Multiplication families

You'll need to create a set of 36 cards for each time tables you wish to practise. For example if practising the 8 times table you'll need number cards for the numbers 1 to 12, a card for each of the multiples of 8 and twelve number 8 cards! Shuffle the cards and spread them out face down on a table. Children then take it in turns to turn over three cards. If they are able to use the cards to create a multiplication family they get to keep the cards.

8   **2**   **16**

These cards could be used to make the multiplication family 2 x 8 = 16 or 8 x 2 = 16

Continue until all the cards have gone. The winner is the person with the most sets.

Tens and ones

To take children on to multiplying two digit numbers, partition the number by using counters to represent tens and ones. For example: to calculate 23 x 3 use large counters for tens and small counters for ones to represent three lots of 23. Children can then add the tens and then the ones to find the solution.
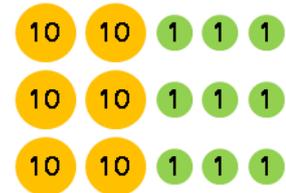
This method leads neatly on to grid multiplication e.g.

	20	3
3	60	9

For calculations such as 34 x 5 children may need reminding/encouragement to exchange ten ones for a ten counter.

Division Detective

Set up a weekly division detective problem for the children to solve! Ask children to submit their solution along with evidence of their workings out. For more able learners ask them to create some division-based crimes for others to solve. Here are a couple to get you started:

1. Last night Fingers Flanagan loaded 540 barrels of bootleg blackberry jam onto some lorries. The lorries then joined hundreds of other lorries travelling on a ferry in Calais and will arrive in Dover tonight. Detective Di of D Division knows a lorry holds 60 barrels. She needs to track down each of Fingers Flanagan's lorries. How many lorries did Fingers use?

2. Big Ben, the watch thief, stole a consignment of 24000 watches. He sold them to Frankie the Fence who gave him £10 for each box of 40. How much money did Big Ben make? How much did he make per watch?

4

Am I a multiple of …?

Did you know that if you double the last digit and subtract it from the number left by the remaining digits and if that equals 0 or is divisible by 7 then your starting number is a multiple of 7! E.g. 672; 67 - 4 = 63 which is divisible by 7 so therefore 672 is a multiple of 7. Challenge children to establish rules for finding multiples of numbers from 2 to 10.

A number is a multiple of:

2 if the last digit is even (0, 2, 4, 6, 8).

3 if the sum of the digits is divisible by 3.

4 if the last 2 digits are divisible by 4.

5 if the last digit is 0 or 5.

6 if the number is divisible by 2 (i.e. even) AND 3 (i.e. sum of digits is divisible by 3).

7 if you double the last digit and subtract it from the number made by the rest of the remaining digits and it equals 0 or is divisible by 7 e.g. 672; 67 - 4 = 63 which is divisible by 7.

8 if the last 3 digits are divisible by 8

9 if the sum of the digits is divisible by 9

10 if the number ends in a 0.

5

Remainders count

Playing in small teams, use a deck of cards with the picture cards removed and lay them out on a table. Each child takes it in turns to turn over three cards and total up the values shown on the cards. They then roll a dice to give them a number to divide the total by. Points are only scored if there is a remainder left after the division. For example:
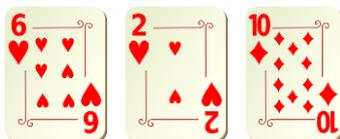
 gives a total value of 18. If a child the rolls a

18 ÷ 4 = 4 remainder 2 so the child would score 2 points. Make the game harder by removing the tens cards and asking the children to turn over three cards and to order them to create a three digit number to divide.