Spring Scheme of Learning

Year 4/5

#MathsEveryoneCan

2019-20
In this document, you will find suggestions of how you may structure a progression in learning for a mixed-age class.

Firstly, we have created a yearly overview. Each term has 12 weeks of learning. We are aware that some terms are longer and shorter than others, so teachers may adapt the overview to fit their term dates. The overview shows how the content has been matched up over the year to support teachers in teaching similar concepts to both year groups. Where this is not possible, it is clearly indicated on the overview with 2 separate blocks.

For each block of learning, we have grouped the small steps into themes that have similar content. Within these themes, we list the corresponding small steps from one or both year groups. Teachers can then use the single-age schemes to access the guidance on each small step listed within each theme. The themes are organised into common content (above the line) and year specific content (below the line). Moving from left to right, the arrows on the line suggest the order to teach the themes.
How to use the mixed-age SOL

Here is an example of one of the themes from the Year 1/2 mixed-age guidance.

**Subtraction**

<table>
<thead>
<tr>
<th>Year 1 (Aut B2, Spr B1)</th>
<th>Year 2 (Aut B2, B3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many left? (1)</td>
<td>Subtract 1-digit from 2-digits</td>
</tr>
<tr>
<td>How many left? (2)</td>
<td>Subtract with 2-digits (1)</td>
</tr>
<tr>
<td>Counting back</td>
<td>Subtract with 2-digits (2)</td>
</tr>
<tr>
<td>Subtraction - not crossing 10</td>
<td>Find change - money</td>
</tr>
<tr>
<td>Subtraction - crossing 10 (1)</td>
<td></td>
</tr>
<tr>
<td>Subtraction - crossing 10 (2)</td>
<td></td>
</tr>
</tbody>
</table>

In order to create a more coherent journey for mixed-age classes, we have re-ordered some of the single-age steps and combined some blocks of learning e.g. Money is covered within Addition and Subtraction.

The bullet points are the names of the small steps from the single-age SOL. We have referenced where the steps are from at the top of each theme e.g. Aut B2 means Autumn term, Block 2. Teachers will need to access both of the single-age SOLs from our website together with this mixed-age guidance in order to plan their learning.

**Points to consider**

- Use the mixed-age schemes to see where similar skills from both year groups can be taught together. Learning can then be differentiated through the questions on the single-age small steps so both year groups are focusing on their year group content.
- When there is year group specific content, consider teaching in split inputs to classes. This will depend on support in class and may need to be done through focus groups.
- On each of the block overview pages, we have described the key learning in each block and have given suggestions as to how the themes could be approached for each year group.
- We are fully aware that every class is different and the logistics of mixed-age classes can be tricky. We hope that our mixed-age SOL can help teachers to start to draw learning together.
## WRM – Year 4/5 – Scheme of Learning 2.0s

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
<th>Week 7</th>
<th>Week 8</th>
<th>Week 9</th>
<th>Week 10</th>
<th>Week 11</th>
<th>Week 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Autumn</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number: Place Value</td>
<td>Number: Addition and Subtraction</td>
<td>Number: Multiplication and Division</td>
<td>Measurement: Length, Perimeter and Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number: Multiplication and Division</td>
<td>Number: Fractions</td>
<td>Number: Decimals (including Y5 Percentages)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Summer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number: Decimals (including Y4 Money)</td>
<td>Measurement: Time</td>
<td>Statistics</td>
<td>Geometry: Properties of Shape</td>
<td>Y4: Consolidation</td>
<td>Y5: Converting Units &amp; Volume</td>
<td>Consolidation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In this section, content from single-age blocks are matched together to show teachers where there are clear links across the year groups. Teachers may decide to teach the lower year’s content to the whole class before moving the higher year on to their age-related expectations. The lower year group is not expected to cover the higher year group’s content as they should focus on their own age-related expectations.

In this section, content that is discrete to one year group is outlined. Teachers may need to consider a split input with lessons or working with children in focus groups to ensure they have full coverage of their year’s curriculum. Guidance is given on each page to support the planning of each block.

