



Overview of activities, learning and progression - Information for parents

This unit of work is for 3 days, the days that the children are not in school during the week 13th-17th July. There are suggested activities to continue with this unit over the holidays.

We are starting a new unit of work this week on **statistics**.

The learning objectives for this area of maths are:

- To interpret and present data using bar charts, pictograms and tables.
- To solve one step and two step questions using information presented in bar chart, pictograms and tables.

There are 3 recorded video lessons this week with activities for the children to do as they go along, and then some to complete after. The children will need to pause the video at points to complete tasks. There are some activities to complete after that are attached. They can then mark their work using the answer sheets.

Some children will be able to follow along pretty independently but others may need some support, or for you to go over key parts. In class we would differentiate by the questions we ask, the resources and support we provide. Clearly we can't do this remotely in the same way but we have tried to include different levels of questions and challenges where possible.

If you would like to have a paper copy of any of the activities that we include this week please let us know, we are happy to print off packs and leave them at the office for you to collect. year3@coleridgeprimary.net

Useful website links and other resources to support the learning this week

<https://mathsframe.co.uk/en/resources/resource/51/bar-charts> Choose the level that you want to look at some bar charts and answer questions about them online.

<https://www.topmarks.co.uk/maths-games/5-7-years/data-handling> Lots of different online games you can play looking at different data.

<https://www.bbc.co.uk/bitesize/articles/zsrgp4j> Aimed at year 4.

Statistics pack - saved as 'extra resource'

Lesson 1

2.

Starter: Follow along with Miss Thorn doing some mental maths in a video: <https://www.youtube.com/watch?v=9OPnDuj5rnk&feature=youtu.be>

Or use this paper copy if you prefer:

- 1) **Start with 50**, divide it by 2, add 10, divide by 5, double it, add 13, divide by 3 = _____
- 2) **Start with 450**, find half, subtract 5, quarter it, divide by 5, times 3 = _____
- 3) **Start with 1000**, take away 150, divide by 2, take away 5×5 , quarter it = _____
- 4) **Start with 30**, times 3, add 6, find a third, divide by 11, multiply by 10 = _____
- 5) **Start with 6**, add 14, times 3, divide by 10, multiply by 8, half it = _____

The answers will be given in the video. If you're using the paper copy the answers are on the **answer sheet**.

Main:

If possible follow along with this video lesson from Miss Thorn, completing mini tasks as you go along. You could use the paper copy below instead if this works better for you. <https://www.youtube.com/watch?v=P9PCyDU3JUs&feature=youtu.be>

We are starting a new unit of work on statistics and data. Do you know what this mean?

Data are individual pieces of information, ie how many children in a class ride their bike to school, or how many animals in a zoo eat bananas. Statistics is to do with the collecting and analysing the pieces of data and using it to make statements, ie 'In Coleridge Primary school $\frac{1}{4}$ of the children ride their bike to school, or In zoo's across England, $\frac{1}{4}$ of the animals eat bananas as part of their diet. (This data and statistics are not correct, just made up to demonstrate what the words mean!).

What does this show? Do you know what we call this way of showing data?

Class	Books read
Class 1	
Class 2	
Class 3	
Class 4	

Can you make some statements using this **pictogram**?

Is there anything that you need to know to give specific details?

This pictogram shows how many books different classes read over a half term.

Class	Books read
Class 1	
Class 2	
Class 3	
Class 4	

Notice how the key tells us that each book represents 5 books read.

Why isn't the key 1 book = 1 book read?

Because each class had read more than a few books and it would take a lot of space to show 25 books, which class 4 needs.

Key
 = 5 books

- Which class read the most books?
- Which class read the least books?
- How many more books did class 3 read than class 2?
- What other questions could you ask about the pictogram?

Today we are looking at, and creating our own pictograms as a way of displaying certain data.

Activity 1

Use the clues to complete the pictogram to show how many apples each group collect.  = 10 apples.

