Overview

In this chapter, students will learn to count, write and compare numbers from 0 to 10.

Key Concepts

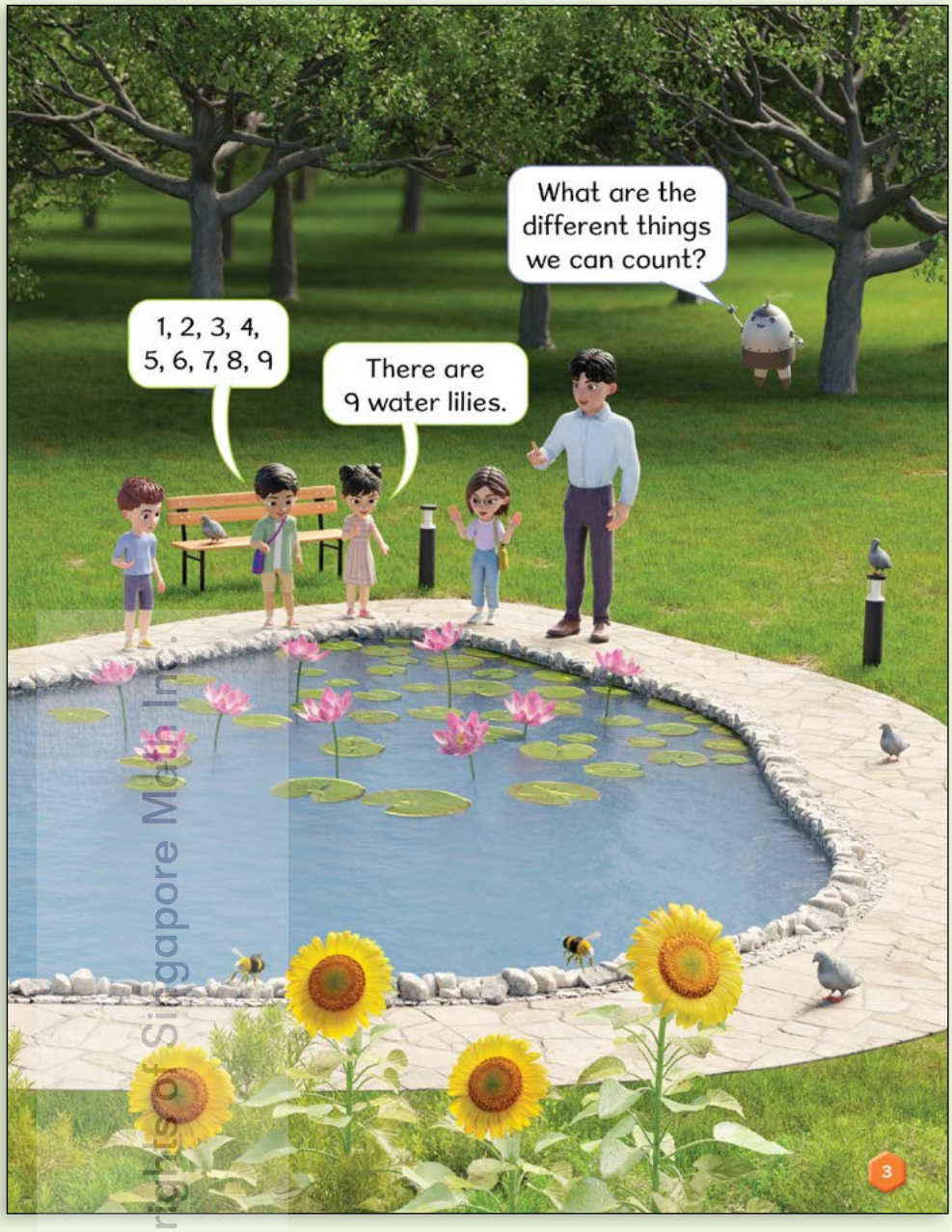
- Counting and comparing quantities as a means to find quantities

Thinking Skills

- Sequencing
- Identifying relationships
- Comparing

Math Vocabulary

- zero
- nothing
- same number as
- more
- fewer
- greater than
- smaller than



Teaching Note

Get students to study the chapter opener. Have them discuss an overview of the illustration.

Draw on students' experience with respect to their daily lives.

Ask: Do you observe the number of objects around you when you go to a park?

Talk about the types and number of things they observe in the park.

Key SIOs

- To rote count from 0 to 10
- To read and write numbers 0 to 10
- To count on from 0 to 10
- To count back from 0 to 10

Teaching Note

Write down the numbers 1 to 10 on the board. Demonstrate counting using multilink cubes.

When there is nothing to count, the number of objects is zero.

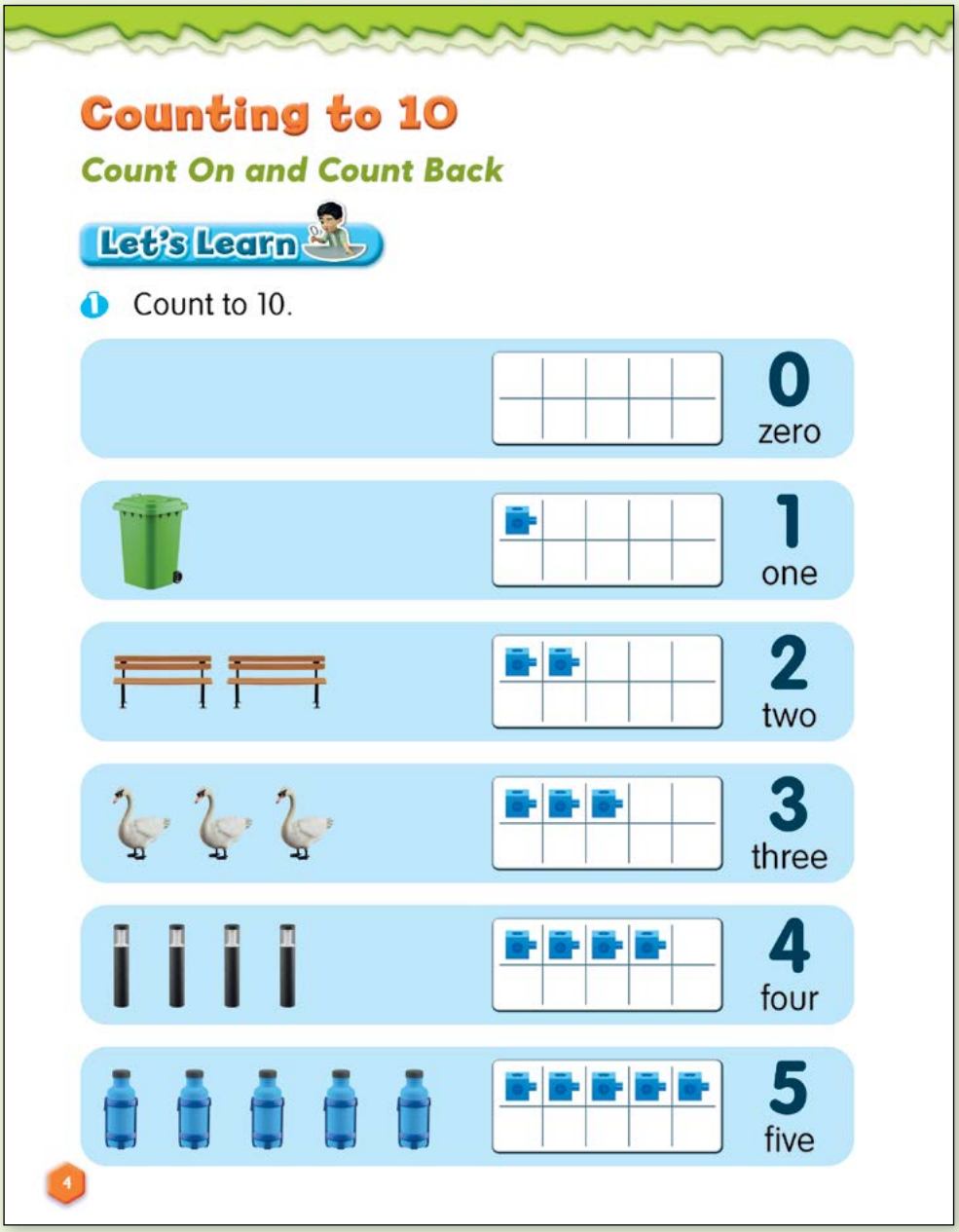
Hold up a multilink cube and count aloud. Help students make connection by saying the numbers, referencing the numbers on the board as well as showing the physical objects.

