



KiwiMaths
Series



Maths: Foundation

- ✓ number and place value
- ✓ patterns and algebra
- ✓ using units of measurement
- ✓ shape
- ✓ location and transformation
- ✓ statistics and probability

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Teachers' Notes

By the end of the Foundation year, students need to be able to:

- Make connections between number names, numerals and quantities up to 10.
- Compare objects using mass, length and capacity.
- Connect events and the days of the week.
- Explain the order and duration of events.
- Use appropriate language to describe location.
- Count to and from 20 and order small collections.
- Group objects based on common characteristics and sort shapes and objects.
- Answer simple questions to collect information and make simple inferences.

Teaching Maths is about providing students with:

1. Key skills needed to solve Maths problems in the real world.
2. The chance to explore ways to find an answer and explain how it works.
3. Opportunities to problem solve.
4. The chance to use and apply their skills.
5. Real life opportunities.

A strong Maths program teaches:

- Number Sense and Operations – develops arithmetic and place value.
- Geometry and Spatial Sense - builds on knowledge of basic shapes, increases ability to reason spatially, visualise objects in space, read maps and eventually use geometry to solve problems.
- Data Analysis and Probability - uses charts, tables, and graphs to assist learning to organize information about the world around them.
- Algebra - learning to recognize patterns and sets (“pick the small pencil”) creates the groundwork for working with unknowns and algebraic variables.
- Measurement - learning how to measure and compare is an important life skill.

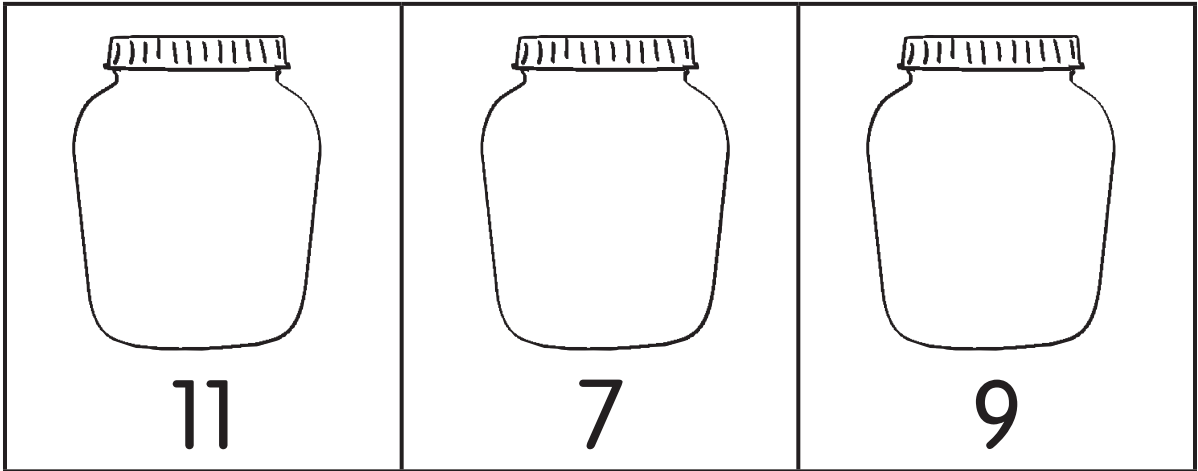
Remember that students can recite the number sequence (i.e. say one, two, three, etc.), but we cannot assume that they can count small sets of objects. With your class, make every day activities and events a counting exercise.

