Measurement and Data

In Kindergarten, children begin building a foundation for data collection and analysis in future grades. They describe measurable attributes of objects, such as length, weight, or color. They may describe one pencil as short and another as long, one book as light and another as heavy, and may describe several measureable attributes of a single object, such as a large, blue ball.

Additionally, Kindergarteners directly compare two objects with a measurable attribute in common to see which has "more" or "less" of an attribute and describe the difference. For example, children may directly compare the heights of two children and describe one child as "taller" or line up blocks and determine one row is "a lot longer" than another.

Children identify similarities and differences between objects based on size, color, and shape, for example, and use the identified attributes to sort a collection of objects. Once objects are sorted, children count the amount in each set, or once a set is counted then children are asked to group each of the sets by the amount in that set. As an example, children may sort cars by color (blue cars in one group, red cars in a second group, green cars in a third group) then count the cars in each group and organize them by the size of the group.

The Kindergarten Common Core State Standards for Measurement and Data specify that children should:

• Describe and compare measurable attributes.
• Classify objects and count the number of objects in categories.

The following hands-on activities provide children with opportunities to explore various manipulatives and use them to investigate mathematical concepts. Numerous opportunities using concrete objects to solve problems enable children to become more proficient at making decisions about which objects are most helpful in given situations. When solving a problem, such as five children were playing at the park and two children came to join them, children may decide that the situation calls for role playing. They may decide that another problem, such as determining how many of Julie's four grapes remain after sharing two with a friend, calls for using cubes to model the situation.