

Spotlight 5: a learning check

Describes the operation of multiplying ten as 'adding a nought'

Opportunity for: discussing and explaining

Move left

Time 15–20 minutes

Resources

- Two sets of number cards 1–9 (Resource sheet 1)
- Two sets of cards saying $\times 10$, $\times 100$ and $\times 1000$ (all the same size)
- Lots of 0 cards
- At least two children
- Large score charts (see below), big enough for the number cards to fit
- Timer
- Calculators to help with scoring

Check: does the child use key vocabulary?

- | | |
|----------------------------|-------|
| how many times? | group |
| multiplying by ten | digit |
| lots of | row |
| move one place to the left | |

Score chart					
Total:					

Teaching activity

'This is a game called **Move left**, and it will help you to get much better at multiplying by ten.'

The game can be played cooperatively in pairs, or children can see who gets the highest score, or you could set a timer so that the child or pair can try to beat their best time.

Place the number cards in one face-down pile and the multiplying cards in another face-down pile.

How to play

1. Each player or pair takes a number card from the face-down pile, for example 6. This is placed in the first row in the right-hand space on the score chart.
2. Then each player takes a multiplying card from the face-down pile, for example $\times 100$.
3. Each player or pair now multiplies their one-digit number by their multiplying card number (in this example, 6×100). They then move their 6 card to the left and put in two 0 cards in the empty columns.
4. Each player or pair can record their answer, 600 in this case, or just leave their cards on the score card.

5. Then each player takes two number cards and places these in the second row, making a two-digit number. Again, they take a multiplying card and move the two number cards left, putting in 0 cards.
6. Then each player takes three number cards to make a three-digit number and multiplies that by taking another multiplication card.
7. Then they add up their score (using a calculator if necessary).

Variations

- Play to see who can get the lowest score.
- Play the other way around. Call it 'Move right' and start with the number cards at the right and lots of zeros and have 'divide by' cards, such as $\div 10$, $\div 100$, $\div 1000$.

Learning objectives

By the end of this set of activities children should be able to:

- tackle related learning tasks with increased motivation and confidence;
- use and understand connected mathematical vocabulary;
- describe the effect on the digits of multiplying a number by ten;
- understand why whole numbers multiplied by ten have a zero in the units position.