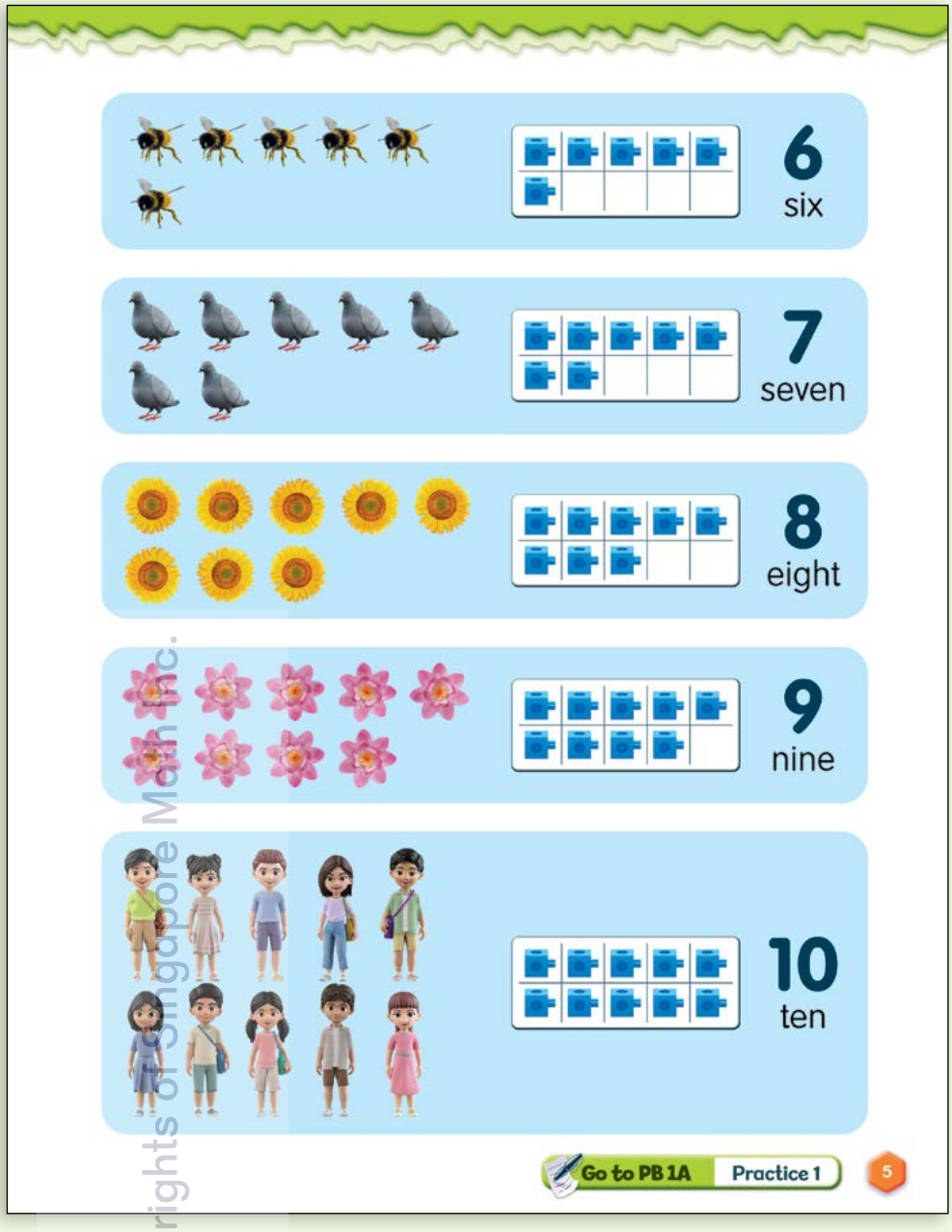
Ask: Are there any objects in the class that represents one?

Put another cube beside the first cube. Repeat the above steps for numbers 2 to 10 to help students recognise numbers and learn how to read and spell them.

Extension

Ask: Name some common objects that come in twos, threes, fives, etc.





Teaching Note

Apart from counting, have students take turns to pronounce the numbers out loud, as well as to spell out the numbers.

Extension

An additional activity would be the use of numeral cards, number word cards and picture cards.

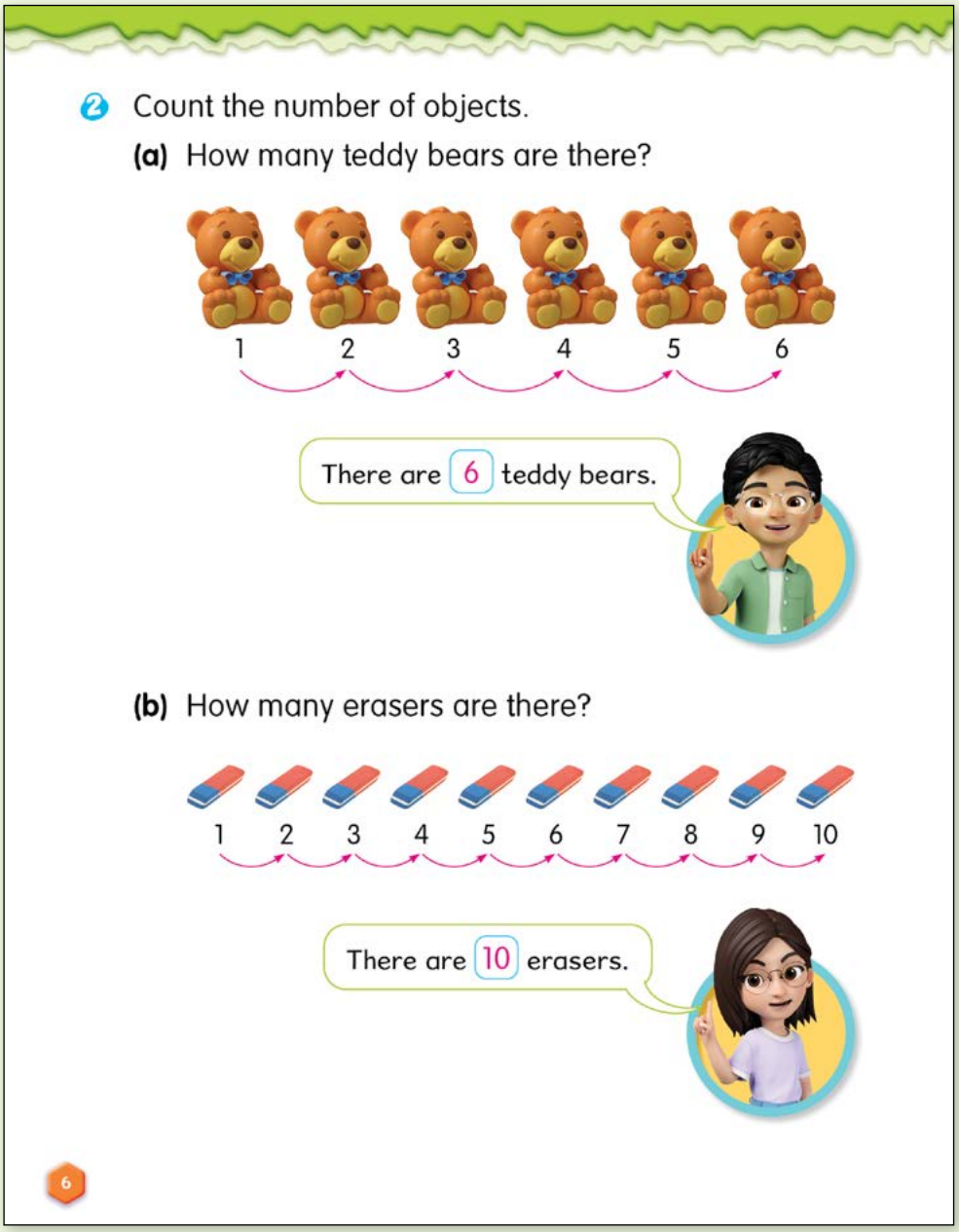
Have students match numerals and number words, numerals and pictures, number words and pictures.