- Group 6 collected twice as many as group 2
- Group 3 collected 35 more apples than group 5
- Group 1 collected a quarter of the amount group 4 collected.

Group	Apples
1	
2	
3	
4	
5	
6	

Check the answers on the **answer sheet**.

Activity 2 Use the information to complete the pictogram below.

4.

Try this challenge:

Daniel, Charlotte and Freddie record the scores of six football matches. Unfortunately, Freddie spilt paint on the results. Help them record the possible results based on their memories of the matches.

Match	Number of goals ☹ = 2 goals
1	
2	☹ ☹ ☹
3	☹
4	
5	☹ ☹ ☹ ☹
6	☹



There were 3 more goals in match 1 than there were in match 3



1 less goal was scored in match 6 than match 2



There were at least double the goals scored in match 4 as there were in match 3

Check the answers on the **answer sheet**.

Activity 3: Now you're going to have a go creating a pictogram to show the information below:

How could we use this information to create a pictogram?

What key will you use?

Number of children who cycled to school each day.

Monday - 16
 Tuesday - 10
 Wednesday - 15
 Thursday - 6
 Friday - 20

Day	Number of children who cycled
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Your table will need to look like this:

Look on the **answer sheet** to see how mine looked. You might use a different key.

Activity 4

Can you write some questions about your pictogram and answer them?

For example:

On which day did most people cycle?

What is the difference between the number of children who cycled on Monday and Thursday?

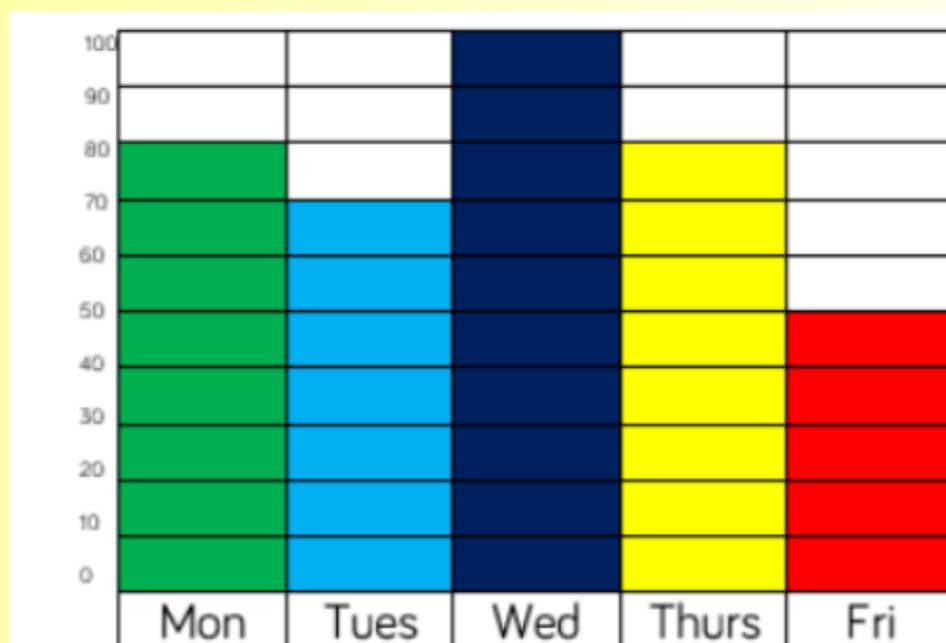
Lesson 2

Starter: Choose a mental maths test as usual and then mark your answers.

Main: If you can follow the video lesson: <https://www.youtube.com/watch?v=L5HOUfFxWa8&feature=youtu.be> If you prefer, you can follow this paper copy instead:

Teaching: Today we are looking at another way that we can present information. Have a look at this:

What is this called? What could it represent?