The themes should be taught in order from left to right.
Year 4/5 | Summer Term | Week 4 to 5 – Statistics

Statistics

Common Content

**Line graphs**
- Year 4 (Sum B4)
  - Introducing line graphs
  - Line graphs
- Year 5 (Aut B3)
  - Read and interpret line graphs
  - Draw line graphs
  - Use line graphs to solve problems

Teachers may decide to start this block by recapping bar charts with both year groups.

Both year groups then look at line graphs. Year 4 focus on reading and interpreting line graphs whilst Year 5 move on to drawing them.

Year 5 then read and interpret tables. Year 4 may look at aspects of this to support their other statistics work including recapping pictograms and tables from Year 3.

**Bar charts**
- Year 4 (Sum B4)
  - Interpret charts
  - Comparison, sum & difference

**Tables**
- Year 5 (Spr B3)
  - Read and interpret tables
  - Two-way tables

Year Specific
Block 3 – Statistics

Theme 1- Bar Charts
Interpret Charts

Notes and Guidance

Children revisit how to use bar charts, pictograms and tables to interpret and present discrete data. They decide which scale will be the most appropriate when drawing their own bar charts. Children gather their own data using tally charts and then present the information in a bar chart. Questions about the data they have gathered should also be explored so the focus is on interpreting rather than drawing.

Mathematical Talk

What are the different ways to present data?
What do you notice about the different axes?
What do you notice about the scale of the bar chart?
What other way could you present the data shown in the bar chart?
What else does the data tell us?
What is the same and what is different about the way in which the data is presented?
What scale will you use for your own bar chart? Why?

Complete the table using the information in the bar chart.

<table>
<thead>
<tr>
<th>Transport</th>
<th>Number of children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td></td>
</tr>
<tr>
<td>Walk</td>
<td></td>
</tr>
<tr>
<td>Bus</td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td></td>
</tr>
</tbody>
</table>

What is the most/least popular way to get to school?
How many children walk to school?

Produce your own table, bar chart or pictogram showing how the children in your class travel to school.

Represent the data in each table as a bar chart.

<table>
<thead>
<tr>
<th>Day</th>
<th>Number of tickets sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>55</td>
</tr>
<tr>
<td>Tuesday</td>
<td>30</td>
</tr>
<tr>
<td>Wednesday</td>
<td>45</td>
</tr>
<tr>
<td>Thursday</td>
<td>75</td>
</tr>
<tr>
<td>Friday</td>
<td>85</td>
</tr>
</tbody>
</table>

8
Halifax City Football Club sold the following number of season tickets:
- Male adults – 6,382
- Female adults – 5,850
- Boys – 3,209
- Girls – 5,057

Would you use a bar chart, table or pictogram to represent this data? Explain why.

Possible answer: I would represent the data in a table because it would be difficult to show the exact numbers accurately in a pictogram or bar chart.

Alex wants to use a pictogram to represent the favourite drinks of everyone in her class.

It is not a good idea, because it would be difficult to show amounts which are not multiples of 5.

Possible response: I would tell Jack to use a different scale for his bar chart because the numbers in the table are quite large. The scale could go up in 5s because the numbers are all multiples of 5. Jack needs to record the title and he needs to label the axes.

What advice would you give Jack about the scale he has chosen? What would be a better scale to use? Is there anything else missing from the bar chart?
Children solve comparison, sum and difference problems using discrete data with a range of scales. They use addition and subtraction to answer questions accurately and ask their own questions about the data in pictograms, bar charts and tables. Although examples of data are given, children should have the opportunity to ask and answer questions relating to data they have collected themselves.

**Mathematical Talk**

What does a full circle represent in the pictogram?
What does a half/quarter/three quarters of the circle represent?
What other questions could we ask about the pictogram?
What other questions could we ask about the table?
What data could we collect as a class?
What questions could we ask about the data?

