# Statistics

HERE'S THE MATHS

Examples of discrete data are favourite fruits or colour of cars. Most of the data handling your child has learned up to Year 4 has been discrete data, displayed in bar charts or pictograms. They are now handling continuous data, notably time graphs. They are learning about scale intervals and sensible numbers to use.

ACTIVITY

7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00
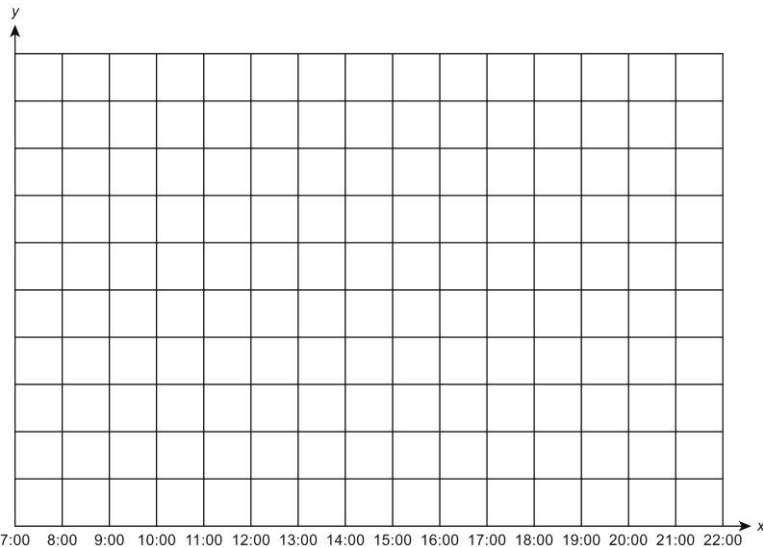
What to do

- Take turns to draw a line on the graph and explain the scenario that it represents.
- Ideas for the y-axis are:
  - temperature measurements over the day
  - distance of a delivery van from the supermarket
  - height of an aeroplane or hot-air balloon.
- Discuss the story of the graph.

You will need:
- pen, pencil and rubber

QUESTIONS TO ASK

Explain the difference between discrete and continuous data.

On time graphs, on which axis is time usually plotted?

Why is it important to label the axes of a graph clearly?

Year 4 Maths Newsletter 12

Busy Ant Maths

Date: _____   Name: _____

MATHS TOPICS

These are the maths topics your child will be working on during the next three weeks:
- Multiplication and division
- Statistics

KEY MATHEMATICAL IDEAS

During these three weeks your child will be learning to:
- learn the formal written method to calculate HTO ÷ O and choose an appropriate method to use for division calculations
- interpret and present data in simple time graphs.

TIPS FOR GOOD HOMEWORK HABITS

Reflect on the variety of maths tasks that you have enjoyed together over the year. Try to decide which strategies have helped you to understand maths most easily. Congratulate your child on their effort!

Multiplication and division

This week consolidates your child's understanding of written methods of division, TO ÷ O and HTO ÷ O. Most children find this the most challenging operation and require lots of practice. Several different methods are used to strengthen their understanding, culminating in the formal written method. This is sometimes described as a 'bus stop'.

e.g.

$$
\begin{array}{r}
1\ \ 3 \\
6\ \overline{)\ 7\ ^18}
\end{array}
$$

At this stage calculations are set so that the answers are whole numbers with no remainders.

ACTIVITY

64	80	24	96	48
56	32	88	40	72

You will need:
- cards marked with 2, 4, 6 and 8
- counters or coins

What to do
- Take a card. This will be your divisor (the number you divide by).
- Choose a number to divide.
- Carry out the division using a method of choice.
- If your answer is correct, cover the number.
- Continue until all the numbers are covered.

Variation
- Make up a new grid for the 3, 6, 9 family. (To ensure no remainders, the numbers must all be even multiples of 9.)

QUESTIONS TO ASK

Explain how multiplication and division are related.

What is the multiple of 6 that comes before 44?

What is the multiple of 7 that comes before 38?

What is the multiple of 8 that comes before 50?

Multiplication and division

This week your child is practising the formal written method for HTO ÷ O, including estimating and checking the answer to a calculation. They are encouraged to look carefully to determine the most efficient and effective method to use for each calculation, e.g. 678 ÷ 6 probably requires a written method but 666 ÷ 6 can be done mentally.

ACTIVITY

Dice roll	3-digit numbers	1-digit number	Context
1	576	3	books
2	306	6	boats
3	468	9	buttons
4	558	3	beans
5	378	6	bottles
6	522	9	bears

You will need:
- 1–6 dice
- pencil and paper

What to do
- Roll the dice three times. The first roll determines the amount, the second the divisor and the third the context.
- Write a word problem using these choices.
- Swap problems and solve them using an appropriate method.
- Check each other's answers and discuss the methods used.
- Continue for 10 minutes.

Variation
- Use 3-digit numbers that are divisible by 8, new context ideas and 2, 4 and 8 as the divisors. (Possible 3-digit numbers are 552, 376, 432, 312, 656 and 584.)

QUESTIONS TO ASK

Will 2540 divide exactly by 10?

What numbers between 40 and 50 are divisible by 7?

How do you know that 234 will not divide exactly by 5?