Multiplication and Division: Key Skill 9

YEAR 4

Recall and use multiplication facts (times tables) up to 10 × 10

Children need to know their times tables as they are used in all areas of maths. They are extremely important and any progress in maths slows if they do not know their times tables. Knowing and using them with speed and accuracy makes maths so much easier.

Times tables are easily forgotten and need to be practised often! It can be challenging to fill the gaps of unknown facts so it is important to spend more time on learning these. Check your child remembers their times tables as often as you can!

We teach times tables in 2 ways. Both ways need to be taught:

1 **Rote learning** – repeating them over and over until they are stuck in the children's mind. Sing along to times tables songs, write out times tables, and test the children daily.

   This can be effective for many children but doesn't help to build a deep understanding of multiplication and how numbers work. For instance, many children can quickly tell you that 4 x 6 = 24 but not 24 ÷ 4 = 6. So we also teach times tables another way.

2 **Meaningful learning**. This way helps children to find the answer to a multiplication problem from known times tables. Skip counting (e.g. 3, 6, 9, 12 etc.) and the commutative law (which means multiplication problems can be solved in any order, e.g. 7 x 3 = 3 x 7) are some of these strategies. Your child may not know 7 x 5, but they can easily find 5 x 7 using these strategies.

Notes: Rote vs meaningful learning

Work together using a combination of songs, playing with arrays, skip counting, races, charts and online games to help your child convert the times tables into their long term memory.

Play the I have, who has? game (see Game: I have, who has? printable game).

The 4s, 6s, 7s, 8, and 9s may be new to your child. Here are some useful strategies to help children learn times tables:

2 x tables: Double the number
3 x tables: Double plus 1 more set. 3 x 5 = 2 x 5 + 5
4 x tables: Double and double again
5 x tables: Skip count by 5s. Always end with 5 or 0
6 x tables: Double 3 x. 6 x 4 = (3 x 4) x 2. Or build from 5. 6 x 7 = 5 x 7 + 7
7 x tables: Build from known facts. That is, work from one you know. 7 x 8 = 7 x 5 + 3 x 7
8 x tables: Double, double, and double again. 3 x 8 = 3 x 2 x 2 x 2
9 x tables: 1 less than 10 x. 9 x 8 = 10 x 8 – 8
10 x tables: Multiples of 10. Always end in 0.

WEB LINKS go to:

Notes: Times tables
Video: How to easily memorise times tables
Video: 4 times tables
Game: I have, who has? printable game
Game: Tables games
Notes: Mental strategies
Video: 3 times tables – uptown funk
Video: 6 times tables – cheerleader
Game: Times tables shoot em up

Multiplication and Division: Key Skill 10

YEAR 4

Relate multiplication facts to their inverse division facts

Multiplication is a process of repeatedly adding the same number a given amount of times. Multiply, product of, times and lots of all mean the same thing.

Division is to share into equal groups or parts. Divide, split, quotient, distribute, share equally and separate all mean the same thing.

Inverse operations are functions that are the opposite of each other. This is a way of checking if answers are correct.

Addition and subtraction are inverse operations. Multiplication and division are inverse operations.

A **fact family** is a group of related facts in addition and subtraction, and multiplication and division. It helps children understand the relationship between operations.

4 x ▲ = 20

▲ x 4 = 20

20 ÷ 4 = ▲

20 ÷ ▲ = 4

Children find division a tricky skill to learn but knowing that multiplication and division are opposites helps to make learning division easier. Using a fact family helps greatly with this skill.

Children begin to learn about multiplication and division by making arrays and using pictures. Using everyday events to give your child experiences using multiplication and division will help develop this skill.

Use this skill often to check for answers while working out division and multiplication problems! Have your child complete a set of division and multiplication problems and work together to check the answer using the inverse operation.

Test this theory out and make up your own questions to see if this skill always works. Use a calculator to test bigger numbers!

Be a novice and ask your child to teach you about inverse operations!

WEB LINKS go to:

Notes: Inverse operations

Game: Interactive chart for skip counting