. Students may begin by counting all circles. 2. Students will move on to use one quantity and count on.
Number Lines for Counting On or Counting in Chunks	Students are still building understanding of numbers, so it is important to show the distance moved by actual jumps made on the number line.	<ol style="list-style-type: none"> 1. Show the starting number on the number line. 2. Show the actual jumps made to arrive at the answer.
Hundred Chart for Counting On or Counting in Chunks	Hundred chart helps students see number relationships and notice important ideas and patterns about the base ten system.	<ol style="list-style-type: none"> 1. Show the initial number as the starting point. 2. Show actual jumps or chunks on the chart.

Additional strategies could include using doubles or near doubles, breaking numbers into its place value and making tens.

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Common Tools/Strategies for Multiplication/Fact Fluency 3-5

<p>Hundreds Chart to show Repeated addition/ skip counting</p>	<p>Give students a number from 1-10 and have them practice skip counting showing the facts on the hundreds chart. Ask: How did you move from one number to the next? What kind of pattern do you see on the chart? How is repeated addition like skip counting?</p>	<ol style="list-style-type: none"> 1. Students may begin by counting each number on the chart. 2. Students may notice a pattern of movement from one number to the next. 3. Students will move on to use the value of the number for skipping without counting each number and continue to skip count.
<p>Skip Counting Aloud</p>	<p>Give students a number from 1-10 and have them practice skip counting to list multiples of a number. Ask: What did you notice about the numbers you said? What would an array model of this look like? (__ rows of __)</p>	<ol style="list-style-type: none"> 1. Students may begin by counting on their fingers (you may want to go back and use the hundreds chart). 2. Students may count on in their head to from one quantity to the next.
<p>Number Lines for Counting in Chunks can be used to show multiples</p>	<p>Students are building understanding of numbers, so it is important to show the distance moved by actual jumps made on the number line.</p>	<ol style="list-style-type: none"> 1. Show the starting number on the number line. 2. Show the actual jumps made to arrive at the next number when skip counting.
<p>Part to Whole Box to show factors</p>	<p>Students that are learning multiplication facts can tie this practice to division using a visual.</p> <div style="text-align: center;">  </div> <p>Roll two dice to create a two digit number. Have students use color tiles to create an array to represent the visual model to prove their thinking.</p>	<ol style="list-style-type: none"> 1. Students may count out the color tiles and try to make rectangles prior to completing the part to whole box. 2. Students will complete the part to whole box and check using an array. 3. Students may think aloud the division process to determine the missing factor if they know one of the parts.

Multiplication Strategies

- Repeated addition/ skip counting
- Making friendly numbers
- Partial products
- Doubling/halving
- Breaking factors