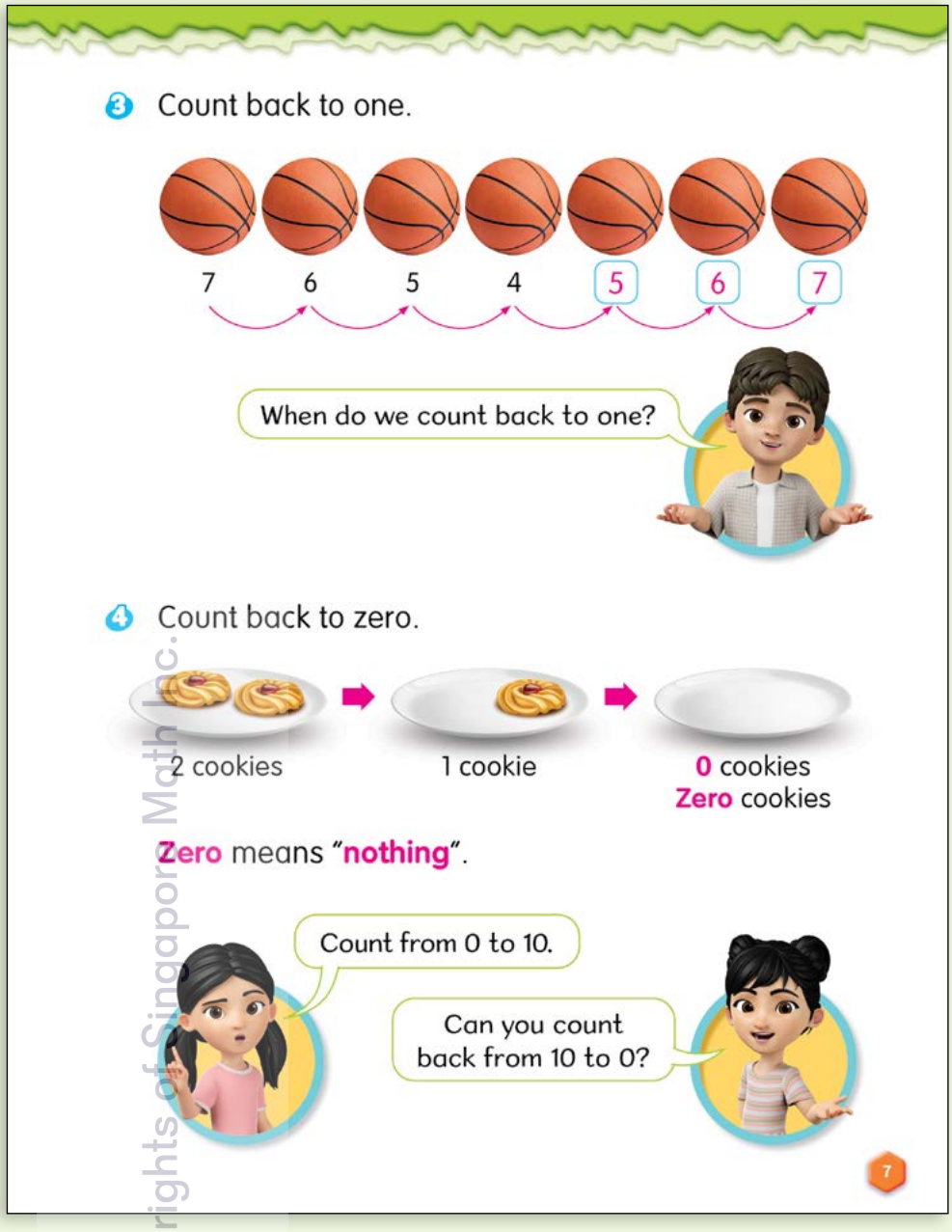
Teaching Note

Use 2 to have students practice counting on, so as to count the number of objects. Say that the last number counted is the number of objects.

Extension

To extend further, use multilink cubes. Start from 0, add multilink cubes one at a time to count on.





Teaching Note

Use 3 to have students count back. Teachers may initially use the number of basketballs to count on first, then count back. Guide students to write the numbers in the boxes.

Teaching Note

To exemplify 4, use multilink cubes. Provide students with 2 multilink cubes on the table. Ask them to say the number aloud as each cube is removed one at a time. When the last cube is taken away, there is nothing left on the table. Relate this idea to zero, or 0.

Extension

Ask: Can you use your fingers to count back to zero?