Learning to count involves learning the following important principles:

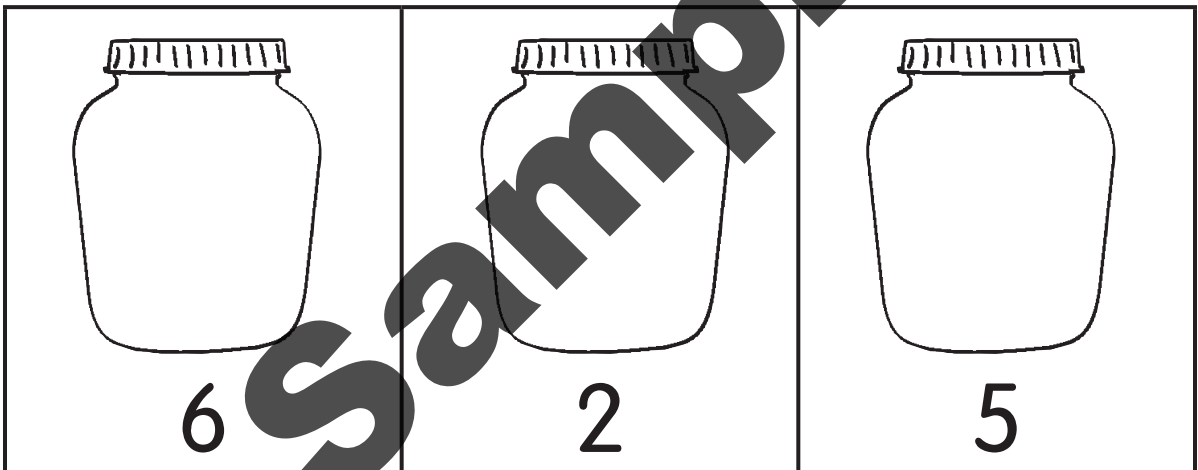
- The number name list is used in a fixed order every time a group of objects are counted (i.e. you have to say one, two, three, four in the same order each time).
- The last number name used gives the number of objects in the set.
- The arrangement of the objects to be counted does not affect how many there are.
- Each object to be counted must be given one and only one number name.
- The order in which the objects are counted doesn't matter. The child can start with any block and count them.

Do some counting

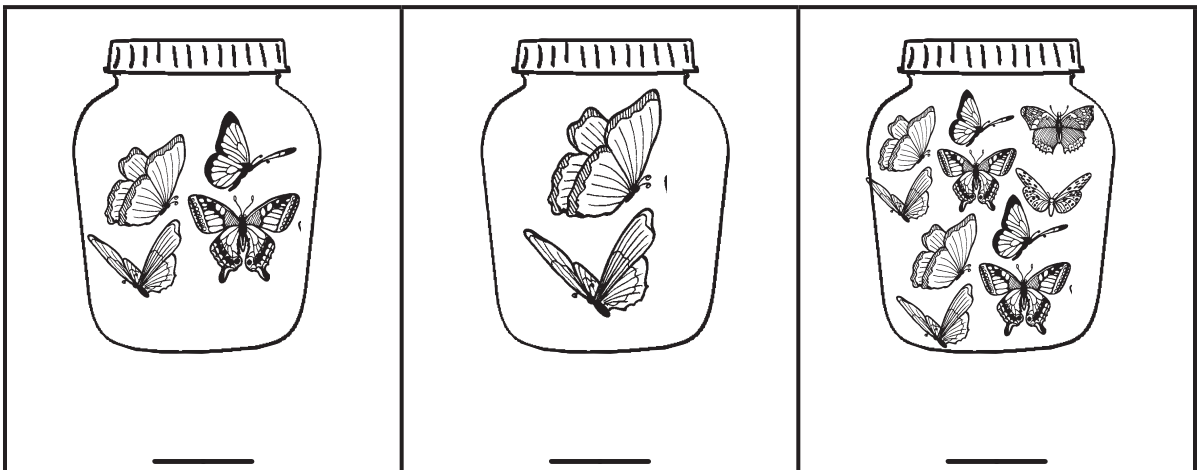
1. Draw **lollies** in the jars to match the numbers.



