2) **Module 6**

Core Focus

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

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 + 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.

6.4 Addition: Reinforcing two-digit numbers (composing tens)

Step In How could you figure out the total cost of these two books?

BIKES $33   BOATS $19

Oliver drew pictures to help.

How many tens blocks are shown? How many ones?
What methods could you use to figure out the total value of the blocks?

I could add 40 and 12.   Or I could regroup the ones to make another ten.

In this lesson, students add two-digit numbers composing tens.
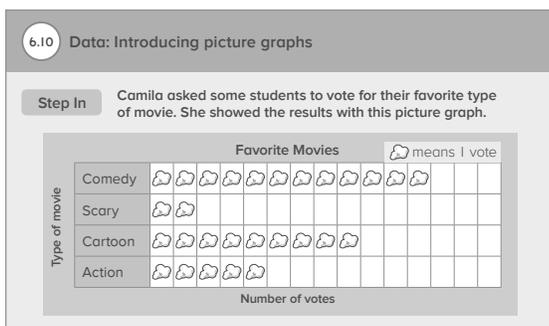
Ideas for Home

- 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.
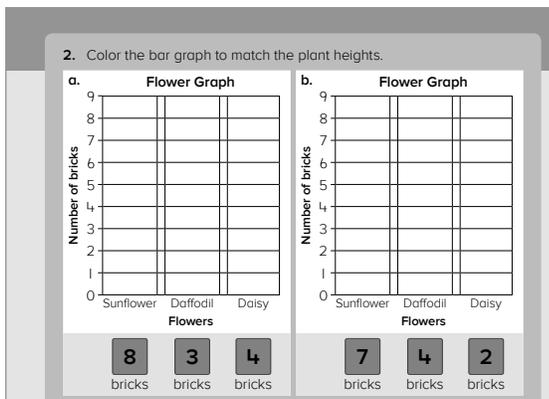
Glossary

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

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(2) **Module 6**

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. Shoes, for example, might be sorted by type (slip-on, laced up, or with Velcro), or they might be sorted by color.

- Once items are sorted into categories, students make comparisons among the groups. They might observe that more students wear shoes with laces than slip-ons, or that there are five more students wearing black shoes than white shoes.

6.10 **Data: Introducing picture graphs**

Step In Camila asked some students to vote for their favorite type of movie. She showed the results with this picture graph.

Favorite Movies

Type of movie		Number of votes
Comedy	🐑🐑🐑🐑🐑🐑🐑🐑🐑🐑	
Scary	🐑🐑	
Cartoon	🐑🐑🐑🐑🐑🐑🐑🐑	
Action	🐑🐑🐑🐑🐑	

means 1 vote

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

2. Color the bar graph to match the plant heights.

a. Flower Graph

Number of bricks (0–9)
Sunflower Daffodil Daisy
Flowers

8	3	4
bricks	bricks	bricks

b. Flower Graph

Number of bricks (0–9)
Sunflower Daffodil Daisy
Flowers

7	4	2
bricks	bricks	bricks

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.