

Session 1

Over the next couple of weeks, we are looking at data handling.

What do you know already?

Session 1



Data is the collection of information



It can be anything

It could be how many people have brown hair in your class.

It could be how many people there are in each country.

or





It could be favourite ice cream flavours!



Tally Charts

Often, information can be collected using a tally chart

Here is an example:

Title: How Do We Get to School?		
Categories	Tallies	Total
Walk		7
Bike		3
Car		4
Bus		12


 This shows 1 person

 This shows 5 people

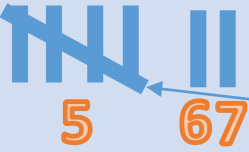






Tally Charts

 This shows 1 person

 This shows 5 people

Count the number of people with different coloured hair.

Colour of hair	Tally	Total /Frequency
Blonde	 5 67	7
Brown		
Black		
Ginger		
Other		

We know this shows 5 so we do not need to count them all






Each represents 1

Tally Charts

 This shows 1 person

Now you try the other ones on your own. Click the arrow when you think you know the answer.


 This shows 5 people


Colour of hair	Tally	Total /Frequency
Blonde		7
Brown	 5 678	8
Black	 5 6	6
Ginger	 5 10	10
Other	 1	1

Tally Charts

 This shows 1 person

This time, think about how many tallies there should be.

 This shows 5 people


Colour of eyes	Tally	Total /Frequency
Blue	 1234	8
Brown		3
Green		12
Other		9




Tally Charts

 This shows 1 person

This time, think about how many tallies there should be.

 This shows 5 people


Colour of eyes	Tally	Total /Frequency
Blue	 5 678	8
Brown		3
Green		12
Other		9






Tally Charts

 This shows 1 person

Now try the next tallies on your own. Click on the arrow when you think you know what to do.


 This shows 5 people




Colour of eyes	Tally	Total /Frequency
Blue		8
Brown	 1 2 3	3
Green	 1 2 3 4	12
Other		9

Tally Charts

 This shows 1 person

Now try the next tallies on your own. Click on the arrow when you think you know what to do.


 This shows 5 people

Colour of eyes	Tally	Total /Frequency
Blue		8
Brown	 123	3
Green	 5 6789	12
Other		9







Tally Charts

 This shows 1 person

 This shows 5 people


Now try the next tallies on your own. Click on the arrow when you think you know what to do.

Colour of eyes	Tally	Total /Frequency
Blue		8
Brown	 1 2 3	3
Green	 5 10 11 12	12
Other	 1 2 3 4	9



Tally Charts

 This shows 1 person

 This shows 5 people

Now try the next tallies on your own. Click on the arrow when you think you know what to do.

Colour of eyes	Tally	Total /Frequency
Blue	 	8
Brown	 1 2 3	3
Green	 5 10 11 12	12
Other	 5 6 7 8 9	9







Session 1- Task



Session One



A zoo needs you to count how many of each animal there are. Fill out the tally chart below using the pictures of the animals above.

Animal	Tally	Total
Lion 		
Penguin 		
Elephant 		
Tiger 		
Zebra 		
Bird 		

Which groups of animals is the biggest in the zoo? _____

How many more lions are there than zebras? _____

How many animals are there altogether at the zoo? _____

Fill out the following tally chart. You can use the template provided or draw the chart yourself (using a ruler).

Count the number of zoo animals there are. It helps if you do one animal at a time and cross them off as you count them!

Challenge

Whitney, Teddy and Jack tally how many jumps they can do in a minute.

Jumps	Tally	Total
Whitney	JHT I	
Teddy	IIIIIIII	
Jack	IIII	

a)



Do you agree with Whitney? _____

Explain your reasons.





b) How could Teddy's tallying be improved?

Session 2 Recap

Tally Charts

Often, information can be collected using a tally chart!

Here is an example:

Title: How Do We Get to School?		
Categories	Tallies	Total
Walk		7
Bike		3
Car		4
Bus		12

 This shows 1 person

 This shows 5 people

Pictograms

Today we are going to be looking at pictograms and how we can draw our own using a tally chart.