**Varied Fluency**

<table>
<thead>
<tr>
<th>Team</th>
<th>Number of house points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sycamore</td>
<td>![Sycamore Pictogram]</td>
</tr>
<tr>
<td>Oak</td>
<td>![Oak Pictogram]</td>
</tr>
<tr>
<td>Beech</td>
<td>![Beech Pictogram]</td>
</tr>
<tr>
<td>Ash</td>
<td>![Ash Pictogram]</td>
</tr>
</tbody>
</table>

How many more points does the Sycamore team have than the Ash team?
How many points do Beech and Oak teams have altogether?
How many more points do Ash need to be equal to Oak?

How many people voted in total?

\[ \frac{1}{4} \text{ of the votes were for } \]

7 more people voted for ________ than __________.

As a class, decide on some data that you would like to collect, for example: favourite books, films, food. Collect and record the data in a table. Choose a pictogram or a bar chart to represent your data, giving reasons for your choices. What questions can you ask about the data?
Rosie has read the bar chart incorrectly. 15 people chose vanilla, 19 people chose chocolate, 10 chose strawberry and 12 chose mint. That means 56 people were asked altogether.

**True or false?**

- The same number of people visited Maltings Castle as Film Land Cinema on Saturday.
- Double the number of people visited Animal World Zoo on Sunday than Saturday.
- The least popular attraction of the weekend was Primrose Park.
- False The Film Land Cinema had 9 more visitors than Maltings Castle
- True 1,282 doubled is 2,564
- True Animal World Zoo - 3,846 Maltings Castle - 3,865 Primrose Park - 3,277 Film Land Cinema - 3,649
Block 3 - Statistics

Theme 2 - Line Graphs
The graph shows the temperature in the playground during a morning in April.

The temperature at 9 a.m. is _______ degrees.

The warmest time of the morning is ________.

Class 4 grew a plant. They measured the height of the plant every week for 6 weeks.

The table shows the height of the plant each week.

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 cm</td>
<td>7 cm</td>
<td>9 cm</td>
<td>12 cm</td>
<td>14 cm</td>
<td>17 cm</td>
</tr>
</tbody>
</table>

Create a line graph to represent this information.

What scale would you use on the x and y axes?

Between which two weeks did the plant reach a height of 10 cm?
Jack launched a toy rocket into the sky. After 5 seconds the rocket fell to the ground. Which graph shows this? Explain how you know.

Graph A
The height of the rocket increases then decreases quickly again, returning to a height of 0 at 5 seconds.

Example story: A bird flew up from the ground. It continued to fly upwards for 5 seconds then flew at the same height for another 3 seconds.

Make up your own story for the other graph.

Tommy created a line graph to show the number of dogs walking in the park one afternoon.

Tommy says,
At half past one there are 1.5 dogs in the park.

Why is Tommy incorrect?

What would be a better way of presenting this data?

Tommy is incorrect because you cannot have 1.5 dogs.

A better way of presenting this data would be using a bar chart, pictogram or table because the data is discrete.
Line Graphs

Notes and Guidance

Building from the last step, children continue to solve comparison, sum and difference problems using continuous data with a range of scales. They use addition and subtraction to answer questions accurately and ask their own questions about the data in line graphs. Although examples of data are given, children need to have the opportunity to ask and answer questions relating to data they have collected themselves.

Varied Fluency

The graph shows the growth of a plant over 6 months.
• How tall was the plant when it was measured in May?
• In what month did the plant first reach 50 cm?
• How many centimetres did the plant grow between March and July?
• What was the difference between the height of the plant in February and the height of the plant in April?

The graph shows the weight of a puppy as it grows.
When the puppy is ____ months old the weight is ____kg
Between month ____ and month ____ the puppy increased by ____ kg

Mathematical Talk

Is this discrete or continuous data? How do you know?

What do you notice about the scale of the graph?

How could you make sure you read the graph accurately?

What other questions could you ask about the graph?

How many different ways can you fill in the stem sentences?
Eva measured the temperature of a cup of tea every 30 minutes for 2 hours. The graph shows Eva’s results.

Eva says, In the first 45 minutes the temperature of the tea had dropped by 20 degrees.

Do you agree with Eva? Explain why.

