



1. Making Tally Charts

interpret and construct simple pictograms, tally charts, block diagrams and simple tables

Fluency:

Complete the tally chart.

Favourite Colour	Tally	Total
Blue		
Red		
Yellow		
Green		

What does the data tell you? Tell me the story.

Complete the tally chart for Year 2 and Year 3

Year Group	Tally	Total
Year 1		10
Year 2		19
Year 3		
Year 4		17

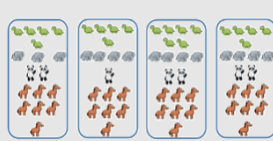
Make a tally chart about one of the following topics:

- Equipment in class (scissors, glue etc.)
- Favourite sport
- Favourite fruit
- Ways of getting to school (walk, car, cycle etc.)
- A choice of your own

Problem solving:

Dexter makes a tally chart of the animals he saw at the zoo

Animal	Tally
Elephant	
Giraffe	
Kangaroo	
Monkey	



Tick one box below that shows all of the animals Dexter saw and explain why the others are incorrect.

Reasoning:

Class 1 and class 2 were asked their favourite ice-cream flavours. Their results are shown in the tally charts.

Class 1		Class 2	
Flavour	Total	Flavour	Total
Vanilla		Vanilla	
Chocolate		Chocolate	
Strawberry		Strawberry	
Mint		Mint	

What is the same?
What's different?

2. Drawing Pictograms

interpret and construct simple pictograms, tally charts, block diagrams and simple tables

Fluency:

Complete the pictogram.

Hair Colour	Tally	Total
Black		5
Blonde		
Brown		9
Green		4

Key
● = 1 person

Use the tally chart to help you complete the pictogram.

Fruit	Tally	Fruit
Banana		Banana
Grape		Grape
Pear		Pear
Apple		Apple

Key
● = 1

Complete the pictogram using the data given.

Name	Tally
Teddy	
Annie	
Amir	
Whitney	

Key
● = 1 goal

Problem solving:

Use the clues below to help you complete the pictogram.

- More caramel was sold than bubblegum flavour, but less than strawberry flavour.
- Mint was the most popular flavour.
- Vanilla was the least popular flavour.

Flavour	Ice cream	Total
Strawberry		
Vanilla		
Chocolate		
Mint		
Caramel		
Bubblegum		4

Can you find more than one way to complete the pictogram?

Reasoning:

Here is a pictogram showing the number of counters each child has.

Dexter	
Alex	
Mo	
Rosie	

How could you improve the pictogram?

3. Interpreting Pictograms

interpret & construct pictograms, tally charts, block diagrams & tables · ask & answer questions about totalling & comparing categorical data.

Fluency:

Here is a pictogram to show Class 5s favourite t-shirts.

Colour	T-shirt
Blue	
Green	
Red	
Purple	

Key
|| = 1 T-shirt

What is the most popular colour t-shirt?
What colour is the least popular t-shirt?
How many more children chose blue t-shirts than red?
How many children are in Class 5?

Here is a pictogram to show minibeasts collected by Class 5.

Minibeast	Total
Woodhouse	
Ladybird	
Centipede	
Worm	
Spider	

Key
● = 1 minibeast

There are ___ ladybirds.
There are ___ centipedes and worms altogether.
There are ___ more worms than centipedes.
What else does the pictogram tell us?

Problem solving:

Teddy writes these statements about his pictogram:

- There were more cows than sheep
- There were the same number of sheep and horses
- There were more chickens than any other animals
- There were less cows than goats
- There were 8 goats

Can you draw a pictogram so that Teddy's statements are correct?
What title will you give it?

Reasoning:

Here is a pictogram.

Colour	Sweet
Blue	
Red	
Yellow	
Green	

The most popular colour sweet is green.
Do you agree with Eva?
Explain why and correct any mistakes.

4. Drawing Pictograms (2, 5 and 10)

interpret & construct pictograms, tally charts, block diagrams & tables · ask & answer questions about totalling & comparing data.

Fluency:

Use the tally chart to complete the pictogram.