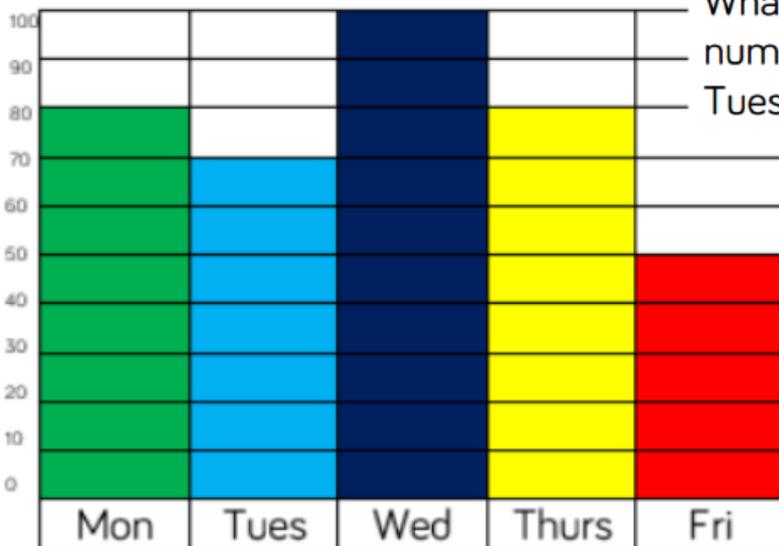


Notice the different axis (the horizontal and vertical lines.)

What is the y axis (the vertical line) going up in ?

What can you say from looking at this type of chart?

The bar chart shows how many children participate in after school clubs.



Which day is the most popular? By how many children?
 Which day is the least popular?
 What is the difference between the number of children participating on Tuesday and on Thursday?

Try and write in full sentences.

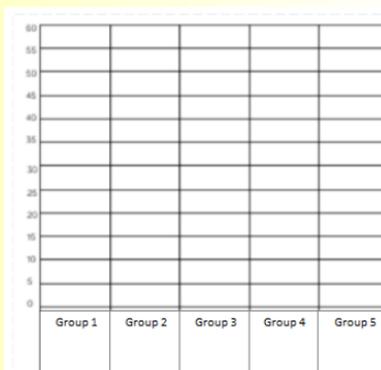
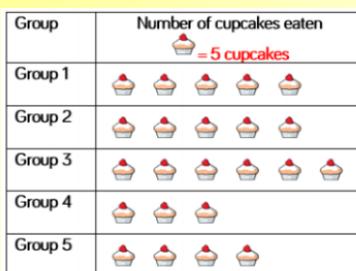
Check your answers on the **answer sheet**.

Activity 2:

You are now going to use the information from this pictogram (like we looked at yesterday) to create a bar chart. Use the sheet saved, 'Lesson 2 pictogram to bar chart'

Activity

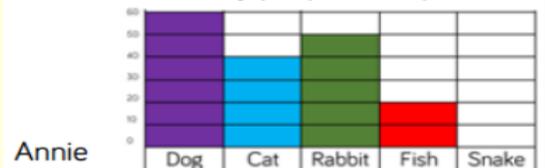
Use the information in the pictogram to complete the bar chart.



When you have finished check it against the one in the **answer sheet**.

Then have a go at the challenge:

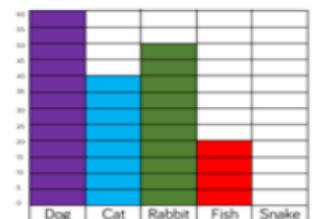
Annie and Chris have drawn bar charts to show how many people have pets.



Annie



I asked more people because my scale goes up in larger jumps.



Chris



I asked more people because my bars are taller.

This is saved as a sheet so you can see it more clearly.

Check this on the **answer sheet** when you have finished. remember the focus on these types of questions is on your reasoning, not giving a one word answer. You must explain/prove what you think.

Who is correct? Explain why.

Activity 3

7.

As we just saw, the axis that shows the number of children, animals, time spent or whatever it might be, can change. Sometimes it works best to go up in jumps on 1, sometimes 2, sometimes 5. As long as the jumps are equal you have the freedom to choose this, but you do need to choose sensibly—picking the jumps that make the most sense for the data that you have. For example if you were asking how many children in your school have dogs and 90 said they did, would it be a good idea to go up in jumps on 1? Your graph would need to be really big and would take a long time to make. Have a look at the information in the data chart below. You are going to create your own bar chart to show this information, You will need to decide what the jumps on the vertical axis will be.