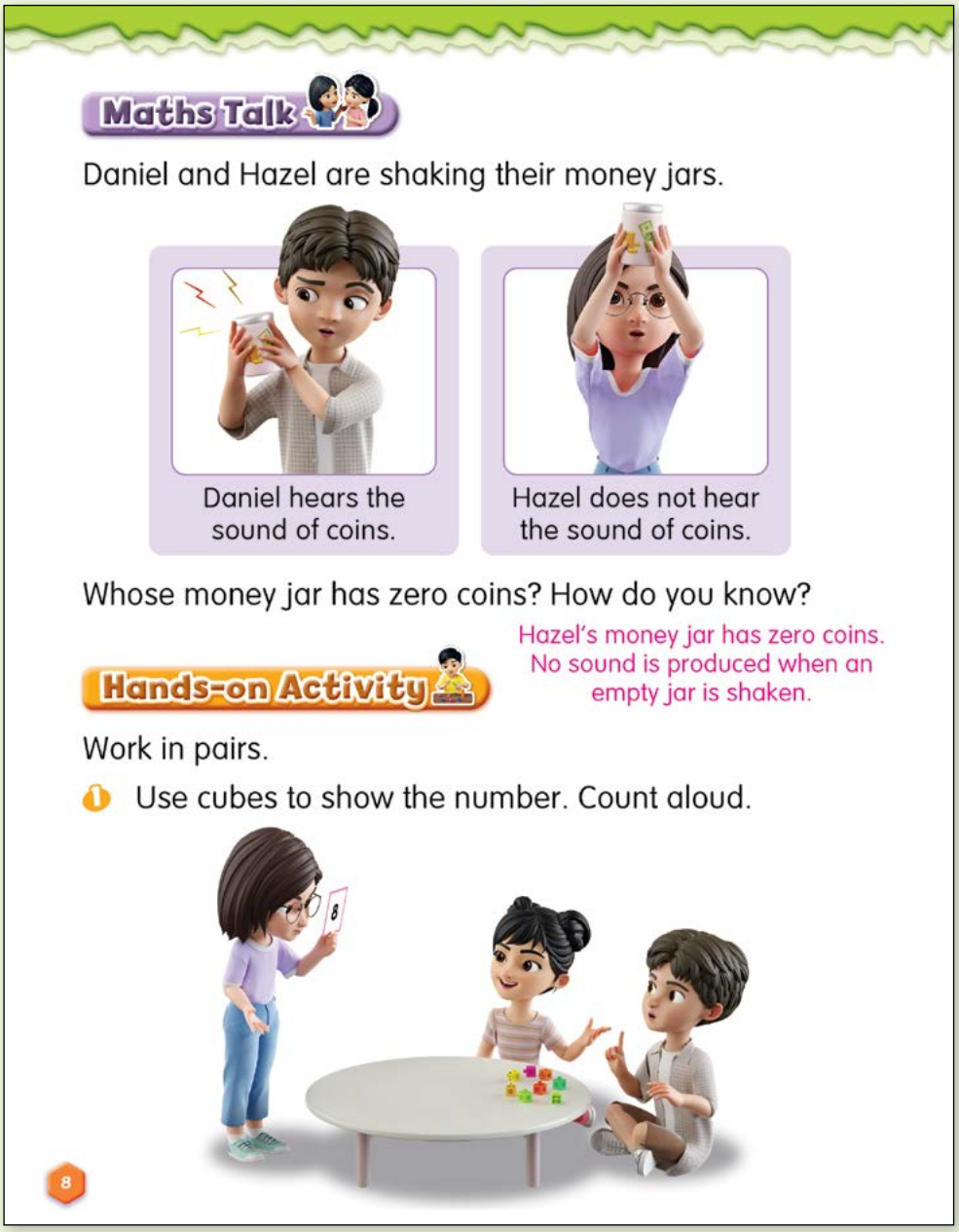
As each number is counted, get them to bend one finger inwards.

Ask: What do you see when all fingers are bent inwards?

Students should show a fist that resembles zero.

Teaching Note

Include a demonstration so as to make this activity meaningful. Teachers may bring two money jars (one with coins and one without coins) and have students role play.



Teaching Note

Use this activity to have students practice counting. Show students picture cards, numeral cards or number word cards. Have them use multilink cubes to match the numbers on the cards.

By using cubes, they will count the number of cubes to show the number instead of merely reading the number out loud.

Maths Talk

Hazel's money jar has zero coins.

No sound is produced when an empty jar is shaken.

2 Say a number. Clap the number of times.

3 Say a number. Write the number on the whiteboard.

Teaching Note

Similar to 1, by clapping, students will be counting on to reach the required number of claps.

Use 3 to have students practise writing numerals and spell number words. You may reverse the instruction as well by writing a number and have students spell out the number or read the number.

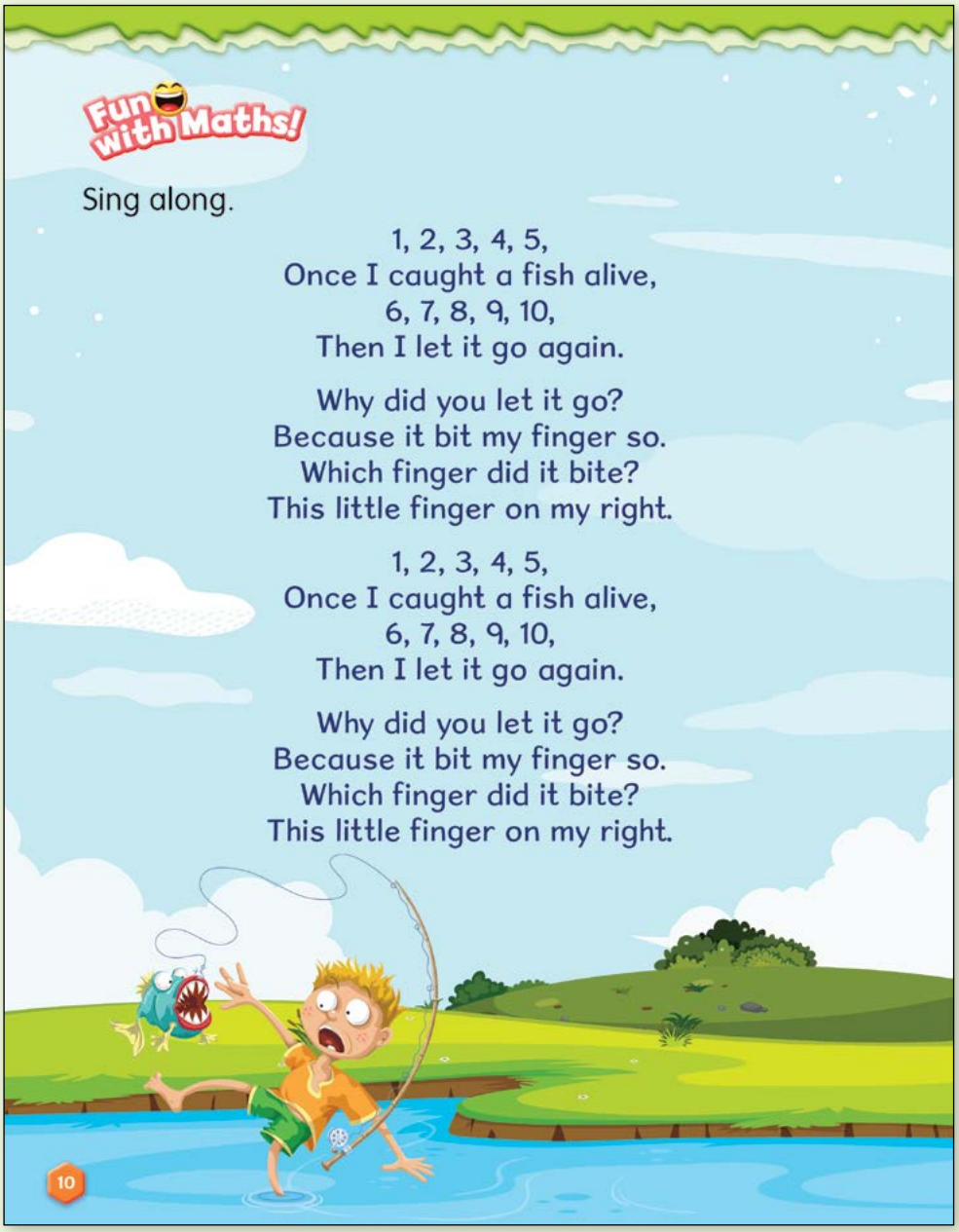
Teaching Note

Show a video of "1 2 3 4 5, once I caught a fish alive" and have students sing along to the song.

The objective is to have students assimilate the order of numbers when counting on.

Extension

Ask: Which finger does "this little finger on my right" refer to?



Teaching Note

For these questions, focus on the key instruction for students, i.e., get them to see if we are supposed to count on or count back by looking at the numbers, then attempt to fill in the missing numbers.

Use 1 to have students relate numbers and objects in everyday life.

For some students, it may be obvious that a person has 10 fingers and 10 toes. They should nonetheless count the number of figures and toes, as well as other objects, from the given illustrations.