2. Draw **marbles** in the jars to match the numbers.

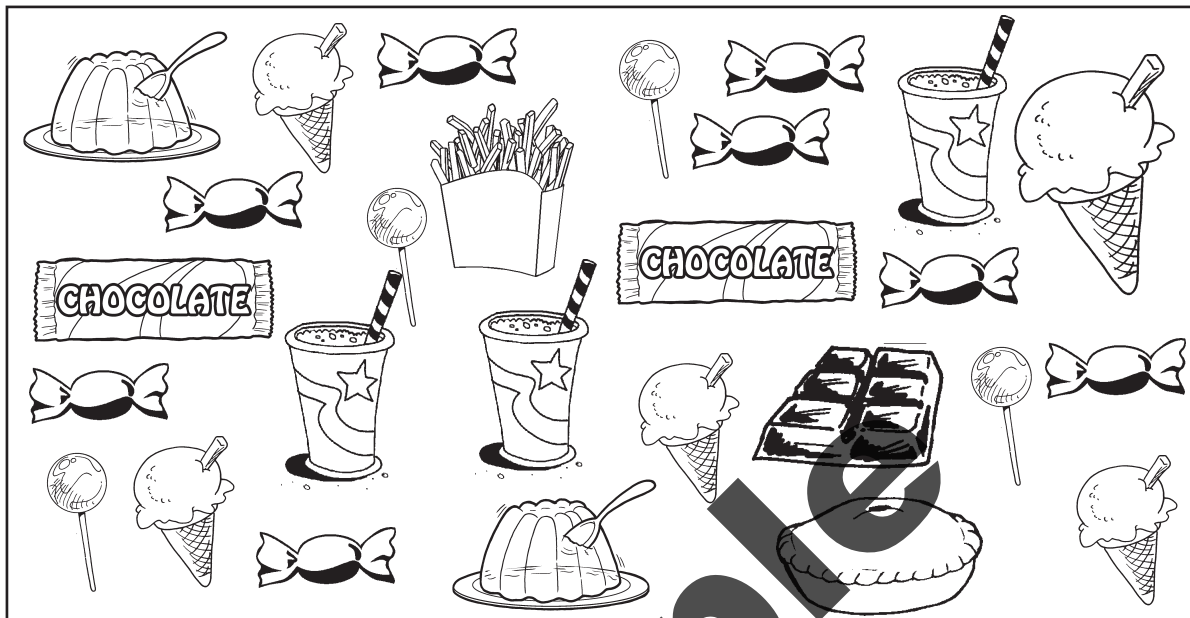


3. Write how many **butterflies** are in each jar.








Count and graph

Colour the squares to show how many there are of each item in the picture. You will make a bar graph!



A Bar Graph


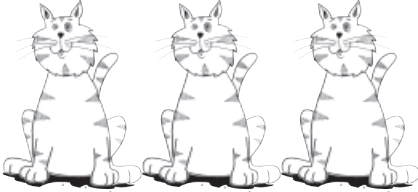
How many of each?

10					
9					
8					
7					
6					
5					
4					
3					
2					
1					
					

party food

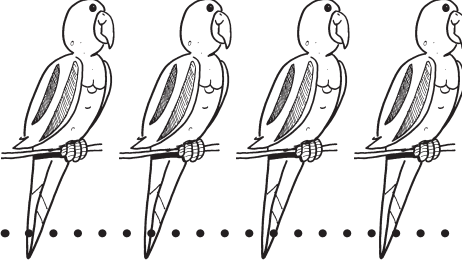
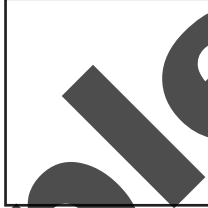
Can you add?

Complete the number sentences with pictures and words.

a.  and  equals _____



.....

$2 + \underline{\quad\quad} = \underline{\quad\quad}$

b.  and  equals _____



.....

$4 + \underline{\quad\quad} = \underline{\quad\quad}$

c.  and  equals _____

.....

$\underline{\quad\quad} + \underline{\quad\quad} = 10$

d.  and  equals _____

.....

