Curricular content	Examples and Strategies
Subitizing

Cardinality

Conservation | Developing subitizing: Perceptual is "I see five"; Conceptual subitizing is "I see 4 and 1". Use familiar dot patterns such as dice to subitize, as well as ten frames. When holding the ten frames, make sure you orient them so the top is filled first, and we fill from left to right   Subitizing with ten frames.   Subitizing "7" with dot cards
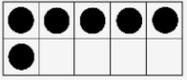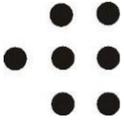
Start with subitizing up to 5 then move to 10. Subitizing beyond 10 is not recommended.
have students subitize until they can readily tell you how many
-have students tell you "one more" and "one less"
-How many more to get to 10?

Cardinality: counting sets and building sets with quantities up to 10. "Show me 5" means to show the quantity 5 rather than the 5th one that you counted |
| **Language**

Subitizing: to know a quantity at a glance without counting (typically less than 10)

Cardinality: know that when you count, the last number you say is the quantity. E.g. Seven refers to the quantity of seven not the last one in the line that you touched as you counted

Conservation: trusting the count. If you have 5 counters and spread them out, you still have 5 in the set. If you squish them together you will still have 5. | Conservation: understanding that different arrangements of the same quantity are equal. For example, count out 7 counters together with the child. Move the counters farther apart- how many are there? Move them closer together- how many are there? Put them into a cup and shake them out onto the table. There are still 7.

Where does this lead?
making 10, understanding how to "count on"

early stages of addition and subtraction

leads into Skip counting/ counting multiples |

Curricular content	Examples and Strategies
Sequencing numbers 0-10	**Sequencing numbers 0-10**: Make sure we introduce the concept of zero- sometimes we forget to explicitly teach this. Create a "numberline" with numeral cards. Watch for students eventually to be able to place the cards in the random order that they get them, rather than starting with finding a "1" or a "0" and then searching the whole pile to find the next number. **We want students to start seeing the magnitude of the difference between the numbers. Encourage them to lay cards and leave space between for the other numbers
Paritioning numbers 1-10 By decomposing and recomposing Benchmarks 5 and 10	Example | 2		8	10	

Decomposing and Recomposing numbers to 10
-showing a number as being composed of its parts- or smaller numbers
Start with decomposing and recomposing numbers to 5 then move up to 10

Example: show 8 in as many ways as possible: 5 and 3; 7 and 1; 4 and 4 etc
-count out double sided counters into a cup. Shake them out and have the students say the number sentence e.g. if you used 8 counters then there may be 6 red and 2 yellow makes 8 counters

Language	
Decomposition: really important to know this word- it will show up until grade 12☺ (and beyond) Recomposing just means putting the parts back together to show that the total is the sum of the parts. Example: 10 decomposes into 7 and 3 and when you put 7 and 3 back together you will have 10	-partition on your hands: show 6 using both your hands (4 and 2; 5 and 1 etc) -mystery number: student counts cubes into a jar (example 5 cubes). Have students close their eyes while you take some out and hold them in your hand. Open eyes, students decide how many counters you must be holding. -Use unifix cubes and link a set number together (e.g. 10) Have students hold the tower in their hands then break it into two pieces. Say the sentence. 10 is "8 and 2" **Benchmarks of 5 and 10 are super important**. -make five and ten in as many ways as possible -recognize 5 and 10 in ten frames -be able to tell how many more to 5 and how many more to 10

Where does this lead?

Knowing how many more to get to 10 is going to be absolutely essential to addition and subtraction

Sequencing and leaving the spaces between will lead naturally into subtraction, which is where we are looking to find the magnitude of the difference between two numbers