InsightMath

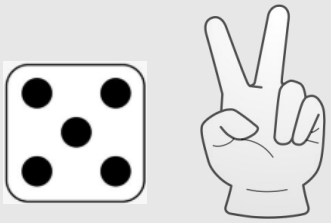
Discovering Mathematics

Family Guide | Grade K | Unit 1

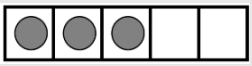
Your student is exploring how mathematics is a way to think about and describe the world.

Key Math Ideas

Before students learn what numbers mean, they learn to rote count, or say the numbers in order like remembering the words of a song. Students learn to rote count by repeating the number sequence verbally or looking at a number path.



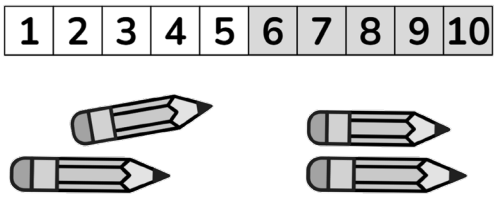
Subitizing is recognizing quantity without needing to count one by one. It's almost like we do it without thinking about it! Try looking at the images on the left. Did you need to count to know how many?



When students can rote count and subitize, they are ready to count with **one-to-one correspondence** by matching one number in the number sequence to one object while they count it. The last number they say tells how many are in the set.

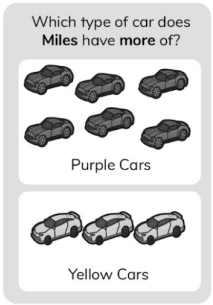
→ In the first part of the unit, your student will learn to

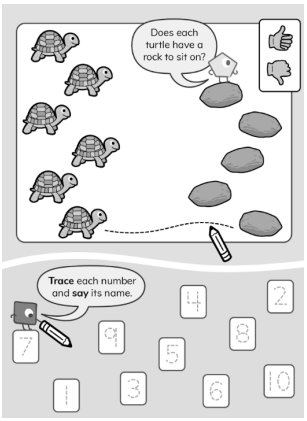
- rote count from 1 to 10 along a number path;
- name and write numerals from 1 to 10.



→ In the middle of the unit, your student will learn to

- rote count from 1 to 20 along a number path;
- name and write numerals from 1 to 20;
- compare length by lining up the endpoints of objects;
- compare quantities of objects by noticing visible differences or by matching up pairs of objects.





→ In the last part of the unit, your student will learn to

- match the numbers 1, 2, and 3 with quantities by subitizing;
- count up to 10 objects by moving one item while saying one number (one-to-one correspondence);
- answer the question, "How many?" by using the last number spoken when counting (cardinality);
- subitize with structured arrangements such as dice dots, the fingers on one hand, and five frames.

Helpful Hint

It's common for students to get lost in the sequence of teen numbers, such as skipping fourteen or cycling through "fourteen, fifteen, fourteen, fifteen" many times, because these numbers sound similar. Write the numbers from 1 to 20 in order and run your finger along them as you count. Notice that "fourteen" sounds like "four" and that 14 has a 4 in it, while "fifteen" sounds a bit like "five" and that 15 has a 5 in it.

Tips for Supporting Your Student at Home

Questions to Ask Your Student

→ In the first part of the unit:

- Will you count with me?
- What numbers do you notice around you?

→ In the middle of the unit:

- Which one is shorter? Longer? How do you know?
- Which group has more? Fewer? How do you know?

→ In the last part of the unit:

- How many are there? How do you know?
- Can you figure out how many without counting?
- How many did you count? How do you know?

If...	Try...
your student makes mistakes when counting, such as skipping objects or counting them twice . . .	counting everyday objects like small toys, raisins, or spoons. Together, move one object to a new location while saying one number.

Student Strengths Spotlight

We talk about our ideas.	Students practice using gestures, informal language, and mathematical terms to explain their thinking.
We listen to other people's ideas.	Students notice that others may have different strategies or answers that can help them think flexibly. They learn to be supportive when helping others fix their mistakes.

Try This Together!

- **Stair Step Counting.** Count steps out loud when going up and down the stairs. Even if you and your student are walking on different steps, students learn rote counting when they hear and say the numbers in order.
- **Length Hunt.** Give your student a piece of string or pencil and ask them to find things that are longer or shorter than that object.
- **Who has more?** When serving foods with countable amounts (berries, crackers, etc.), make two plates with different amounts. Ask, "Who has more? Who has fewer?" Start with amounts that are obviously different (15 and 3), then use close amounts (5 and 6) that your student can compare by matching.
- **Subitizing Challenge.** Take turns holding up some fingers on one hand while your student guesses how many there are, then switch roles. Next, say a number from 1 to 5 and challenge the other person show it on their fingers.
- **Board Game Fun.** Play board games that use dice to tell how many boxes to move on a pathway. Subitize the dots on the dice ("I see 5!") and then count that many boxes on the path while you move ("1, 2, 3, 4, 5!").
- **Counting Collections.** Make collections of objects in bags or cups. Have your student dump out the objects, then count each one while sliding it back into the container. After students count, count them yourself and discuss whether you got the same amount.