I do not agree with Eva. At 9 a.m. the temperature was 80 degrees and at 9.45 a.m. the temperature was 50 degrees, so it had dropped 30 degrees not 20 degrees.

Write a story to match the graph.

Example story: Mo drove 20 miles in his lorry. At half past 9 he had a 15 minute rest then drove for another 30 miles until he reached his destination at 10:30 a.m.
Children read and interpret line graphs. They make links back to using number lines when reading the horizontal and vertical axes. Children can draw vertical and horizontal lines to read the points accurately.

Encourage children to label all the intervals on the axes to support them in reading the line graphs accurately. When reading between intervals on a line graph, children can give an estimate of the value that is represented.

How can we use a ruler to support us to read values from a line graph?

Where do we see examples of line graphs in real life?

How is the line graph different to a bar chart? How is it the same?

How can we estimate the value between intervals? Does it matter if we are not perfectly accurate? Why?
The graph shows the number of cars sold by two different companies.

Key

- Ace Motors
- Briggs

2,000
Ace 5,500
Briggs 4,500
Difference of 1,000
Ace sold more.

Points on graph are all half an interval up from Briggs.

- How many more cars did Ace Motors sell than Briggs in April?
- From January to March, how many cars did each company sell? Who sold more? How many more did they sell?
- Crooks Motors sold 250 more cars than Briggs each month. Plot Crooks Motors’ sales on the graph.

Match the graph to the activity.

A car travels at constant speed on the motorway.
A car is parked outside a house.
A car drives to the end of the road and back.

The first graph matches with the second statement.
Second graph with the third statement.
Third graph with the first statement.
Children use their knowledge of scales and coordinates to represent data in a line graph. Drawing line graphs is a Year 5 Science objective and has been included here to support this learning and link to reading and interpreting graphs. Children draw axes with different scales depending on the data they are representing. Encourage children to collect their own data to present in line graphs focusing on accurately plotting the points.

The table shows average rainfall in Leicester over a year. Complete the graph using the information from the table.

<table>
<thead>
<tr>
<th>Month</th>
<th>Rainfall (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>54</td>
</tr>
<tr>
<td>Feb</td>
<td>40</td>
</tr>
<tr>
<td>Mar</td>
<td>38</td>
</tr>
<tr>
<td>Apr</td>
<td>38</td>
</tr>
<tr>
<td>May</td>
<td>48</td>
</tr>
<tr>
<td>Jun</td>
<td>46</td>
</tr>
<tr>
<td>Jul</td>
<td>58</td>
</tr>
<tr>
<td>Aug</td>
<td>60</td>
</tr>
<tr>
<td>Sep</td>
<td>50</td>
</tr>
<tr>
<td>Oct</td>
<td>57</td>
</tr>
<tr>
<td>Nov</td>
<td>65</td>
</tr>
<tr>
<td>Dec</td>
<td>50</td>
</tr>
</tbody>
</table>

On the rainfall graph, if the vertical axis went up in intervals of 5 mm, would the graph be more or less accurate? Why?

What scale will you use for the rupees on the conversion graph?

Which axis will you use for the pounds on the conversion graph? Explain why you have chosen this axis.

How can we use multiples to support our choice of intervals on the vertical axis?

Here is a table showing the conversion between pounds and rupees. Present the information as a line graph.

<table>
<thead>
<tr>
<th>Pounds</th>
<th>Rupees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>2</td>
<td>160</td>
</tr>
<tr>
<td>3</td>
<td>240</td>
</tr>
<tr>
<td>4</td>
<td>320</td>
</tr>
<tr>
<td>5</td>
<td>400</td>
</tr>
<tr>
<td>6</td>
<td>480</td>
</tr>
<tr>
<td>7</td>
<td>560</td>
</tr>
<tr>
<td>8</td>
<td>640</td>
</tr>
<tr>
<td>9</td>
<td>720</td>
</tr>
<tr>
<td>10</td>
<td>800</td>
</tr>
</tbody>
</table>
Draw Line Graphs

Reasoning and Problem Solving

Encourage the children to collect their own data and present it as a line graph. As this objective is taken from the science curriculum, it would be a good idea to link it to investigations. Possible investigations could be:

- Measuring shadows over time
- Melting and dissolving substances
- Plant growth

Here is a table of data.

