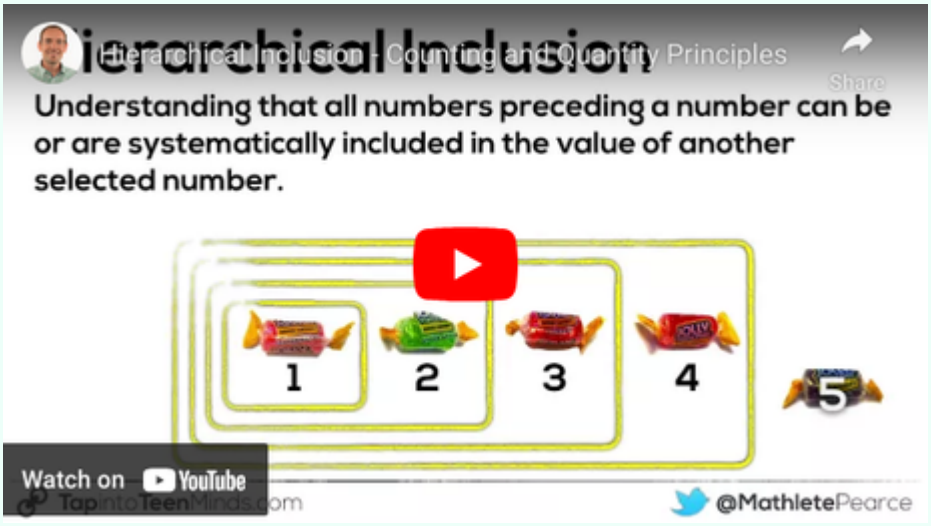
THE FOUNDATION OF PLACE VALUE

FOUNDATIONS OF PLACE VALUE

The understanding that place value is the value of a digit according to its position in the number such as ones, tens, hundreds, and so on.



https://www.youtube.com/watch?v=J9GwpMfdyM4

Related to Cardinality, is the concept of Hierarchical Inclusion.

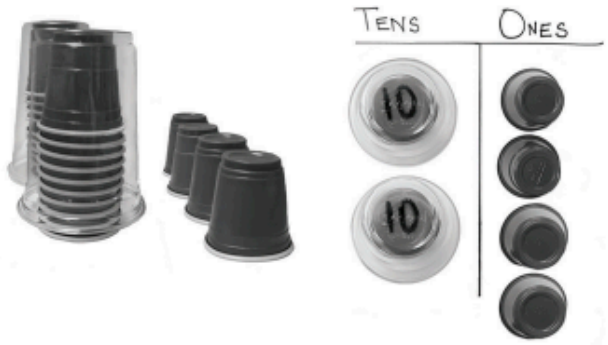
Hierarchical Inclusion is the understanding that ALL numbers that come before a selected number on the number line are included within the value of that number. For example, nested within the number 5 are the numbers 1, 2, 3, & 4.

The understanding of Hierarchical Inclusion is NECESSARY for students to develop their understanding of PLACE-VALUE (1's place, 10's place, 100's place...

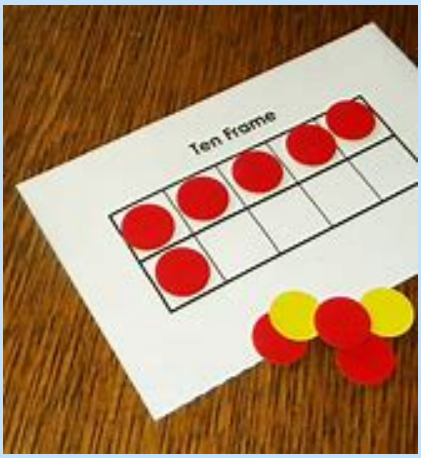
Thinking of Benchmarks

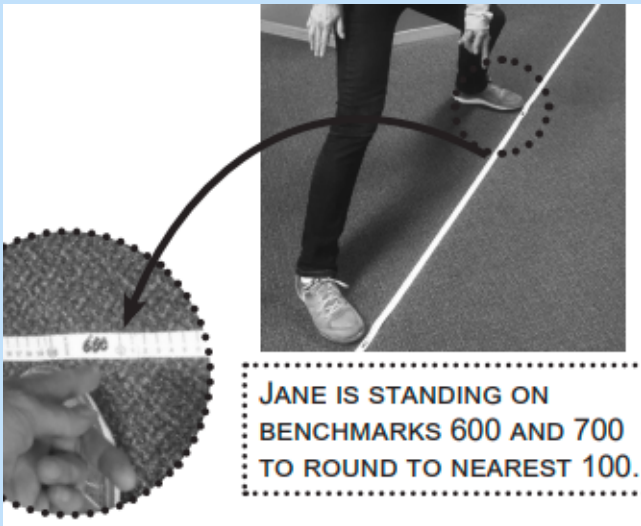
"My number is close to..."

Remember - Base Ten Place Value Manipulatives should be used to support the games when students need more concrete experience with place value.



Shown is 2 tens, 4 ones = 24 using small red solo© cups and grouping 10 under a large plastic cup, perfect for place value. The clear TENS cup is a powerful visual for showing that "10" is composed of "10 ONES".





Jane is standing on benchmarks 600 and 700 to round to nearest 100.

SD22
Dream. Believe. Achieve.

COUNTING COLLECTIONS

Focus Concept(s):
- Language Matters
- One-to-one correspondence
- Cardinality
- Foundation of Place Value

Use a variety of counting materials and 'math tools' to create counting experiences that help mathematicians learn about:

- organizing and trusting the count
- skip counting by 2's, 5's or 10's
- estimating
- breaking up numbers into parts
- counting on / counting back

Questions for Counting:

Can you guess how many you think are there?

How can you find out for sure?

How can we arrange the items so they are easier to count? What math tools could we use?

Is there a way to count more quickly?

How many will there be if you count by 2s (or 5s or 10s)?

Rearrange items, then ask: How many are there now?

How many are there if you start counting in the middle?

Make a group of 6 items (or any number up to 10). Ask: How can you make this a set of 10 (or extend to 20) items? How many did you add?
Repeat by taking away from the group and ask: How many will we take away to have only 4 left?

MATH TOOLS - ten frames, egg cartons, small containers, muffin tins, rulers, etc.

AT-HOME COUNTING MATERIALS - natural objects (rocks, pinecones, leaves...), dried macaroni or beans, small toys (lego or puzzle pieces), and many more...