$6 + 2 = \underline{\quad\quad}$

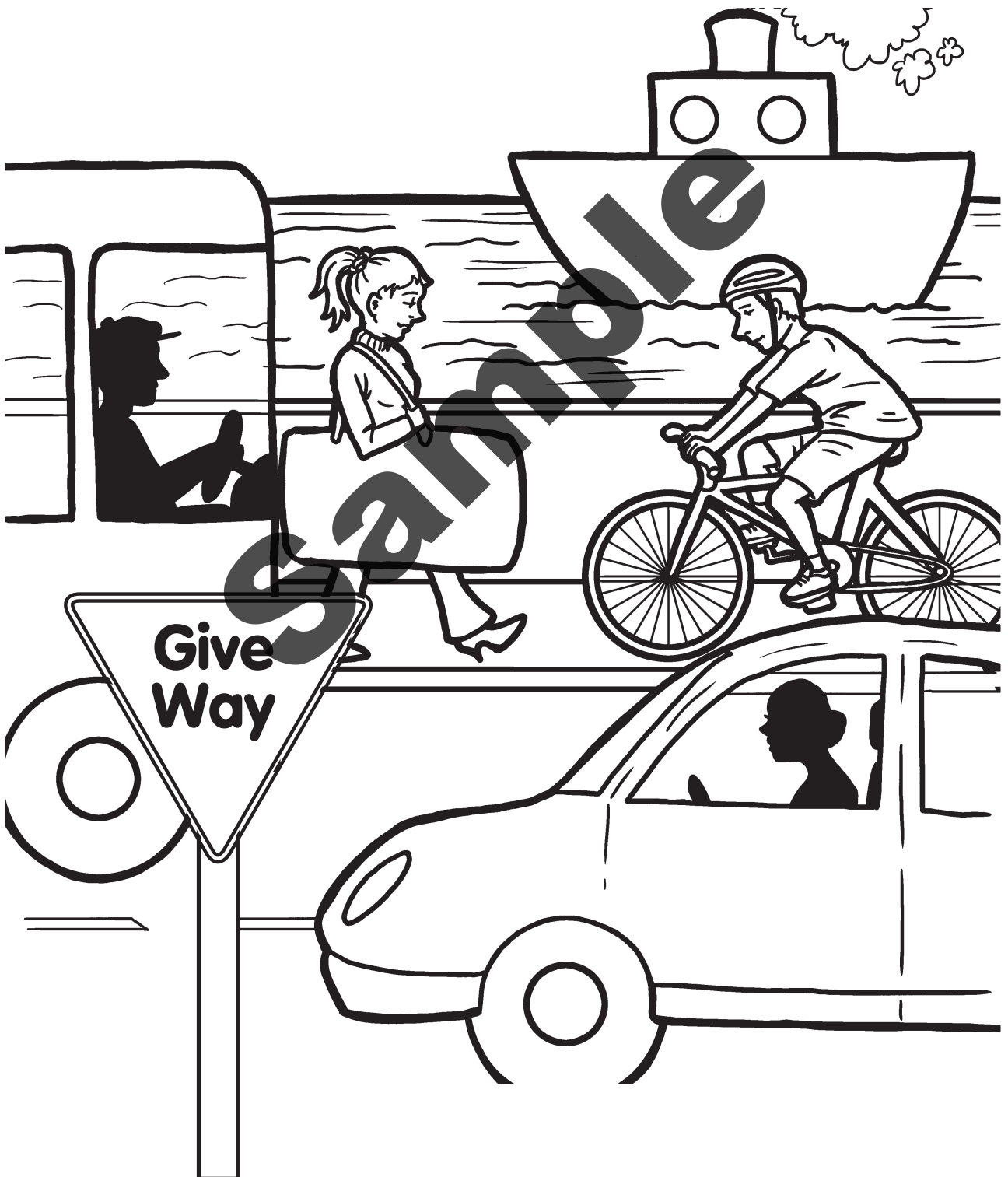
Shapes hunt

Find an oval in the picture. Colour it blue.

Find a circle in the picture. Colour it yellow.

Find a triangle in the picture. Colour it red.