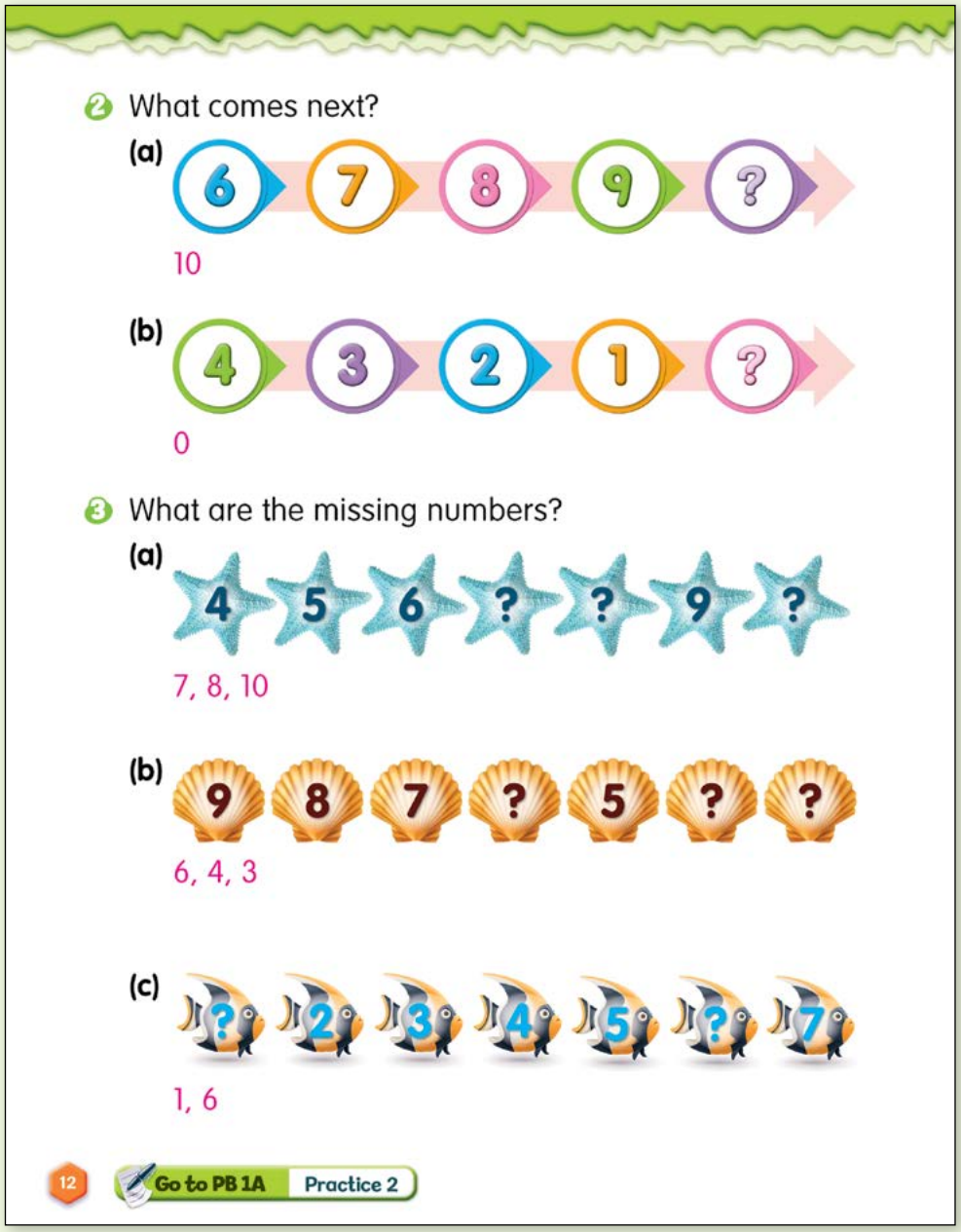
Let's Practise

1. 10 fingers
10 toes
4 legs
8 arms
6 eggs
7 crayons

Teaching Note

A common misconception students may have for 2**(b)** would be to think of 5 as the missing number to the "set of 1 to 5".

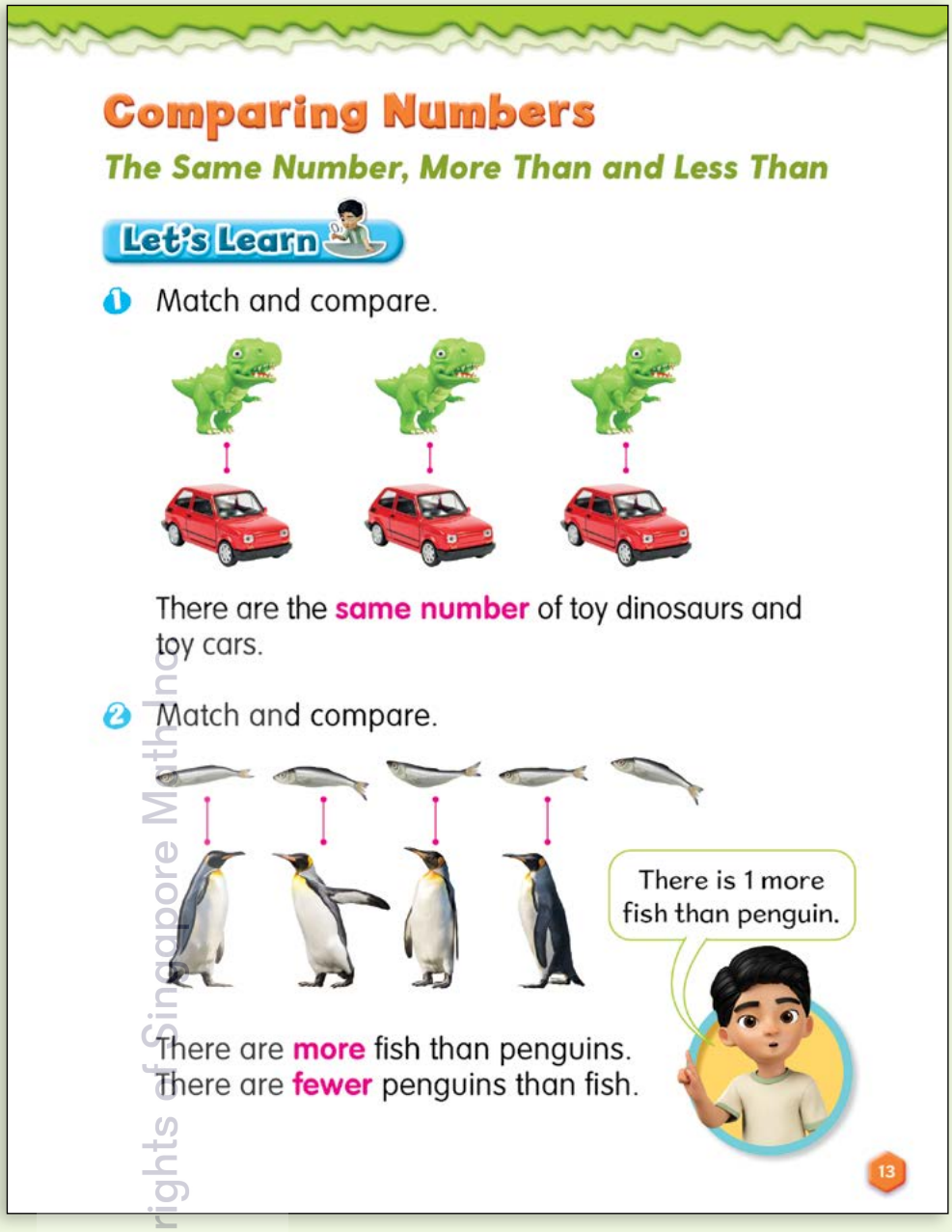
For students having difficulty with 3, have them count out loud the first few available numerals.