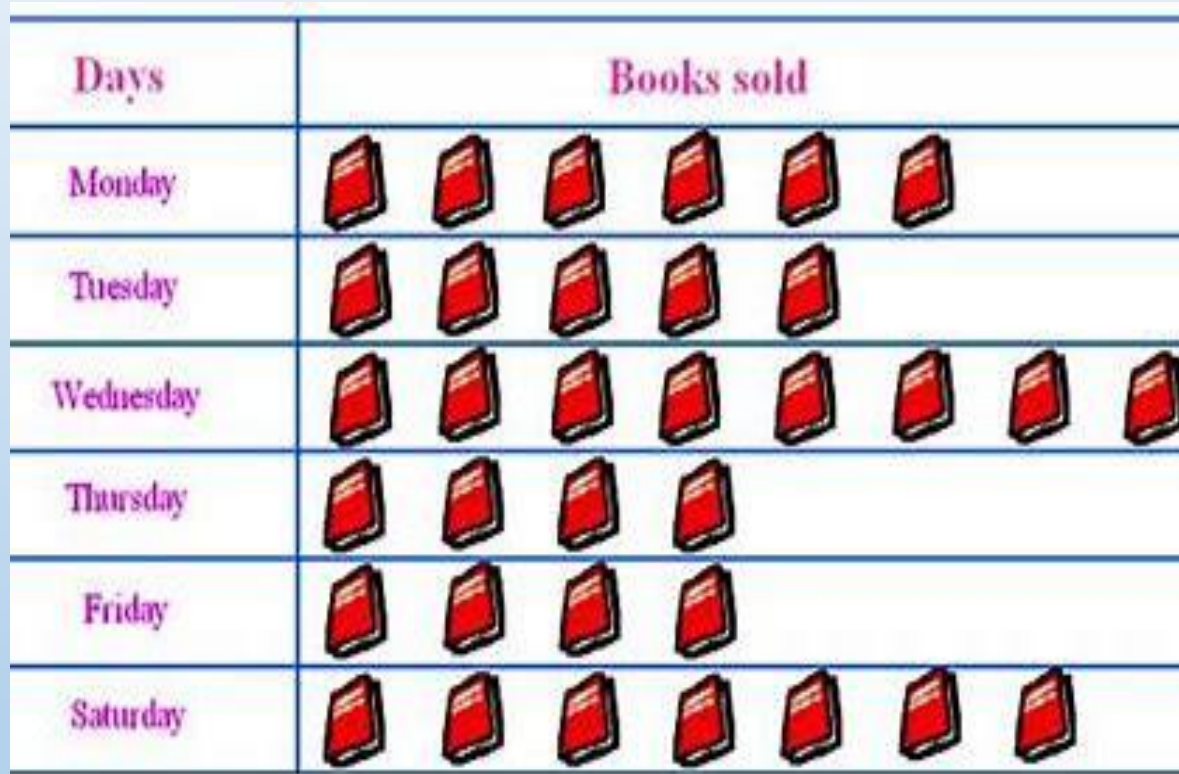
Look at the video to help introduce pictograms

<https://www.youtube.com/watch?v=RQsHOeoz57s>

Today we are focusing on each picture representing one object.

Here is an example of a pictogram

Number of books sold in a week



Key








= 1 book


When drawing a pictogram you need to remember the following things:

- **Title** - Tells you what the pictogram is showing
- **Pictures** - To represent the number of objects
- **Labels** – Tells you what kind of data is shown
- **Key** - Tells you what number each picture is equal to

Pictograms


Lets have a look at the tally chart you complete in Session 1 and make a pictogram together.

Animal	Tally	Total
Lion 	 	12
Penguin 	 	8
Elephant 		4
Tiger 	 	10
Zebra 		4
Bird 		4
Panda 	 	6

Animal	Tally	Total
Lion 	 	12



Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

<u>Key</u>		= one animal
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Lets start by looking at the lion first.

Step One – Look at the total on the tally chart for the Lion.



Step Two- Look at the key to see what each picture represents.

Step Three- Draw number of pictures to represent number (this would be 12 lions because there are 12 in total).

Penguin 		8
---	---	---



Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

Now lets look at the penguins.

Step One – Look at the total on the tally chart for the Penguins.

Step Two- Look at the key to see what each picture represents.

Step Three- Draw number of pictures to represent number (this would be 8 penguins because there are 8 in total).

<u>Key</u>		= one animal
------------	---	--------------

Elephant






IIII

4



Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

Key



= one animal

Now lets look at the elephants.

Step One – Look at the total on the tally chart for the Elephants.





Step Two- Look at the key to see what each picture represents.

