



# EARLY ACQUISITION OF NUMBER

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# NUMERAL IDENTIFICATION

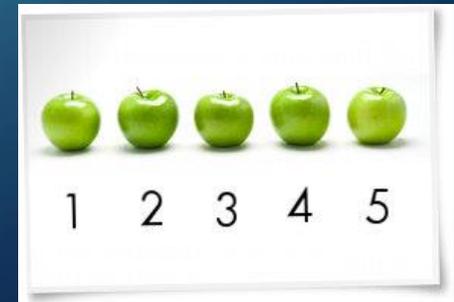
- The first step in Number Awareness is learning what the 10 numerals (0 through 9) look like. This requires strong Visual Discrimination skills since many numerals (such as 6 and 9, or 1 and 7) look very similar. Once a child is able to recognise the 10 numerals and know each numeral's name, he can develop an understanding of the amount each numeral represents.
- Children in the classroom may be asked to “Cut out five circles,” “Pick three friends,” or “Ask one question,” for example. Understanding the significance of numerals will directly contribute to a child's success in the classroom.

# COUNTING

- When first learning to count, a child counts by rote memorisation. This means he will likely be able to say the names of the numbers from 1 through 10 simply because he has memorised the order of the words, “one, two three ... ten.” However, he likely does not yet understand that 5 is 2 more than 3, for example.

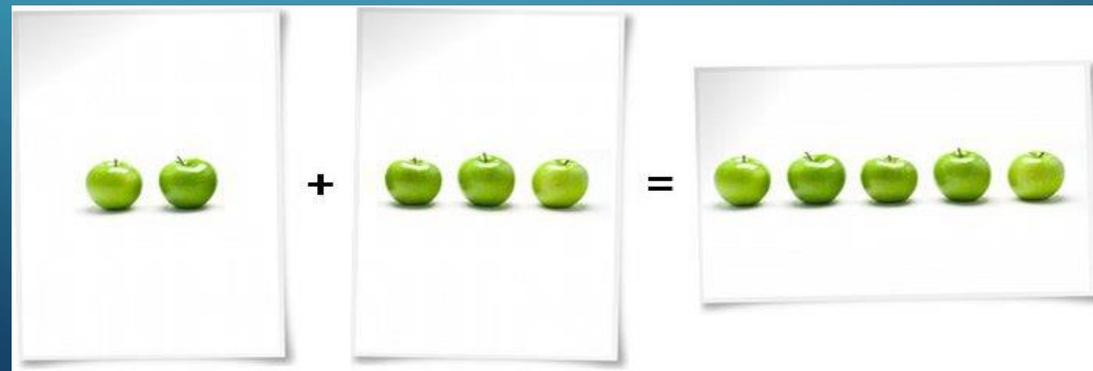
# ONE-TO-ONE CORRESPONDENCE

- When counting, the concept of “one-to-one correspondence” is the understanding that each object being counted represents “one more.”
- Before a child understands one-to-one correspondence, he will count by rote memorization. When asked to count a small group of objects, he will likely count quickly through the numbers he has memorized and randomly touch the objects being counted instead of touching and counting each object just once. For example, a child given five beads may automatically count aloud from 1 to 10 when asked to count the beads, pointing to random beads as he proudly shows how well he can “count.”



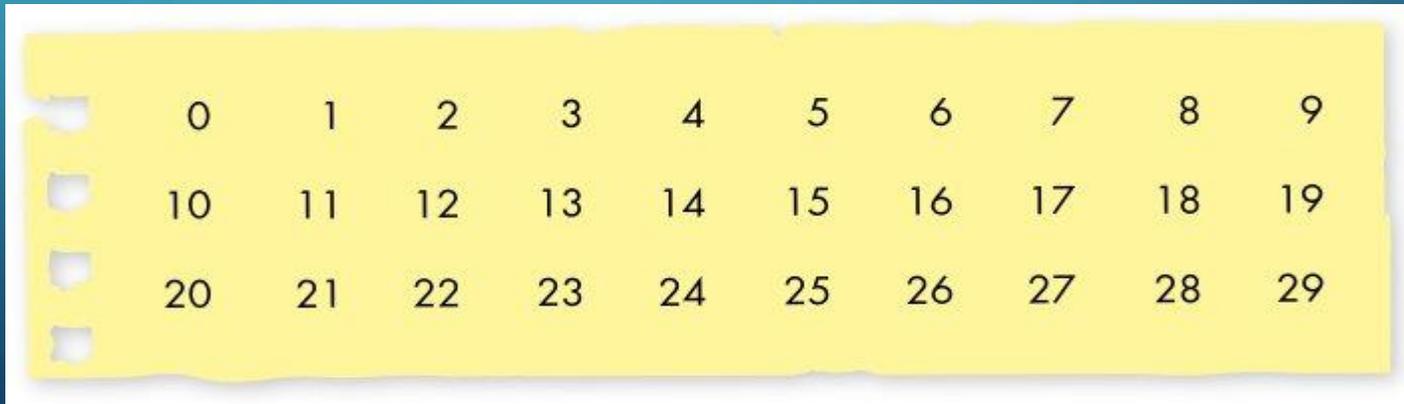
# COUNTING ON

- “Counting on” allows a child to continue counting objects added to a previously counted group without recounting the entire group. For example, give your child two apples and ask him to count them. Then, give your child three more apples. Counting on would involve your child applying one-to-one correspondence to the additional three apples by counting “three, four, five” instead of restarting at one and recounting all five apples.
- Counting on is an important skill because it is time-consuming and impractical to recount a group of items each time additional pieces are added.



