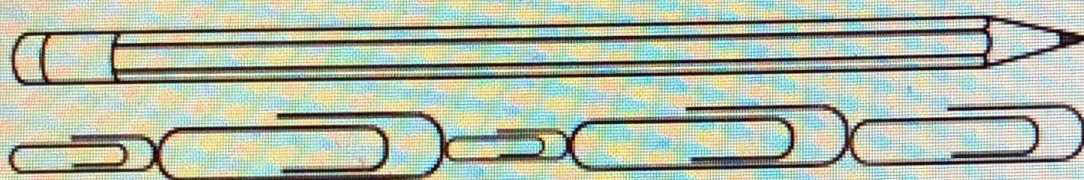


### Length and Addition Facts

Two ideas are emphasized in Unit 4: length measurement and addition fact fluency.

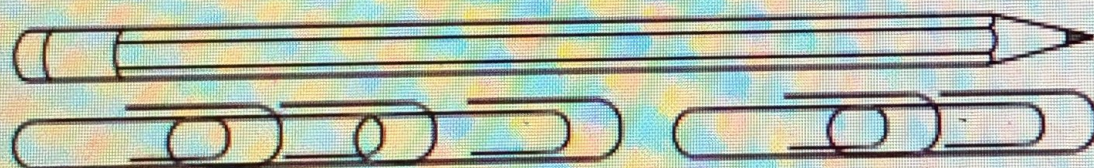
Children begin the unit by directly comparing the lengths of two objects. Then they compare the lengths of two objects indirectly by using a third object, such as a piece of string. Later children learn to measure length using nonstandard units like paper clips.

They learn that measurement units must be the same size.



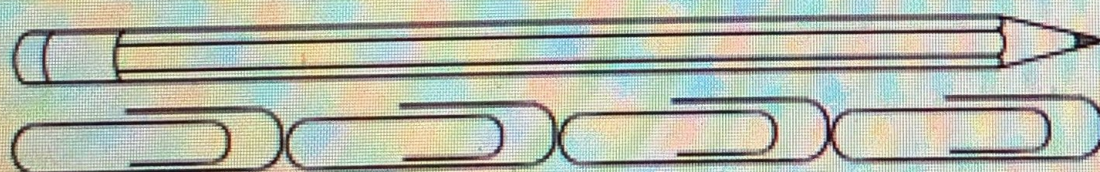
**Using different-size units does not provide an accurate measurement.**

They also learn that the units must be arranged without gaps or overlaps.



**Measuring with gaps and overlaps does not provide an accurate measurement.**

Correct measures use same-size units with no gaps and overlaps.



**The pencil is about 4 paper clips long.**

Also in this unit, children transition from displaying data in tally charts to displaying data in bar graphs. Their work with comparing lengths will help them interpret data by comparing the lengths of the bars in the graphs.

Other lessons in Unit 4 focus on addition facts. One of the Grade 1 standards requires children to fluently add and subtract within 10. In order to achieve fluency, they must be efficient at recalling these facts and using the facts in a variety of situations. Doubles and combinations of 10 are some of the easiest facts for children to remember and are emphasized in Unit 4. Once children learn these facts, they can use them to help figure out other facts. Fact fluency is emphasized and developed throughout the year, so do not worry if your child does not achieve this goal right away.

In Unit 4, children also begin developing strategies for adding more than two numbers and using place value to mentally add or subtract 10 from other 2-digit numbers.

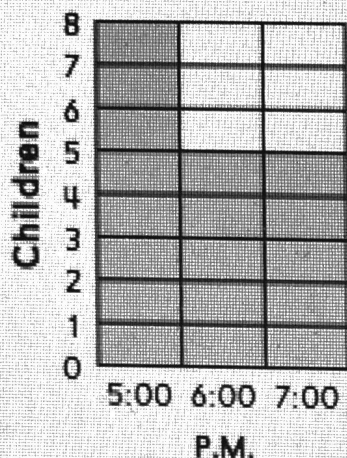
## Vocabulary

Important terms in Unit 4:

**bar graph** A graph with bars that represent data.

**addition facts** Two numbers from 0 to 10 and their sum, such as  $9 + 7 = 16$ .

### What time do we eat dinner?



**combinations of 10** Addition facts in which the numbers add to 10. For example,  $4 + 6 = 10$  and  $3 + 7 = 10$  are combinations of 10.

**doubles** Addition facts in which both numbers being added are the same. For example,  $4 + 4 = 8$  and  $9 + 9 = 18$  are doubles.

**helper fact** A fact you know well that can be used to help solve a fact you do not know well.

## Do-Anytime Activities

To work with your child on concepts taught in this and previous units, try these activities:

1. Measure flat objects in your home using paper clips. For example, you might measure the length of your mobile phone, the width of a small table, or the length of a spoon. Work with your child to place the paper clips end-to-end, without gaps or overlaps.
2. Use your fingers to help your child practice finding combinations of 10. For example, show both hands with 2 fingers up and the rest closed. Your child should tell you that you have 2 fingers up and 8 fingers down. Continue with different finger combinations. You can also practice doubles facts this way by placing a number of fingers up, and asking your child to tell you double that number of fingers.
3. Draw a bar graph like the one shown above, but list three activities your child likes to do after school along the bottom, such as play with friends, ride bikes, and read. Have your child keep track of the number of times he or she does each activity in a given week. For example, if your child comes home and plays with friends, he or she should color up to the number 1 above "play with friends" on the bar graph. At the end of the week, discuss which activity your child did most often and least often.