<table>
<thead>
<tr>
<th>Time (min)</th>
<th>15</th>
<th>30</th>
<th>45</th>
<th>60</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance (km)</td>
<td>25</td>
<td>46</td>
<td>67</td>
<td>72</td>
<td>98</td>
</tr>
</tbody>
</table>

Which intervals would be the most appropriate for the vertical axis of the line graph? Explain your answer.

Children will present a range of line graphs over the year.

Rosie has used the data in the table to plot the line graph.

<table>
<thead>
<tr>
<th>Time</th>
<th>11:00</th>
<th>11:20</th>
<th>11:40</th>
<th>12:00</th>
<th>12:20</th>
<th>12:40</th>
<th>13:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height above ground (m)</td>
<td>0</td>
<td>180</td>
<td>150</td>
<td>200</td>
<td>210</td>
<td>120</td>
<td>0</td>
</tr>
</tbody>
</table>

Children may give different answers but should give clear reasons. Intervals may range from 2s up to 10s. The most appropriate scale may be in 5s.

What mistakes has Rosie made? Can you draw the line graph correctly?

Rosie has plotted the time for 11:40 inaccurately, it should be closer to 160 than 120. She has mixed up the points for 12:20 and 12:40 and plotted them the other way round.
Children use line graphs to solve problems. They use prepared graphs or graphs which they have drawn themselves, and make links to other subjects, particularly Science.

Children solve comparison, sum and difference problems. They can also generate their own questions for others to solve by reading and interpreting the line graphs.

**Mathematical Talk**

How does drawing vertical and horizontal lines support me in reading the line graph?

How will you plan out your own heart rate experiment? What information will you need to gather? What unit will you measure in? How will you label your axes?

Can we measure the temperature in our classroom? How could we gather the data? How could we present the data?

**Notes and Guidance**

What was the highest/lowest temperature?
What time did they occur?
What is the difference between the highest and lowest temperature?
How long did the temperature stay at freezing point or less?

How long did it take for the pulse rate to reach the highest level?
Explain your answer, using the graph to help.

What could have happened at 5 minutes?
What could have happened at 7 minutes?

Estimate what the pulse rate was after 2 and a half minutes. How did you get an accurate estimate?
Problems with Line Graphs

Reasoning and Problem Solving

Carry out your own exercise experiment and record your heart rate on a graph like the one shown in the section above. How does it compare?

Can you make a set of questions for a friend to answer about your graph?

Can you put the information into a table?

Various answers. Children can be supported by being given part-drawn line graphs.

Here is a line graph showing a bath time. Can you write a story to explain what is happening in the graph?

How long did it take to fill the bath?
How long did it take to empty?
The bath doesn't fill at a constant rate. Why might that be?

Discussions around what happens to the water level when someone gets in the bath would be useful. Approximately 9 and a half mins to fill the bath. Approximately 3 and a half mins to empty. One or two taps could be used to fill.
Notes and Guidance

Children read tables to extract information and answer questions. There are many opportunities to link this learning to topic work within class and in other subject areas.

Encourage children to generate their own questions about information in a table. They will get many opportunities to apply their addition and subtraction skills when solving sum and difference problems.

Mathematical Talk

Why are column and row headings important in a table?

If I am finding the difference, what operation do I need to use?

Can you think of your own questions to ask about the information in the table?

Why is it important to put units of measure in the table?

Varied Fluency

Here is a table with information about planets. Use the table to answer the questions.

How many planets take more than one day to rotate?
Which planets take more than one year to make one revolution?
Write the diameter of Jupiter in words.

What is the difference between the diameter of Mars and Earth?
What is the difference between the time for rotation between Mercury and Venus?

Use the table to answer the questions.

How much larger is the population of Liverpool than Coventry?
Which two cities have a combined population of 621,000?

