

Function machine: multiply by 2, 5 or 10

Strand

Knowing and using number facts

Learning objective

Recognise multiples of 2, 5 and 10

Type of starter

Reason

Whiteboard tools

- Use the 'options' menu to set the 'machine mode'. Select from 'manual' or 'random' options.
- Select 'manual' to enable you to prepare your own number sentences, or 'random' to produce a computer-generated number sentence.
- A keypad pops up automatically when you press a window to enable you to enter a number.
- Press the 'history' button to view a list of the number sentences completed during the lesson.

What to do

The aim of this game is to find the missing number or function to complete a number sentence. Either the teacher or the computer can generate these numbers using either the 'manual' or 'random' mode options.

Random mode: the computer selects a number sentence, but hides the input, output and function windows on the machine. Decide which element to reveal first and press that window to open it. After one other element has been revealed, ask the children to write down and then display the missing number or function. Check their answers and then press 'go' to check the answer on the machine. The computer will generate both multiplication and division sentences in the 2-, 5- and 10-times tables.

Manual mode: enter some number sentences involving multiplication or division in the 2-, 5- or 10-times tables. Again, press 'go' to check answers.

Differentiation

Less confident: in 'manual' mode create sentences using one times table (eg $\times 2$) to develop children's confidence before introducing division facts and a wider range of times tables.

More confident: invite a volunteer to create a number sentence in 'manual' mode for the rest of the class to work out.

Key questions

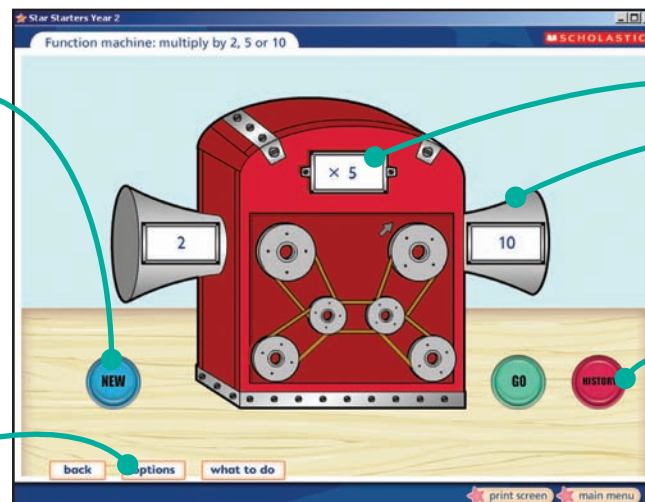
- How can you work out the missing parts of the number sentence?
- How much do I need to show you before you can complete this number sentence?

'new'

- Press to start again in 'manual' mode
- Press for number sentence in 'random' mode

'options'

- Select 'manual' mode to enter your own numbers
- Select 'random' mode for computer-generated numbers, initially hidden



windows

- Type numbers and functions in 'manual' mode
- Press to open in 'random' mode

'history'

Use to track completed number sentences