

Counting, Subitizing, and Making Ten

The goal is to have students become fluid with “friendly numbers” , making ten

Counting:

Use a number path, then move to hundreds chart. Be sure student has one to one correspondence. Present the student with opportunities to count large numbers of items so that they gravitate to bundling tens and skip counting.

Skip counting. Use worksheets for skip counting, use hundreds chart, look for patterns.

**For students grade 3 and older that are catching up early numeracy, be sure to link this to grade level concepts. For example, skip counting is really reciting a multiplication table.

Have a student write down their skip count then quiz them on the times table.

For instance:

Teacher: Write down your skip count by 3:

Student writes: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

Teacher: Ok, find me 3×4 . That is $3+3+3+3$ or $3 \times 4 = 12$. Find 3×6 and so on.

Vocabulary: All these numbers are **multiples** of 3.

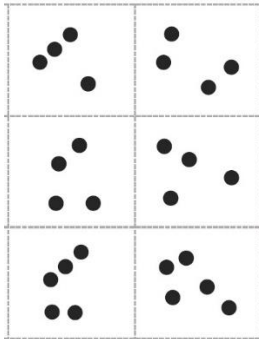
3 is a **factor** of each of these numbers.

For grades 4 and up: Each of these numbers is **divisible** by 3; that is they can be evenly split into groups of three, or into three groups.

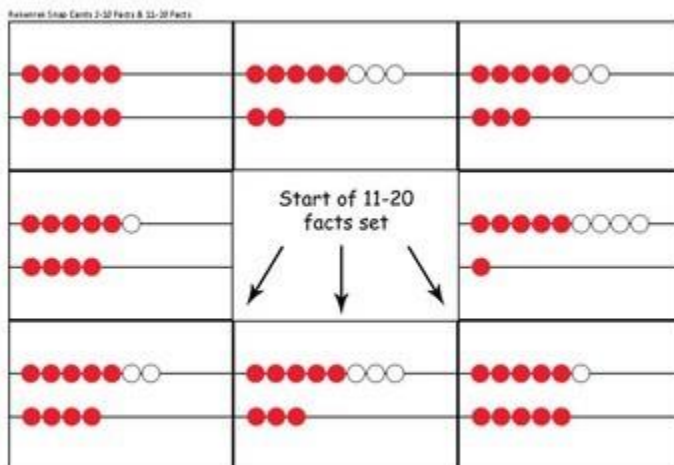
For grades 4 and up: Draw arrays of the numbers.

Skip counting by 2: Remember these are all **even** numbers because they are **multiples** of 2.

Subitizing: Use subitizing dot cards.



Subitize on rekenrek <https://youtu.be/jPg80LrxEWA>
Finding groups of 5, 5+1, 5+2 and so on

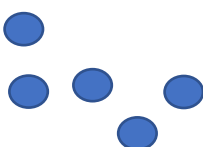


Use Steve Wyborne's SPLAT <https://steveWyborne.com/2017/02/splat/>
Be sure to ask students how they counted, what they saw

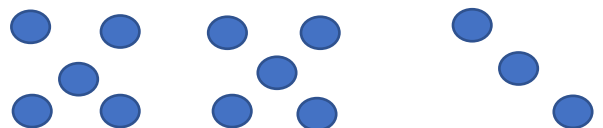
Do subitizing games: Quick peek at an arrangement of dots, then cover it. Always ask what they saw, how they counted.

Note that students usually subitize dice patterns well, so try small numbers not arranged in dice patterns, large numbers that include dice patterns.

Ex: 5



13



Subitizing in ten frames:

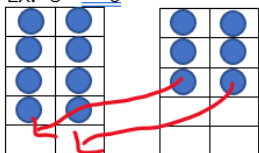
This is important! Students need to be able to look at a ten frame and state how many dots are in it, or how many boxes are coloured (like the Power of Ten cards)

Hold up a card. Ask "How many frames are filled?" "Then how many are empty?" This is the beginning of numeracy within the base ten system, knowing pairs of numbers that make ten.

Play games: "Fish for Ten", "Concentration (Looking for pairs that make ten)" and "Garbage" with Savvy Subitizing Cards (see appendix) or Power of Ten cards.

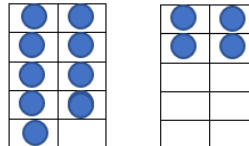
Give students a blackline master of ten frames and counters. Have them physically move counters to make ten

Ex: $8 + 6$



Student moves two counters to fill first frame

becomes: $10 + 4$



Our goal is to have students begin to visualize this process

Number strings:

$$8+2$$

$$8+3$$

$$8+5$$

$$18+5$$

$$18+16$$

$$288+335$$

Use ten frame cards, power of ten cards. Play games, make tens, add by visualizing filling ten frames (making friendly numbers). Work on number talks that require compensation

$$196 + 312$$

$$196 + 4 + 308$$

$$200 + 308 = 508$$

looking for ways to make friendly numbers