<table>
<thead>
<tr>
<th>Planet</th>
<th>Time for Revolution</th>
<th>Diameter (km)</th>
<th>Time for Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>88 days</td>
<td>4,878</td>
<td>59 days</td>
</tr>
<tr>
<td>Venus</td>
<td>225 days</td>
<td>12,104</td>
<td>243 days</td>
</tr>
<tr>
<td>Earth</td>
<td>365 days</td>
<td>12,756</td>
<td>24 hours</td>
</tr>
<tr>
<td>Mars</td>
<td>687 days</td>
<td>6,794</td>
<td>25 hours</td>
</tr>
<tr>
<td>Jupiter</td>
<td>12 years</td>
<td>142,984</td>
<td>10 hours</td>
</tr>
<tr>
<td>Saturn</td>
<td>29 years</td>
<td>120,536</td>
<td>11 hours</td>
</tr>
<tr>
<td>Uranus</td>
<td>84 years</td>
<td>51,118</td>
<td>17 hours</td>
</tr>
<tr>
<td>Neptune</td>
<td>165 years</td>
<td>49,500</td>
<td>17 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City</th>
<th>Leeds</th>
<th>Wakefield</th>
<th>Bradford</th>
<th>Liverpool</th>
<th>Coventry</th>
</tr>
</thead>
</table>
| Population | 720,000| 316,000   | 467,000  | 440,000   | 305,000 ]
Ron thinks that he won the 100 m sprint because he has the biggest number.

Do you agree?
Explain your answer.

Ron’s number is the biggest but this means he was the slowest therefore he did not win the 100 m sprint.

This table shows the 10 largest stadiums in Europe.

### True or False?
- The fourth largest stadium is the San Siro. **False**
- There are 6 stadiums with a capacity of more than 80,000. **False**
- Three of the largest stadiums are in England. **False**
Two-way Tables

Notes and Guidance

Children read a range of two-way tables. These tables show two different sets of data which are displayed horizontally and vertically.

Children answer questions by interpreting the information in the tables. They complete two-way tables, using their addition and subtraction skills. Encourage children to create their own questions about the two-way tables.

Mathematical Talk

Which column do I need to look in to find the information?
Which row do I need to look in to find the information?

How can I calculate the total of a row/column?
If I know the total, how can I calculate any missing information?

Can you create your own two-way table using information about your class?

Varied Fluency

This two-way table shows the staff at Liverpool police station.

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constable</td>
<td>55</td>
<td>24</td>
<td>79</td>
</tr>
<tr>
<td>Sergeant</td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Inspector</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Chief Inspector</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
<td>34</td>
<td>100</td>
</tr>
</tbody>
</table>

- How many female inspectors are there?
- How many male sergeants are there?
- How many constables are there altogether?
- How many people work at Liverpool police station?
- How many male inspectors and female constables are there altogether?

Complete the table.

<table>
<thead>
<tr>
<th></th>
<th>Man United</th>
<th>Liverpool</th>
<th>Chelsea</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost</td>
<td>36</td>
<td>42</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Won</td>
<td>174</td>
<td>76</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Write questions about the information for a friend to solve.
Two-way Tables

Reasoning and Problem Solving

This table shows how many children own dogs and cats.

Fill in the missing gaps and answer the questions below.

<table>
<thead>
<tr>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td>87</td>
<td>44</td>
</tr>
<tr>
<td>Cats</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>245</td>
</tr>
</tbody>
</table>

- How many more boys have dogs than girls? 43
- How many more girls have cats than dogs? 32
- How many more children have dogs than cats? 17

120 people were asked where they went on holiday during the summer months of last year.

Use this information to create a two-way table.

In June, 6 people went to France and 18 went to Spain.
In July, 10 people went to France and 19 went to Italy.
In August, 15 people went to Spain.
35 people went to France altogether.
39 people went to Italy altogether.
35 people went away in June.
43 people went on holiday in August.

You can choose to give children a blank template. Children may not know where to put the 120, or realise its importance. Children will need to work systematically in order to get all of the information. As a teacher, you could choose not to give the children the complete total and let them find other possible answers.