

Dr Fog Presents

**Towards a
Standard
Multiplication
Method**

Year 4 (National Numeracy Strategy)
(Based on DFEE Sample Lessons)



Resources

- 2 - 9 number cards for each group.



Mental Learning Objective

- I can practise division with remainders.



Mental Learning Task

- Sit in pairs
- Write down a number between 10 and 100.
- This is your number



Mental Learning Task

- I am going to give you a number to divide by.
- The remainder is your score.
- I will then give you another number to divide your own number.
- The winner is the one with the largest score.



Mental Learning Task

- Here is the number to divide by...

9



Mental Learning Task

- Here is the number to divide by...



Mental Learning Task

- Here is the number to divide by...

5



Mental Learning Task

- Add up your score.
- Did you win?



Mental Learning Objective

- I can practise division with remainders.



Main Learning Objective

- I can estimate roughly how big the answer will be.
- I can support mental work with informal jottings and written recording.
- I can use a standard written method for multiplication.



Key idea

I can explain how to multiply using the standard method.



Main Learning Task

- Today we are going to learn about different ways of recording multiplication calculations.



Main Learning Task

$$23 \times 8 =$$

- Can anyone suggest an approximate answer?
- Why do you think that?



Main Learning Task

$$23 \times 8 =$$

- Sit in pairs.
- Find a way of solving this sum.
- Write down your workings.



Main Learning Task

$$23 \times 8 =$$

- Check that your answer is not far from 200.



Main Learning Task

$$23 \times 8 =$$

- If it is a long way away, you will need to check your calculation.



Main Learning Task

$$23 \times 8 =$$

- Show your working on the board.
- Explain your method.



Main Learning Task

$$23 \times 8 =$$

- Could you make your working simpler?



Main Learning Task

- Today you are going to learn a method for multiplying a two-digit number by a one-digit number.
- If you can do something mentally, you should do so.



Main Learning Task

- When you need to write down a method, you should use this method.



Main Learning Task

$$23 \times 8$$

- Lets first rewrite this into a vertical sum.



Main Learning Task

$$\begin{array}{r} 23 \\ \times 8 \\ \hline \end{array}$$

- Now what do we multiply first?
- We multiply the tens first.



Main Learning Task

$$\begin{array}{r} 23 \\ \times 8 \\ \hline \end{array}$$

160

20×8

- What do we multiply next?
- We multiply the units.



Main Learning Task

$$\begin{array}{r} 23 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 160 \\ 24 \end{array}$$

$$20 \times 8$$

$$3 \times 8$$

- What happens next?
- We add them together



Main Learning Task

$$\begin{array}{r} 23 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 160 \\ 24 \\ \hline 184 \end{array}$$

$$20 \times 8$$

$$3 \times 8$$

- The answer is 184.



Main Learning Task

$$45 \times 9$$

- Lets first rewrite this into a vertical sum.



Main Learning Task

$$\begin{array}{r} 45 \\ \times 9 \\ \hline \end{array}$$

- Now what do we multiply first?
- We multiply the tens first.



Main Learning Task

$$\begin{array}{r} 45 \\ \times 9 \\ \hline \end{array}$$

- What do we multiply next?
- We multiply the units.



Main Learning Task

$$\begin{array}{r} 45 \\ \times 9 \\ \hline \end{array}$$

- What happens next?
- We add them together



Main Learning Task

$$\begin{array}{r} 45 \\ \times 9 \\ \hline \\ \hline \end{array}$$

- The answer is.....



Main Learning Task

- The next one is 53×7
- Can anyone suggest a quick way of doing this?
- Check your answer...



Main Learning Task

$$\begin{array}{r} 53 \\ \times 7 \\ \hline \\ \hline \end{array}$$

Solve this question

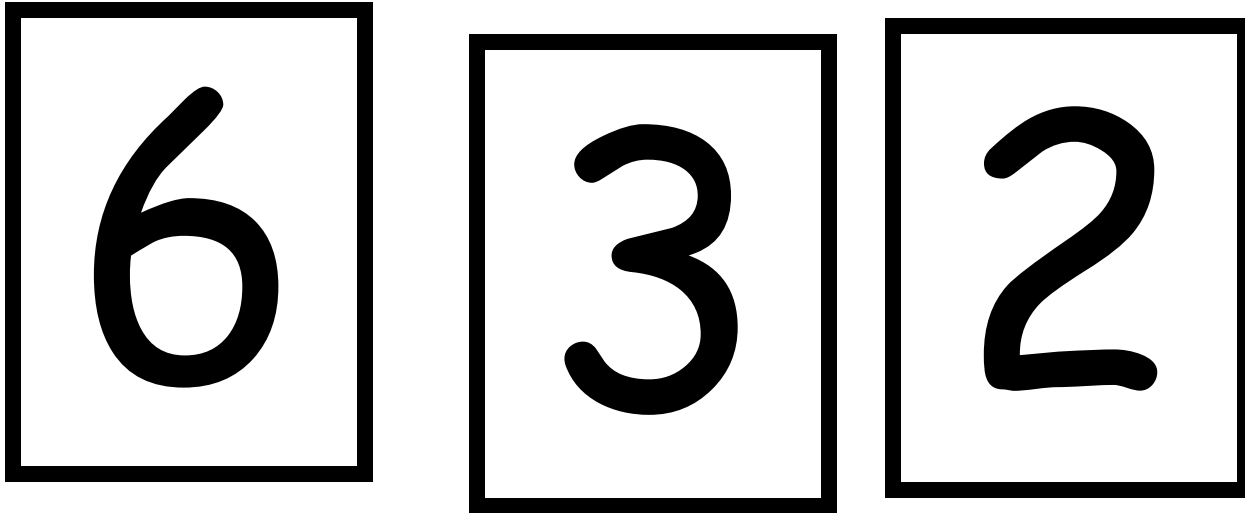


Main Learning Task

- Now we are going to do something slightly different....
- Each table needs a pack of number cards 2 - 9



Main Learning Task



- You could do several calculations with these cards.

$$32 \times 6$$

$$26 \times 3$$

$$62 \times 3$$

What others could you do?



Main Learning Task

- Shuffle the cards.
- Deal out three cards, face up on the table.
- Decide on the multiplication to make with three numbers.



Main Learning Task

- Solve your calculations in your head or use the written method you learnt today.
- Anyone who finishes a round can deal out again.
- It does not matter if you are not ready and miss a round.



Main Learning Task

- Simplification:-
- Children use smaller numbers.
- Do repeated addition in a number line.



Main Learning Task

- Challenge:-
- Children could try working with $TU \times TU$ or $HTU \times U$ multiplication problems.



Main Learning Objective

- I can estimate roughly how big the answer will be.
- I can support mental work with informal jottings and written recording.
- I can use a standard written method for multiplication.



Plenary

- Discuss the work you did today.
- Tell me some questions you did in your head.
- Write on the board some of the questions you needed to do on paper.



Review of Key Idea

- I can explain how to multiply using the standard method.
- Did you learn this in today's lesson?



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