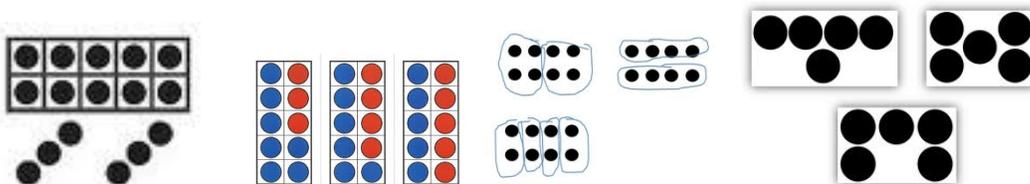


Simple Games To Build Important Number Concepts

When working with children one of the most important things to recognize is that they are still developing an understanding of many of the mathematical rules or concepts that we know automatically. Asking children to clarify their thinking is a great way to help them learn and grow. Questions such as *"How do you know?"* *"How did you figure that out?"* or comments such as *"Say a little more about that"* will help your child begin to articulate their thinking more clearly. Listed below are several simple, but powerful activities you can try at home or in a tutoring situation. The activities are organized by material (dice, cards, etc). The key to any of these activities is to ask the child "How" questions. It is important for them to articulate their thinking, even if it seems obvious!

Quick Images: Quick images is the common name for an important mathematical process called "subitizing." Subitizing literally means to see quantities in sets rather than as individual units. As adults we do this without thinking. We see four dots on a dice and think "That's four." Young children cannot do this automatically. They need practice to develop this skill. The quick images game is quite simple. Show the child a picture of dots for 2-4 seconds and then cover the picture. Ask the child to tell you how many dots there were. If they can, ask them to explain how they saw the dots and encourage them to try to find ways to find the answer other than counting one at a time. Examples of cards can be found below.



Dice:

Roll 2 dice and ask the child "How many dots are there?" "How did you figure that out?"

Roll 2 dice, Ask "How many dots are there?" "How did you figure that out?" Follow up by asking "What if there were one more (or one less) dot?"

Roll 1 die and ask the child to double the amount of dots on it.

Roll 1 die and ask the child "How many more to have 10 dots?"

Dominoes:

Uncover a domino with your hand for 2-4 seconds, show it to the child and then recover it. Ask the child "How many dots are on it?" Encourage the child to find ways to count other than one at a time.

Uncover a domino with your hand for 2-4 seconds, show it to the child and then recover it. Ask the child "How many dots are on it?" Once the total has been established, flip the domino over and ask the child, "What if there were _____ more dots? How many dots would there be all together?"

Blocks or cubes: Always use the same color cubes for these activities

Pull out 5 cubes and count them with the child. Then take the entire pile of cubes in your hands and hide some behind your back. Once you have hidden the cubes, show the rest to the child. Ask "How many are behind my back? How do you know?"

Pull out 3-5 cubes and count them with the child. Then write the number of cubes on a piece of paper and place it on top of the cubes so that they are no longer visible to the child. Place 1-3 more cubes on the table next to those covered by the paper. Ask the child "How many cubes are on the table now- including the ones under the paper?"

Blocks or Cubes Continued:

Place 3-5 cubes under a piece of paper so they are not visible to the child. Tell the child that there are cubes beneath the paper. Then show them 1-3 more cubes. Let the child count these cubes and then place them under the paper with the covered cubes. Then uncover all of the cubes and ask the child, "How many cubes were under the paper before I added the new ones?"

Pull out 2 piles of cubes (3-9) and ask the child which has more cubes in it. Then ask, "*How many more are in (the pile with the most)?*" A variation would be to ask "How many would (the pile with the fewer cubes) need to get to have the same as the other pile?"

Number card Games:

Single Compare: Each player lays down one card face up. The winner is the one who has the larger card. Ask the child "How do you know yours is bigger?"

Double Compare: Each player lays down two cards and combines them without counting the symbols one at a time. The winner is the person who has the largest total. Ask the child "How did you add yours together?"

Single compare with a twist: Both players lay down one card. Again the winner is the player with the largest card. The key follow up question is "How many more do you need to have the same as me?"

Flip over a series of cards and put them in order smallest to biggest.