Let's Practise

2. **(a)** 10
(b) 0

3. **(a)** 7, 8, 10
(b) 6, 4, 3
(c) 1, 6



Key SIOs

- To compare two numbers within 10 using the words 'same', 'more/less than' and 'greater/smaller than'
- To compare objects by doing one to one matching

Teaching Note

For 1, have students use their fingers to match each toy dinosaur to the toy car by following the arrows.

Explain to them that when a certain number of toy dinosaurs and toy cars can be exactly matched, it means that both groups have the same number.

Extension

Have students count the number of toy dinosaurs and toy cars.

Ask: How many toy dinosaurs are there? How many toy cars are there?

Read out the last sentence in 1 to help students relate the idea of comparison.

Teaching Note

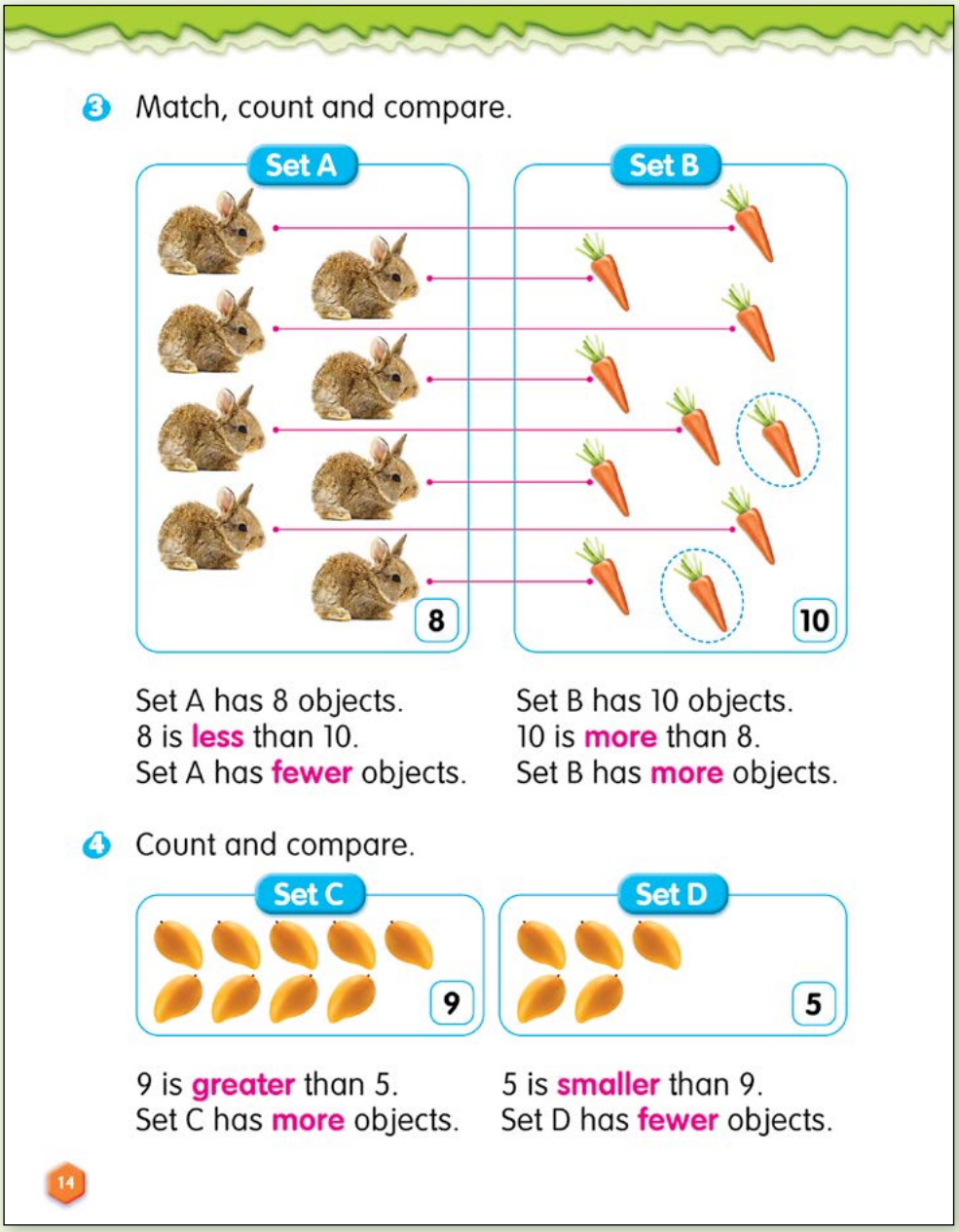
For 2, after matching, students should observe that there are more fish than penguins. Help them make the comparisons using the words 'more' or 'less'.

Teaching Note

Start 3 by first matching each rabbit to carrot. Students will observe that two carrots cannot be matched. Point to the circled carrots.

Next, have students count the number of objects (rabbits and carrots) in both sets. Point to the numbers to affirm the numbers counted.

Finally, read the statements to then compare the number objects, highlighting the keywords used in the comparisons.



Hands-on Activity

Work in pairs.
Each of you will grab a number of cubes.
Compare the number with your partner.

You may use these words to compare the numbers.

greater than	fewer than	the same number
more than	less than	smaller than

Maths Talk

Who is correct?

There are 6 tables and 5 children. Of the 5 children, 3 are boys and two are girls.

Jayden and Hazel are correct.

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Teaching Note

Provide students with interlink cubes to conduct this activity.

Instruct students to place the cubes in a row, so as to make the counting or matching easier. Otherwise, students may mis-count or overcount if the cubes are in a cluster.

Have them match, count and compare the number of cubes and make comparison statements like the ones on the previous page.

Ask: When can we only use one word from the words provided?