Activity How could you use the information in the table to create a bar chart?

What scale would you use?

The sports that children in one class play regularly.

Sport	Tally	Number
Football		16
Tennis		14
Rugby		18
Cricket		12
Basketball		8

You can do this on plain or lined paper but there is a sheet of squared paper if you want to use saved for lesson 2.

When you have finished have a look at Miss Thorn's, in the **answer sheet**. Does it look similar? Did you remember to give your bar chart a title? Did you label the axis? Do they go up in clear jumps? Have you presented the results clearly?

Activity 4:

Now you are going to collect some information from your friends/family and present it in a bar chart.

First you need to decide what you want to find out.

Choose 4/5/6 categories that the people that you ask can choose from. You might have a category that is 'other' to give people the choice to choose another option.

Create a simple tally chart to collect your information.

Here is my example:

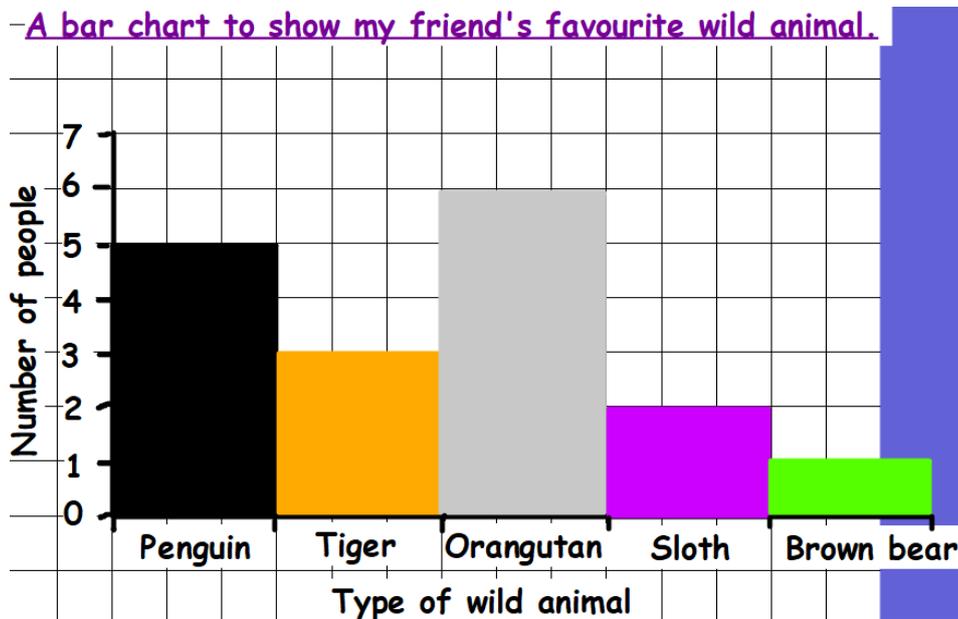
What is your favourite wild animal?

Penguin	
Tiger	
Sloth	
Brown bear	
Orangutan	

You might be able to ask lots of your family or friends, but if you can't you could guess their answers, the focus is really on presenting the information. Try and choose a question that is going to give a variety of answers. 8.

Once you have collected your information you now need to turn it into a bar chart. Make sure your bar chart has: A title stating what it shows, 2 clearly labelled axis, Clear jumps that your vertical axis goes up in. You might want to collect the information today in your tally chart, and then make the bar chart tomorrow. See how you get on.

Here is my example:



If you have time you could then ask someone in your family or a friend a question about what your bar chart shows. E.g: How many children liked penguins best? How many children preferred tigers over brown bears?

Lesson 3 You can follow this whole lesson from the recorded video lesson:

<https://www.youtube.com/watch?v=6JfApsXUBhc&feature=youtu.be>

Or follow this paper copy

Starter:

What do you think this table shows?