# PATTERN RECOGNITION AND CREATION

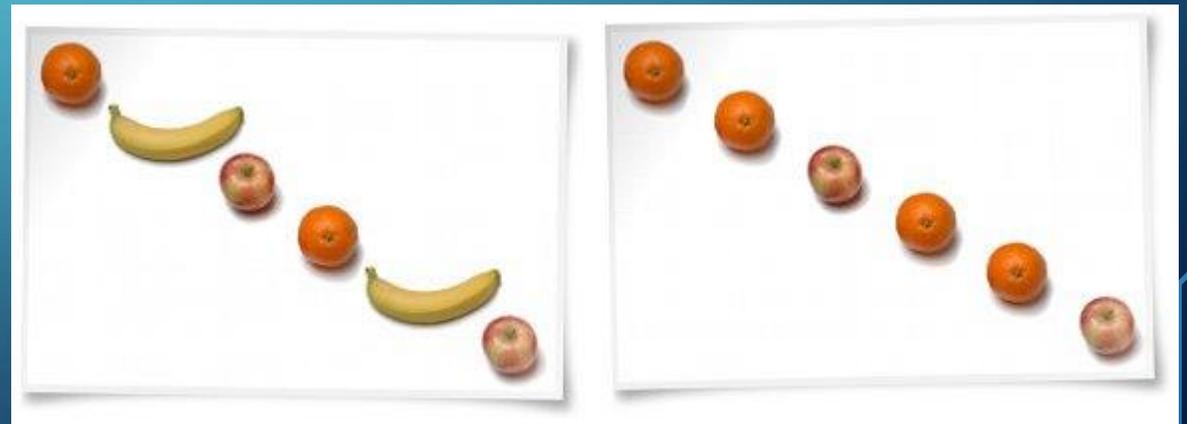
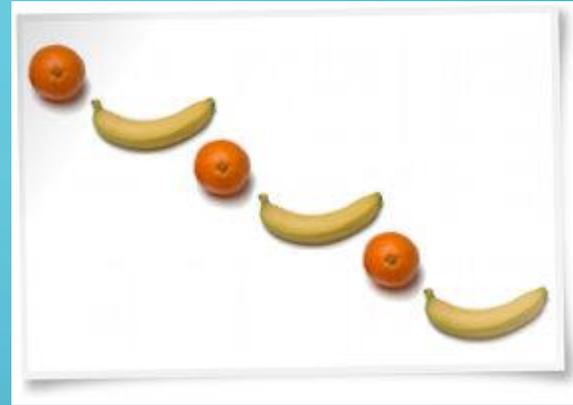
- Understanding patterns is an underlying theme in preschool and kindergarten math lessons. A pattern is defined as any sequence that repeats at least twice. As a practical example, consider counting from one to one hundred by ones. When counting, there is a recurring pattern in which all digits rotate from 0 to 9 before restarting back at 0.



0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29

# PATTERNS

- The first pattern that is introduced in the preschool classroom is called an AB pattern. This means that two different objects line up in an alternating pattern, such as: orange (A), banana (B), orange (A), banana (B), and so on.
- As comfort with patterns grows, the patterns will become more complex, moving to an ABC pattern or an AAB pattern



# CLASSIFYING AND SORTING

- Children are also introduced to sorting and classifying in maths lessons. These activities provide children with opportunities to develop logical reasoning skills as well as demonstrate divergent (independent) thinking.
- For example, three different children will likely sort a pile of buttons of varying shapes, sizes, colours, and materials in three different ways. One child may put all the round buttons in one group and all the odd shaped buttons in a different group. A second child might put all the metal buttons in one group and all the plastic button in a different group. And a third child might sort the buttons according to colour or size. The particular organizational system is not important. What is important is that each child accurately sorts according to his organization system and is able to explain his thought process.

# HANDS ON LEARNING

- Maths learning is most exciting for children when hands-on manipulatives (fancy teacher-speak for small objects that can be easily handled or manipulated) are incorporated. Manipulatives give children tangible representations of the otherwise abstract concepts related to numbers and counting. For example, when asking a child to count to 30, he may become lost or distracted halfway through. But, when you give the same child 30 small beans and ask him to count them, he will likely be able to apply one-to-one correspondence and accurately count all 30 beans.

## WHAT CAN I DO AT HOME?

- Get into the routine of demonstrating one-to-one correspondence by purposefully touching each item as your count it. Have your child join you when he is able by counting aloud and/or pointing to the items as you count together.
- You can also create basic counting games by counting aloud how long it takes to set the table, put away toys, or put on pyjamas. These games can be played in short spans of time and in any place, since no materials are needed.
- Counting Books
- Counting Songs

# NOW IT'S YOUR TURN!

- **What are you aiming to do?**
- **For the task:**
  - L.I – To identify 4 cards that are related to each other by working in a team.
  - S.C – When everyone in the team has their 4 related cards.
- **Getting started**
  - You will need to work in a team of four. If you have a fifth person available - use them as an observer
  - In silence:
    - Distribute the 16 cards randomly amongst the team (four cards each).

# THE RULES ( LISTEN CAREFULLY!)

- Players pass cards to other team members in order to help one another complete their set.
- **Rules**
- No one can talk or give non-verbal signals to other members of the team.
- Each member of the team starts with four cards in front of them.
- The cards in front of each person should be visible to everyone.
- Team members can only give cards; they cannot take cards from someone else.
- Each team member must have at least two cards in front of them at all times.
- Use an observer to check that the team obeys the rules and to keep a record of when members of the team help someone else (rather than, for example, when they just pass a piece on without looking at what the other person or team actually needs).