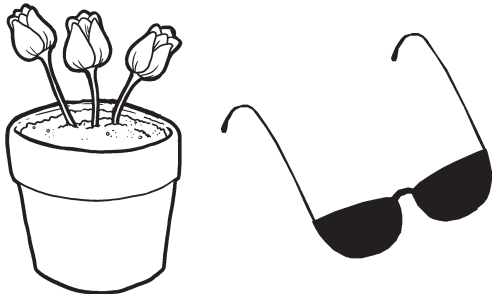
Find a rectangle in the picture. Colour it green.



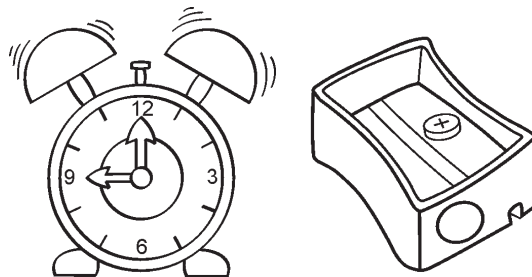
Weight

Circle the object that you think would be the heaviest.

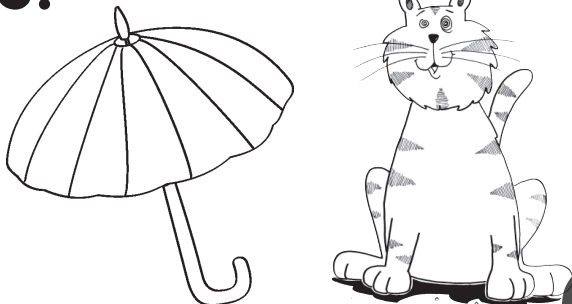
1.



2.



3.



4.

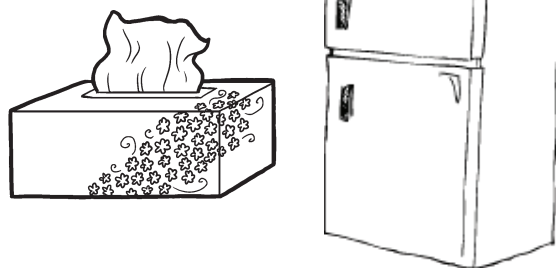


Circle the object that you think would be the lightest.

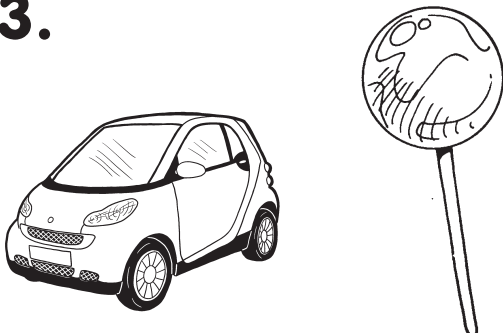
1.



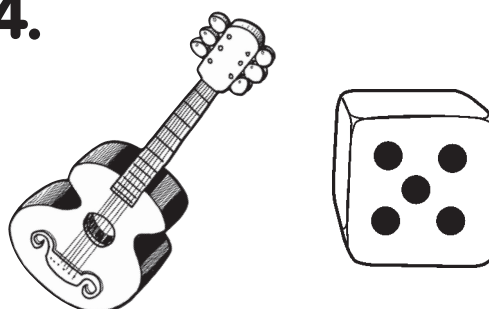
2.



3.

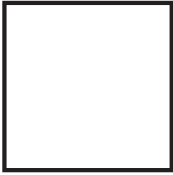
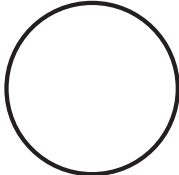
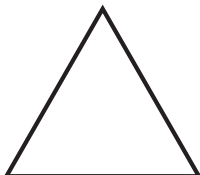

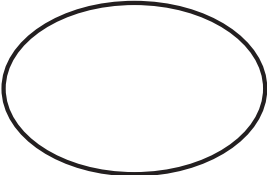


4.



Shapes are everywhere!

Colour in the shapes in the picture, with the colours listed.

 purple	 yellow	 green
 red	 blue	

