

## Core Focus

- Addition: Using the doubles strategy to add two-digit numbers, and exploring the associative property and composing tens and hundreds
- Data: Introducing bar graphs and reviewing picture graphs

## Addition

- Students extend the use-doubles strategy to adding two-digit numbers (e.g. see  $22 + 20$  and *think* double  $20 + 2$ ).

**6.2 Addition: Extending the doubles strategy**

**Step In** Look at this shirt.  
What will be the total cost of two shirts?

How could you figure it out?

20 is the same value as 2 tens. Double 2 is 4 so double 2 tens is 4 tens. The total is \$40.

How could you figure out the total cost of two pairs of shorts?

$23 + 23 =$

$20 + 20 =$

$3 + 3 =$

I could double the tens first. Double 20 is 40. Then I would double the ones. Double 3 is 6. So \$40 plus \$6 is \$46.

In this lesson, students use doubles and near-doubles to solve addition problems.

- When students add three or more numbers mentally, it helps to think about pairs of numbers that add up to ten, or multiples of ten. These pairs are called *friendly numbers*. To find the total of  $3 + 5 + 7$ , students might add the 3 and 7 first to make 10, then add the 5 to make 15.

**6.6 Addition: Using the associative property**

**Step In** Imagine you threw three small beanbags onto this target.

If each beanbag lands on the orange circle, what total scores might you record?

How could you figure out the totals?

I chose 7, 9, and 3. Then I added in this order,  $7 + 3 + 9$  because  $7 + 3$  makes 10 which is easy.

Imagine two beanbags land on pink and one beanbag lands on orange. How could you figure out the total scores you could record?

I could add friendly pairs of numbers like 18 and 32 first.

**Why are 18 and 32 called friendly pairs?**  
What other numbers make friendly pairs?

In this lesson, students use the associative property of addition to make adding easier.

## Ideas for Home

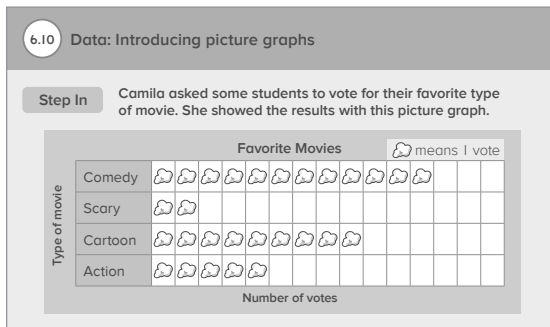
- Build numbers using small objects (e.g. toothpicks). Each toothpick represents 1, ten toothpicks wrapped with a rubber band represents 10, and a collection of ten sets of ten in a paper cup represents 100.

## Glossary

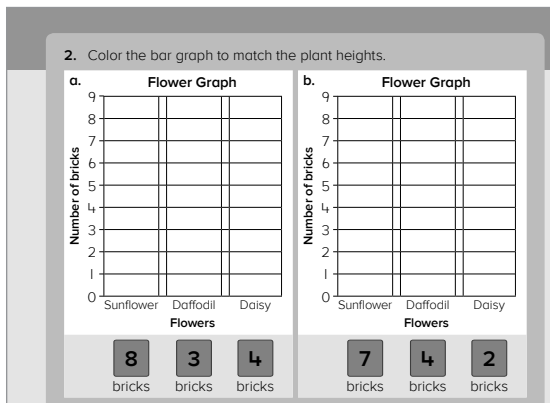
- The **associative property** of addition means numbers can be added in any order without changing the result.

**Data**

- Students build on learning from Grade 1 to review different representations for data, including picture graphs (as shown below), bar graphs, and tally charts.
- Students consider different categories for sorting everyday objects. Buttons, for example, might be sorted by color, size, shape, or the number of holes.
- After items are sorted into categories, students record the sorting in a data display (either picture graph or bar graph). They then interpret the data by comparing the lengths of the bars to determine which category had the greatest number of objects (buttons).



In this lesson, students collect data and display the results in a one-to-one picture graph.



In this lesson, students color bar graphs to match data.

**Ideas for Home**

- Accompany your child while they collect data on everyday subjects, like pets in the neighborhood (by color and pattern), cars in the parking lot (by color), or the types of books friends and family like to read. Ask your child to decide which type of graph would be best to display the data.
- Does your child have a favorite collection of items such as trading cards, seashells, or small toys? Ask your child to sort their collection one way and then ask if there is another way the items could be sorted.