Step Three- Draw number of pictures to represent number (this would be 4 elephants because there are 4 in total).

Tiger 		10
---	---	----



Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

<u>Key</u>		= one animal
------------	---	--------------

Now lets look at the tigers.

Step One – Look at the total on the tally chart for the tigers.






Step Two- Look at the key to see what each picture represents.

Step Three- Draw number of pictures to represent number (this would be 10 tigers because there are 10 in total).

Zebra 		4
---	--	---



Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

<u>Key</u>		= one animal
------------	---	--------------

Now lets look at the zebra.

Step One – Look at the total on the tally chart for the zebras.

Step Two- Look at the key to see what each picture represents.

Step Three- Draw number of pictures to represent number (this would be 4 zebra because there are 4 in total).

Bird









||||

4



Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

Key




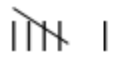
= one animal

Now lets look at the birds.

Step One – Look at the total on the tally chart for the birds.








Step Two- Look at the key to see what each picture represents.

Step Three- Draw number of pictures to represent number (this would be 4 birds because there are 4 in total).

Panda 		6
---	---	---



Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

<u>Key</u>		= one animal
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Finally, lets look at the pandas.

Step One – Look at the total on the tally chart for the pandas.

Step Two- Look at the key to see what each picture represents.

Step Three- Draw number of pictures to represent number (this would be 6 pandas because there are 6 in total).

Session 2 Task



Using the tally chart that has been given to you, create a pictogram.
You can use the template given to you or use your own one.

How many different mini beasts were seen on a spring walk

Mini beast	Tally	Total
Butterfly	I	6
Ladybird		12
Worm		3
Spider		5
Snail		2

Title: _____

Key:

Session 2- Challenge



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

Tim	
Sally	
Tom	
Kate	

How could you improve the pictogram?

Complete the pictogram using the data given.

Name	Tally of goals scored
Raj	
Mark	
Rose	
Amal	

Raj	Mark	Rose	Amal





= 1 goal

Session 3 Recap

Tally Charts

Often, information can be collected using a tally chart!

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Walk		7
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 This shows 1 person








 This shows 5 people

Session 3 Recap

Pictograms- How to draw a pictogram



Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

Key



= one animal

Step One – Look at the total on the tally chart.








Step Two- Look at the key to see what each picture represents.

Step Three- Draw number of pictures to represent number

Session 3 Recap

Pictograms – What is needed in a pictogram

Number of animals at the zoo

Animal	Number at zoo
Lion	
Penguin	
Elephant	
Tiger	
Zebra	
Bird	
Panda	

Key



= one animal

When drawing a pictogram you need to remember the following things:

Title- Tells you what the pictogram is showing

Pictures - To represent the number of objects

Labels – Tells you what kind of data is shown

Key- Tells you what number each picture is equal to

Look at the following tally chart



Mini beast	Tally	Total
Butterfly		12
Ladybird		17
Worm		3
Spider		20

You would have to draw a lot of pictures to complete this tally chart!

Instead, you can change the key. Each picture could represent more than one. For example, it could represent 2 of the object.

Lets have a look together at drawing the pictogram from this tally chart.

Mini beast	Tally	Total
Butterfly		12



Number of mini beasts on Spring walk

Mini beast	Number on Spring walk
Butterfly	

Key  = two mini beasts

Lets start by looking at the butterfly first.

Step One – Look at the total on the tally chart for the butterflies.

Step Two- Look at the key to see what each picture represents (this time each picture represents 2).

Step Three- Draw number of pictures to represent number. If each butterfly represents 2, then we need to count in 2s to make 12.

Step Four- Check you have drawn the correct number of pictures by counting in 2s

Ladybird		17
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Number of mini beasts on Spring walk

Mini beast	Number on Spring walk
Butterfly	
Ladybird	

Key  = two mini beasts

Lets look at the ladybird.

Step One – Look at the total on the tally chart for the ladybirds.

Step Two- Look at the key to see what each picture represents (this time each picture represents **2**).

Step Three- Draw number of pictures to represent number.
If each ladybird represents 2, then we need to count in 2s to make 17.





WAIT! 17 cannot be split into 2! Show this by dividing the picture by 2 (only showing half of it) This will represent 1.

