Year 5 into Year 6 mathematics:

Using a calculator

Key learning

- Use a calculator to solve problems, including those involving decimals; interpret the display correctly in the context of money and measurement.

Check that your child can:

- use a calculator to add, subtract, multiply and divide numbers, including decimal numbers;
- read and explain the numbers on the display in the context of money or measures (for example, explain 5.5 as £5.50 or 5 metres and 50 centimetres).

How many … ?

…seconds in a day? …blinks of an eye in a year?

Find out together how many times your heart beats in a minute when sitting. Use a calculator to work out how many times your heart will beat: … in a week… in a year… in a lifetime. What if you had just been exercising?

A hummingbird's wings beat about 80 times per second. How many times is that per minute or during an hour and a half of flying? How long would a hummingbird take to beat its wings a million times?

The hummingbird's heart beats an average of 1263 times per minute. How many times is that per second? How many beats in a year?

What other fascinating facts can you work out?

Notes for parents/carers

The use of calculators in primary schools helps children to learn more about the way numbers work as well as helping with calculations during problem-solving.

Estimation is a very useful skill that children need lots of opportunities to develop. Help your child to concentrate on estimating the answers to a calculation before they calculate. Knowing roughly what an answer is helps to check a calculation.

Let's estimate and check…

Save some till receipts. Fold back the total cost at the bottom of the receipt. You are both going to work out the approximate total cost. Work separately, jotting down the rough amounts you are adding up and the total. (for example, you might assume £3.61 is roughly £4.00 and £0.48 is about 50p.) Compare your answers and how you worked them out and then use a calculator to add the actual prices. Unfold the receipt to compare totals. How much were your estimates out? Whose estimate was closest to the total? How did the estimates help you to know whether the calculation using the calculator seemed right?

With the total cost of the receipt displayed in the calculator, ask your child to go back through the bill, subtracting the cost of each item. Do they end up at exactly zero?

Let's divide…

Find items on the receipt that contain multiple items and work out the cost of one. For example:

- If eggs cost £1.25 per half-dozen, how much is each egg?
- The calculator shows 0.208 333. What does that mean?

Work together to find out the cost per flapjack in a pack of six, and compare this with the price you would have paid if you had bought them separately. Was the packet of six a good buy?

Make use of opportunities to use calculators to solve practical problems in the home and everyday life, such as:

- checking amounts spent and change given;
- estimating and checking measures and quantities needed for practical projects.

Reading the display

Enter a number with one or two decimal places into the calculator and pass it to your child. Ask them to give examples of what the number represents as money or measures. For example, 54.04 could be £54 and 4p, or 54 metres and 4 centimetres. Swap roles and try different numbers. Try numbers with more than two decimal places.

Who can get closest?

Ask your child to enter into the calculator a number with one decimal place (for example, 6.8). Write down another number to multiply the first number by (e.g. 8.4). Both of you predict which whole number the answer will be closest to, then use the calculator to carry out the multiplication. Compare your predictions with the answer – who was the closer? Score a point. Have ten goes – who wins? Discuss your strategies.

Ask your child to enter a number between 50 and 100 in the calculator (for example, 74.8). Write down a number between one and ten with one decimal place (for example, 5.3). Choose numbers to divide the first number by to get close to the second number. Use the calculator to check – who is closer? Score a point and have ten goes. Discuss your strategies.

Make up your own rules.

Repeating rules – what happens?

Enter a number into the calculator. Add one and divide by five. Using the answer displayed, repeat the rule: add one and divide by five. With each answer, keep repeating this rule – what happens? Now use the same rule with a new start number. What happens?

Use the rule: add one and divide by six. What happens this time?

Make up your own rules and see if you can find a pattern.

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