

## Block Diagrams

### Adult Guidance with Question Prompts



Children should begin to look at block diagrams by using towers of blocks to represent data. Then, they can move on to representing data using block diagrams. They should be able to use block diagrams with different scales, in this case twos. They interpret the data to answer questions.

**What is the scale of the diagram?**

**How do you know?**

**What does one block represent?**

**How many of each animal did they see?**

**Explain how you can work out the difference between two blocks.**

**What would be a suitable title?**

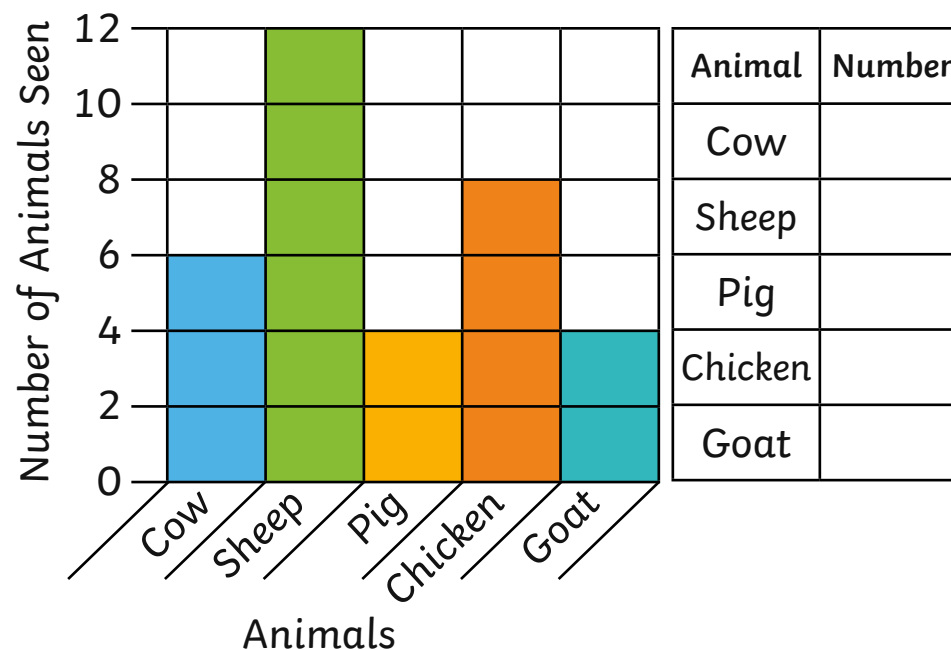
**How will you find out how many animals they saw in total?**

**What other facts can you give about this block diagram?**

## Block Diagrams



Class A went to the farm. They recorded how many farm animals they saw, using a block diagram.



Complete the table to show how many of each animal they saw.

Which was the most common animal?

How many more chickens than goats were there?

How many fewer cows than sheep were there?

Write a title for this block diagram.

True or false? Class A saw 32 farm animals in total.

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Children interpret a block diagram with a scale in tens. They use reasoning skills to find the total number of children asked and to compare two blocks.

What is the scale of the diagram?

How do you know?

What does one block represent?

How many children do football after school?

If that many children do football alone, could it be possible that they only asked 19 children altogether?

How many children do art?

Is that half the number of children that do football?

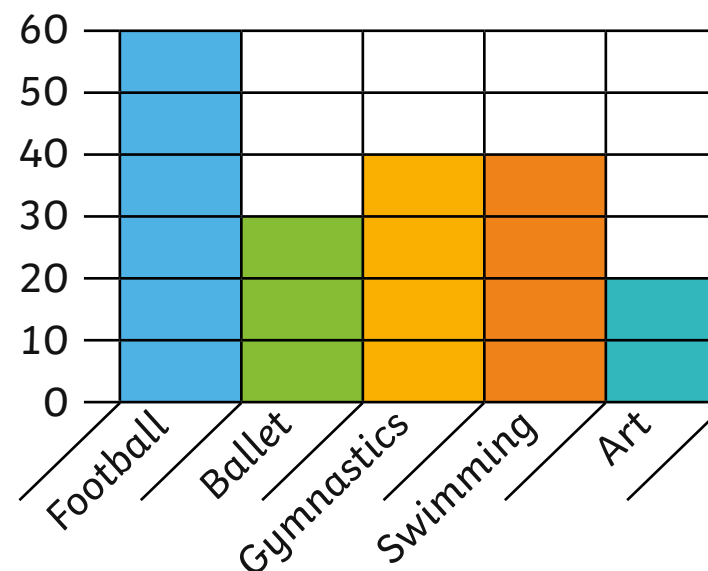
Prove it.

What other facts can you give about this block diagram?

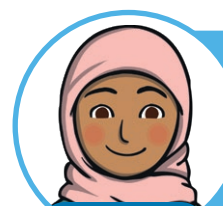
## Block Diagrams



Class B carried out a survey about after-school activities in their school. They recorded the data in this block diagram.



Amna and Bill are looking at the block diagram.



Amna

To find out how many children were asked altogether, I need to count all the blocks. 19 children were asked.

Do you agree with Amna and Bill?

Explain your reasons.

Swimming is twice as popular as art.



Bill

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Children represent data using towers of cubes. Then, they draw their own block diagram using the same data. They choose a scale, label the axes, write a title and present the blocks neatly. You could provide squared paper and pre-drawn axes as required.

Show me how you can use cubes to represent each of these totals.

What scale will you use for your block diagram?

Why?

How will you label the axes?

What would be a good title?

What other facts can you give about this block diagram?

## Block Diagrams



Class C have collected data about their shoe sizes.

| Shoe Size | Number of Children |
|-----------|--------------------|
| Size 12   | 8                  |
| Size 13   | 12                 |
| Size 1    | 16                 |
| Size 2    | 4                  |

Use cubes to represent the data.

Draw a block diagram to represent the data.



Label the axes.



Write a title.

Write 5 facts about the data.