Pet	Tally
Dog	
Cat	
Rabbit	
Fish	

Key
● = 2 animals

Use the information to complete the pictogram about the number of books read in each class.

Class	Books
Class 1	
Class 2	
Class 3	
Class 4	
Class 5	
Class 6	

Key
|| = 5 books

Problem solving:

Create a pictogram to show who was born in what season in your class.

Use what you know about pictograms to help you.

Here is an example.

Season	Children
Spring	
Summer	
Autumn	
Winter	

Key
● = 2 children

Reasoning:

Teddy and Eva both draw a pictogram to show how many cars they counted driving past their school.

Colour	Number of cars
Blue	
Red	
Black	
Green	

What is the same? What is different?
Whose pictogram do you prefer? Why?



5. Interpreting Pictograms (2, 5 and 10)

ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity

Fluency:

How many more sparrows are there than robins?
What is the total number of birds?
How did you calculate this?
Can you think of your own questions to ask a friend?



Use the pictogram to decide if the statements are true or false.

Animal	Number on farm
Pigs	★★★★★
Sheep	★★★★★
Horses	★
Chickens	★★★★★
Cows	★★★★★

★ = 10 animals

Statement	True or False?
Horses were the least popular animal.	
The number of chickens seen was half the number of cows seen.	
The total amount of pigs and sheep is 70.	
There were 8 cows on the farm.	
There were 10 fewer chickens than sheep.	

Problem solving:

Jack and Whitney have carried out a traffic survey.

Van	○○○
Bus	○○○○○
Bike	○○○○○
Lorry	○○○
Car	○○○○○

○ = 10 vehicles

Jack says:
If I add the number of lorries and bikes together then it will be equal to the number of cars.
Is he right? Convince me.
Whitney says:
To find the total number of vehicles I need to count the symbols. There are 16 and a half vehicles.
Is she correct? Explain your answer.

Reasoning:

Ice creams sold in a week



Convince me

There are more ice-creams sold at the weekend than during the rest of the week.

True or False (Why?)

Three ice creams were sold on Tuesday.

Justify

If the staff needed to pick one day to have off during the week, which would be the best day and why?

6. Block Diagrams

interpret & construct pictograms, tally charts, block diagrams & tables · ask & answer questions about totalling & comparing data.

Fluency:

Class 4 are collecting data about favourite colours.

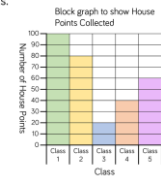
Colour	Number of children
Red	5
Green	8
Blue	7
Yellow	2

Make a block diagram using cubes to represent the data. Now draw the block diagram. What will the title be? Remember to label the blocks and draw a clear scale.

5 classes collected their house points.

Here are their results.

Which class collected the most house points?
Which class collected the fewest house points?
How many more points did Class 2 get than Class 4?
How many fewer points did Class 3 get than Class 5?
How many points did Class 2 and Class 3 get altogether?



Problem solving:

Split into groups.

Everyone needs to write their name on a sticky note. Use your sticky notes to create a block diagram to answer each question.

- How many boys and how many girls are there in your group?
- Which month has the most birthdays for your group?
- What is your favourite sport?

What other information about your group could you show?

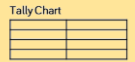
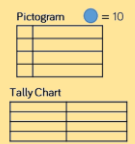
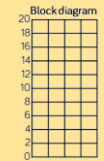


Reasoning:

Here are three tables of data. Which set of data could you display using the block graph? Which could use the pictogram? Which could use the tally chart?

Explain your reasoning.

Team	Goals	Player	Points	Name	Score
A	25	1	25	Ben	25
B	32	2	65	Eve	12
C	27	3	80	Amer	8
D	18	4	45	Mo	15



Vocabulary

pictogram	a chart that uses pictures or symbols to represent data
tally chart	a method of collecting data using tally marks which are represented in groups of 5 marks, the fifth mark crossing the first 4
block diagram	a way of representing information where types of items are shown on the x axis (horizontal), number of items are shown on the y axis (vertical) with blocks representing the number of items
table	a chart to collect data