Summer Adventure!

More About Math

The Cat in the Hat – Animal Book Adventure

THE CAT IN THE HAT
Knows a Lot About That!

Background for Leaders

In this unit, children will help the Cat in the Hat solve math-related problems and complete their animal books. They will explore a variety of math topics appropriate for children age 4-5 years old including counting, spatial sense, shape recognition, measurement, and size correspondence.
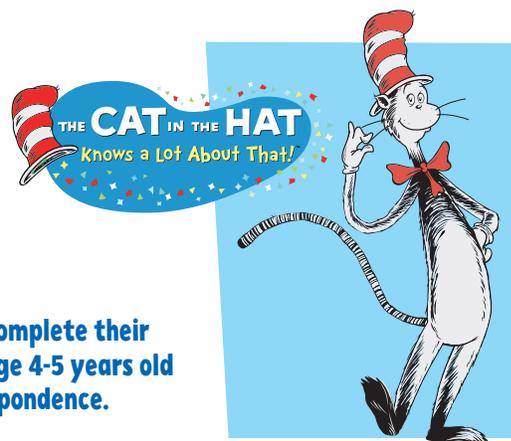
Spatial Sense

Spatial sense enables children to read maps or graphs and complete mazes or puzzles. These types of activities lay the foundation for more advanced geometry and spatial reasoning skills. It is essential that children use and develop spatial sense in conjunction with the proper vocabulary. Children should be able to determine the relative position of an object on a map, picture, or in real life when given 1-2 directional clues. Position and direction vocabulary includes words and phrases such as: up, down, under, over, next to, on top of, under, right, left, behind, in front of, between, closer or closest to, and farther or farthest away from. For example the fish can be located next to the purple seaweed and above the yellow clam.

Counting

Young children should be counting between five and ten objects independently. In the early stages of counting, they may need concrete objects to count such as rocks, beads, or pennies. At the basic level children should be counting to show a one-to-one correspondence between number and numeral (count 5 seahorses to represent 5). At the intermediate level children may be able to recognize numbers already grouped together (pick out the set of 4 seahorses that represent 4). Once children have mastered counting and grouping, they will be ready for simple addition to ten; this means that they can add 8 seahorses to 1 seahorse to represent 9 seahorses. It is not expected that children this age know the terms add and equals, instead show them the symbols and use the words "and" for add and "which makes" for equals.

Measurement

Early measurement experiences allow children to develop a sense of visual estimation and ability to measure length. Young children should be able to compare an object's length visually without exact measurement; this means that when they are asked which log will fill the space they should be able to make an estimate and choose the best one from a set. This may take several tries for children to become successful. Reinforce their learning by using proper comparative vocabulary; encourage them to consider whether the piece was too long or too short and which piece would be a better fit.

Some activities require children to measure the length of objects more precisely; in these activities children will use non-standard units for measurement. Measuring with non-standard units means laying multiple copies of a smaller object end to end with no overlaps or gaps in order to measure a larger object. Examples of non-standard units might be the length of a hand, a paperclip, index card, or length of string.

Shape Recognition

Children at this age should be naming shapes and identifying their defining attributes. This means that they need to be able to describe the shapes by name and characteristics. Children should refer to shapes by their proper names: **heart, octagon, star, rectangle, triangle, pentagon, circle, trapezoid, square,** and **diamond (rhombus).** Children should have plenty of time to play with shapes and explore putting shapes together to form new ones (called composite shapes.)
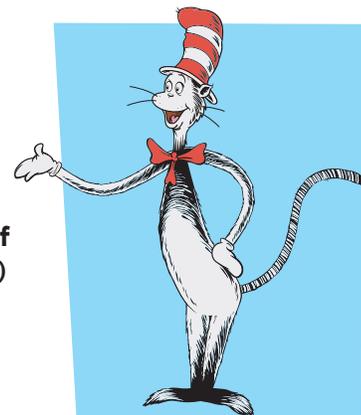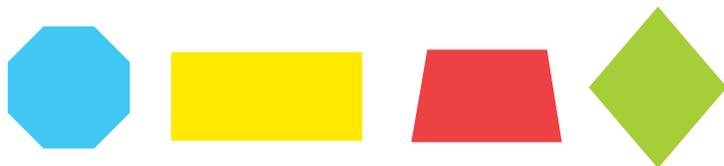
Size Correspondence

Size correspondence means children can identify items of relative size and compare them to surrounding objects. This means that they can find the **largest shell in the set** or determine which **shell is smaller.** Encourage children to use the vocabulary terms **short, tall, long, small, medium,** and **large** to describe an object. Model for children how to compare two objects and use the terms **smaller, larger, shorter,** and **taller.** When comparing three or more objects, the appropriate vocabulary terms include **smallest, largest, shortest,** and **tallest.**