Maths Talk

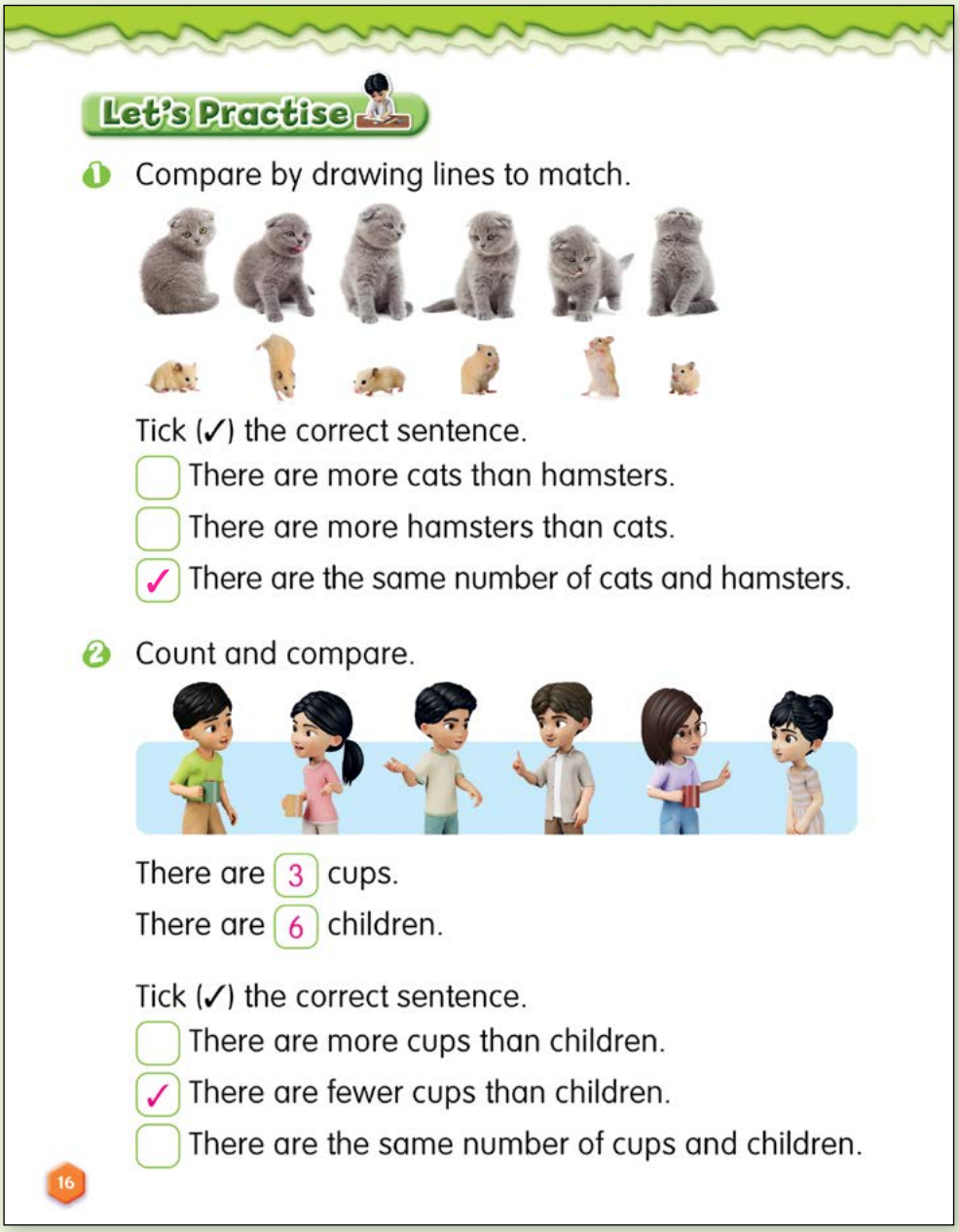
There are 6 tables and 5 children. Of the 5 children, 3 are boys and two are girls.

Jayden and Hazel are correct.

Teaching Note

Some students may start 1 by counting the number of cats and the number of hamsters. Have them observe that by drawing lines to match, they need not count at all, but only need to observe if there are cats, or hamsters which are not matched.

For 2, ask students to circle the cups first and then count and write the number of cups.



Let's Practise

1 Compare by drawing lines to match.

Tick (✓) the correct sentence.

- [ ] There are more cats than hamsters.
- [ ] There are more hamsters than cats.
- [x] There are the same number of cats and hamsters.

2 Count and compare.

There are [3] cups.

There are [6] children.

Tick (✓) the correct sentence.

- [ ] There are more cups than children.
- [x] There are fewer cups than children.
- [ ] There are the same number of cups and children.

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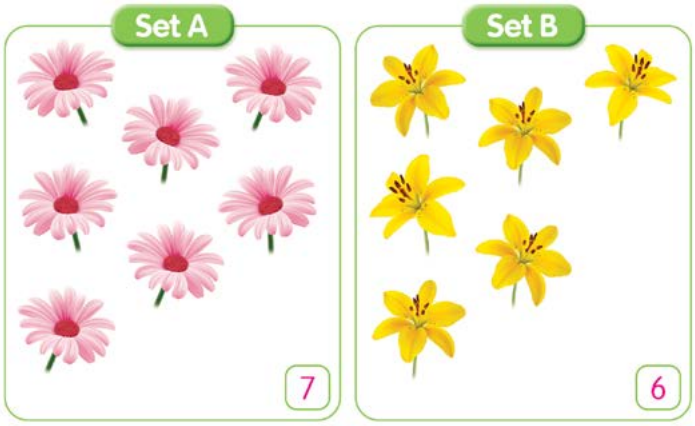
Let's Practise

1. Statement 3

2. 3, 6, statement 2

3 **(a)** Which set has more?



Set [A] has more.

(b) Which set has fewer?

Set [C] has fewer.

Teaching Note

The objective of 3 and 4 is for students to count, write down the number of objects in the given boxes, and compare.

For students who have difficulty in relating the comparison words 'more', 'fewer', etc. Have them refer to page 4 and 5, and practising counting on to assimilate the idea of digits getting larger as the students count on.

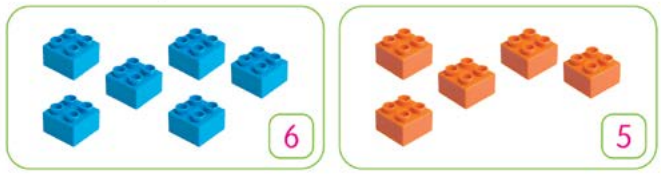
Let's Practise

3. **(a)** 7, 6, A

(b) 2, 4, C

4 Count and compare.

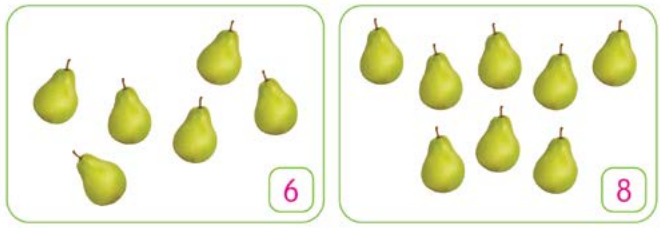
(a)



6 is greater than 5.

5 is smaller than 6.

(b)



8 is greater than 6.

(c)

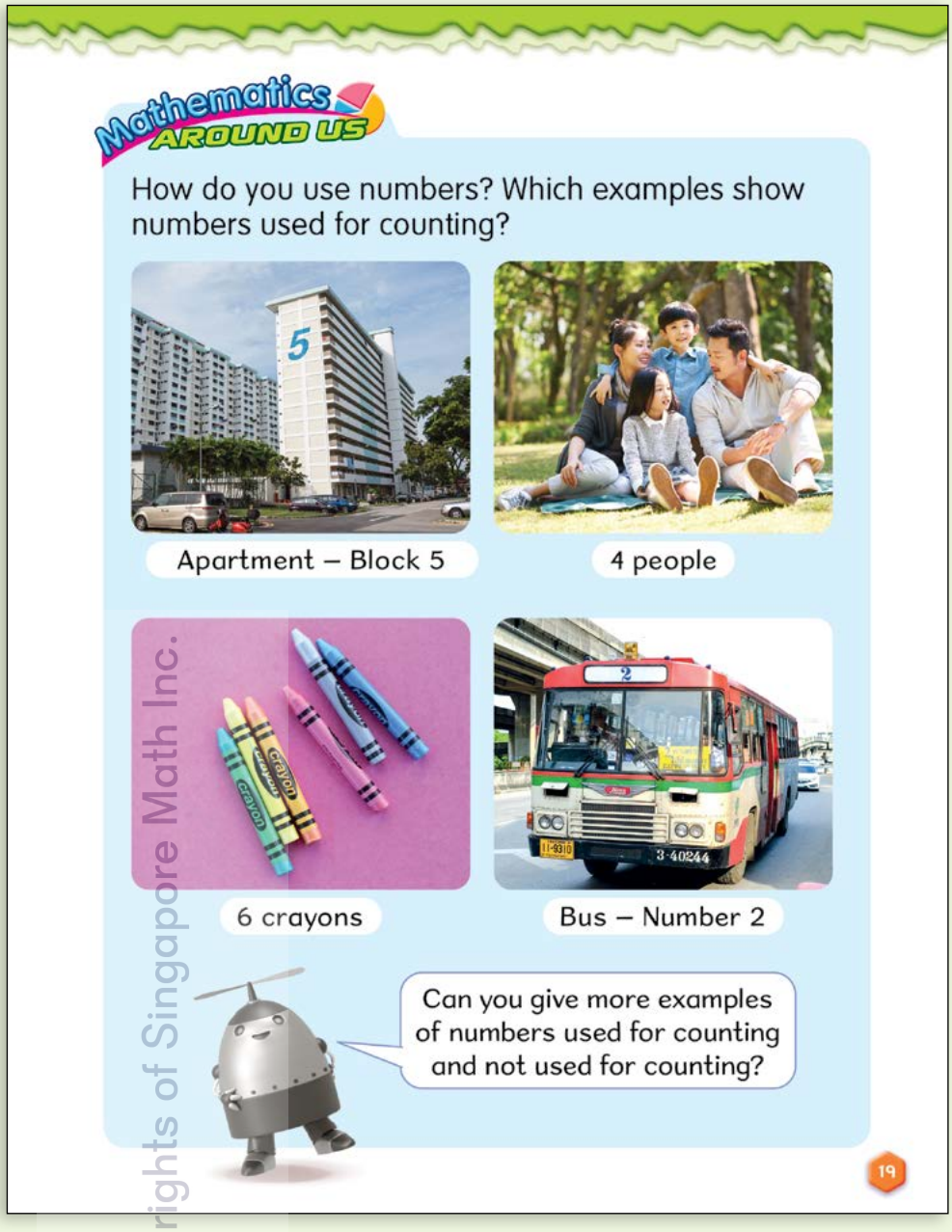
7 is smaller than 9.