	Lottie	John	Chris	Ann	Joanne	Jack
Football	✓		✓	✓		✓
Rugby			✓		✓	
Tennis	✓	✓		✓		✓
Cricket			✓		✓	
Basketball		✓	✓	✓		✓

The table shows which sport children play.

Which children play football and tennis?
 Which is the most popular sport?
 Which is the least popular sport?
 Who plays the most sport?

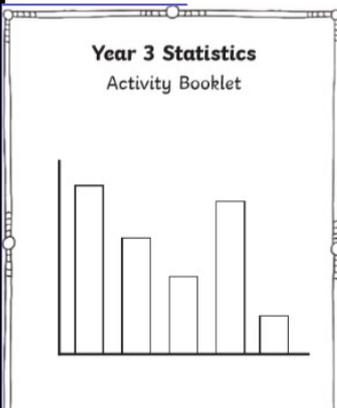
Main:

You might still have your bar chart from yesterday to finish off, perhaps you only collected your information in a tally chart and now need to put it into a bar chart. Do that now if you haven't already.

Activities:

There are a few different activities for you to choose from today, and over the next few days (Monday or Tuesday of the final week, or in the summer holidays.)

There is a data and statistics activity pack: This is saved under lesson 3 for this week.



Collecting and Presenting Data

30 children were asked to choose what their favourite activity for a free afternoon at home would be. Here are their answers.

Trip to the park!	Swimming!	Play computer games!	Swimming!	Trip to the park!	Baking!
Baking!	Reading!	Trip to the park!	Baking!	Play computer games!	Reading!
Play computer games!	Play computer games!	Trip to the park!	Swimming!	Play computer games!	Swimming!
Play computer games!	Reading!	Baking!	Swimming!	Baking!	Swimming!
Play computer games!	Swimming!	Swimming!	Play computer games!	Reading!	Trip to the park!

1. Fill in the tally chart and then calculate the total of each response.
2. Draw a bar chart to present your data.

Activity	Tally	Total
Swimming		
Trip to the park!		

Bar Chart to Show Favourite Free Time Activities

Favourite Colour Bar Graph and Tallying

Here is a tally chart to show the favourite colour of a group of children.

Colour	Number of Children
Red	5
Orange	9
Yellow	5
Blue	2
Purple	1
Green	7

Complete the tally chart and bar charts.

There is an **answer pack** to check your answers after, saved under lesson 3.

Year 3 Statistics

Name _____

1. The pictogram shows the number of animals on a farm.

Animal	Number on Farm
Sheep	☆☆☆☆
Horses	☆☆
Chickens	☆☆☆☆
Cows	☆☆☆☆

☆ = 10 animals

How many cows are there on the farm? _____ cows (1 mark)

How many more sheep are there than horses? _____ (1 mark)

How many animals are there altogether? _____ animals (1 mark)

2. Class 3 voted for their favourite drink. The results are shown in the pictogram.

Drink	Number of children
Apple Juice	☆☆☆☆
Orange Juice	☆☆☆☆
Milk	☆☆☆☆
Water	☆☆☆☆

☆ = 2 drinks

7 people like water the most. Complete the pictogram. (1 mark)

Complete the sentences.

The most popular drink is _____ (1 mark)

3 more children like milk than _____ (1 mark)

Less children like _____ than water. (3 marks)

3. The table and bar chart show how many children attend breakfast club each day.

Day	Number of Children
Monday	30
Tuesday	
Wednesday	25
Thursday	5
Friday	

Complete the table and bar chart. (3 marks)

How many more children attend on Monday _____ (1 mark)

4. Use the information to complete the missing labels on the bar chart.

Netball is the most popular sport. Three times as many people like netball as like rugby. (1 mark)

A statistics assessment to complete.

There is an **answer sheet** to see how you get on with this.

You could complete these extra bits over the holidays. There are also some other ideas for online games, ad work packs listed on page one of this pack.