Step Four- Check you have drawn the correct number of pictures by counting in 2s (and then adding the extra 1)

Worm		3
------	--	---



Number of mini beasts on Spring walk

Mini beast	Number on Spring walk
Butterfly	
Ladybird	
Worm	  2 3

Key  = two mini beasts

Lets look at the worm.

Step One – Look at the total on the tally chart for the worms.

Step Two- Look at the key to see what each picture represents (this time each picture represents 2).

Step Three- Draw number of pictures to represent number.

If each worm represents 2, then we need to count in 2s to make 3.

WAIT! 3 cannot be split into 2! Show this by dividing the picture by 2 (only showing half of it) This will represent 1.

Step Four- Check you have drawn the correct number of pictures by counting in 2s (and then adding the extra 1)

Spider		20
--------	--	----



Number of mini beasts on Spring walk

Mini beast	Number on Spring walk
Butterfly	
Ladybird	
Worm	
Spider	 2 4 6 8 10 12 14 16 18 20

Key  = two mini beasts

Finally lets look at the spiders.

Step One – Look at the total on the tally chart for the spiders.

Step Two- Look at the key to see what each picture represents (this time each picture represents **2**).



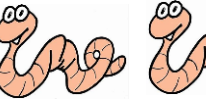

Step Three- Draw number of pictures to represent number. If each spider represents 2, then we need to count in 2s to make 20.

Step Four- Check you have drawn the correct number of pictures by counting in 2s

Here is your completed pictogram!



Number of mini beasts on Spring walk

Mini beast	Number on Spring walk
Butterfly	
Ladybird	
Worm	
Spider	 2 4 6 8 10 12 14 16 18 20

Remember, that if the key is not 1, you may need to represent the picture differently.

For example, the key here is that each picture represents 2.

There were **3** worms on the walk. Therefore the worm has been cut in half to show it represent 1.

Key



= two mini beasts

Session 3 Task



Choose a tally chart to draw a pictogram.



Task A – The key would represent **1** object





Task B – The key would represent **2** objects





Task C – Choose a suitable key (maybe not 1!)

You can use the template in Session 3 to help you again or draw it yourself.

If you would like to add your own option then you can! For example adding an extra row for favourite pet (fish for example)

Favorite Pets		
Pet	Tally Marks	Number
		10
		4
		6

Fruit Basket		Number of Fruits
Fruit		
	Apple	
	Mango	
	Pineapple	
	Strawberry	

	apples					
	oranges					
	pears					
	mangos					

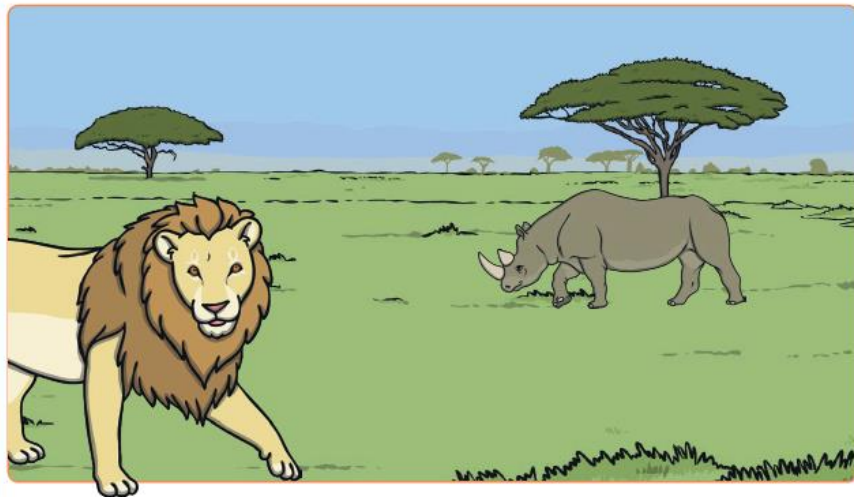
Session 3- Challenge



Draw Pictograms (2, 5 and 10)

The children from Twinkl Academy have been collecting data about their favourite safari animals. Anna and Raj are talking about how best to represent this data in a pictogram.

	Tally
Lion	
Elephant	
Buffalo	
Rhino	
Leopard	



I think each symbol should represent 10 children.

I think each symbol should represent 2 children.



Who do you agree with? Explain why.

What other scales could be used?

Favorite Ice Cream In Our Class	
chocolate	
vanilla	
other	

= 2 people

What are the totals for each flavour?