Let's Practise

4. **(a)** 6, 5, 6, 5, 5, 6

(b) 6, 8, 8, 6

(c) 9, 7, 7, 9



Teaching Note

Point out to students that numbers are used in different ways around us.

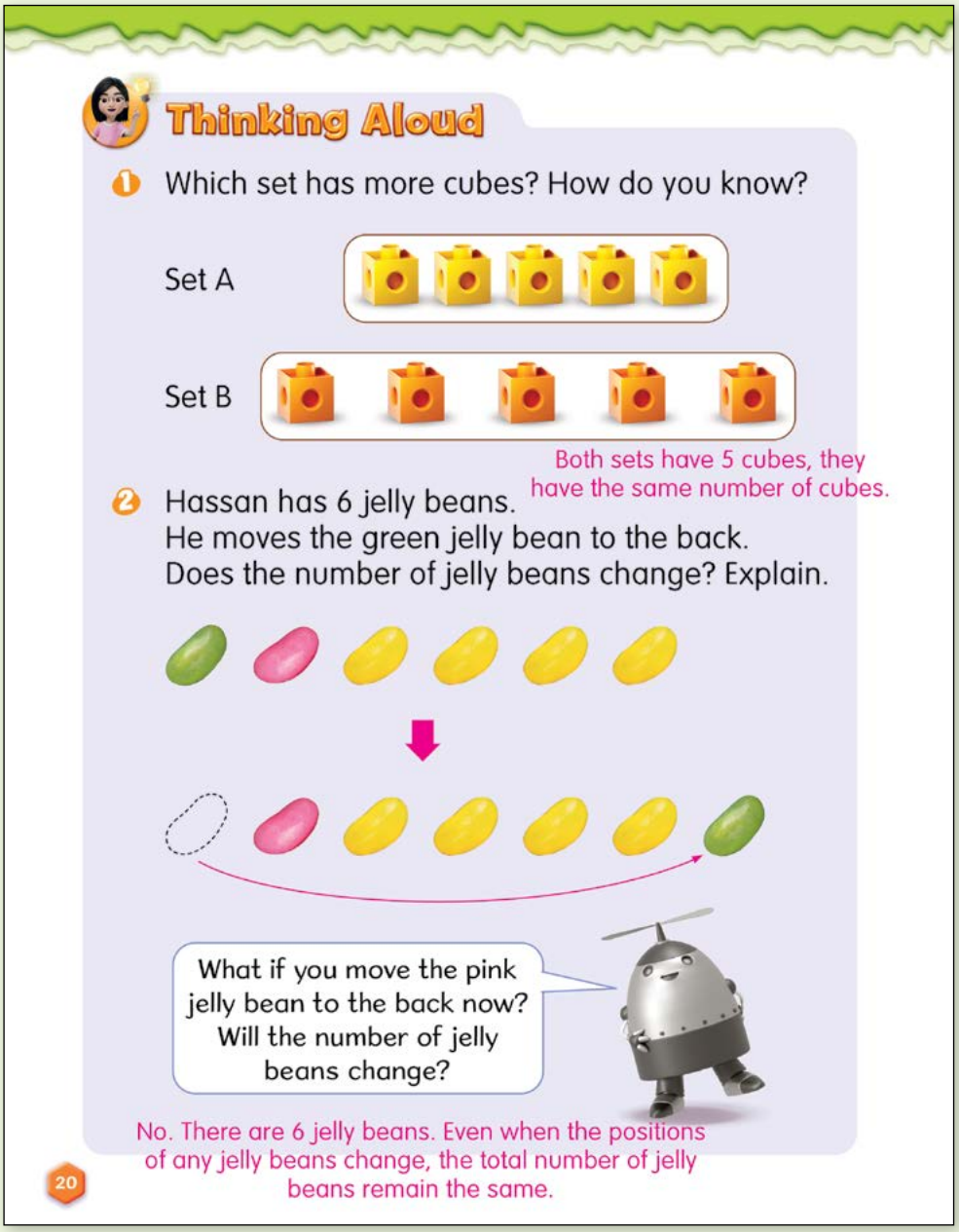
For example, in the first picture showing a block of apartments, we can assume that block 4 and 6 would be next to block 5. The ordering and counting of numbers allow us to locate buildings.

In the second and third picture, numbers allow us to count and identify the number of objects present.

In the last picture, we assign bus routes to particular numbers, instead of names or other labels. In this case, numbers are not used for counting, as a bus route with a greater number may not have a particular meaning.

Teaching Note

This Thinking Aloud focus on conservation of numbers, such that the numbers of cubes and jelly beans do not change despite the positioning of the cubes or jelly beans.

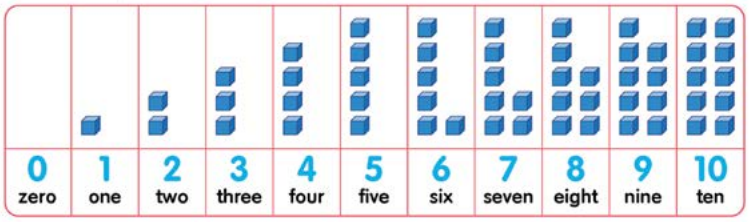


Thinking Aloud

1. Both sets have 5 cubes, they have the same number of cubes.
2. No. There are 6 jelly beans. Even when the positions of any jelly beans change, the total number of jelly beans remain the same.

What Have I Learnt?

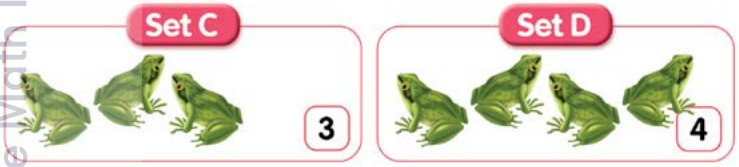
1. Counting to 10.



0	1	2	3	4	5	6	7	8	9	10
zero	one	two	three	four	five	six	seven	eight	nine	ten

2. Comparing numbers.

Set A has **more**. 6 is **greater than** 2.



Set C has **fewer**. 3 is **smaller than** 4.

There are the **same number** of goldfish in Set E and Set F.

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