Year 5 Place Value Knowledge Organiser

Star Vocabulary

multiple
thousands
tens of thousands
factor
prime number
place value
divide, division
inverse
composite number
operation ones, tens, hundreds,
square (x2)
cube (x3)
multiply, multiplication, times

Recognise the place value of each digit in four-digit numbers.

Recognise the place value of each digit up to 2 decimal places.

Multiplication square: Multiplication squares are used in this unit to demonstrate and investigate the patterns found in different types of numbers.
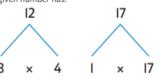

Array: Arrays are a visual representation of multiplication and division. They are an excellent tool for showing equal groups within a number.

Bar model: The bar model enables children to more easily represent a problem. In the context of this unit, it is used to show different types of calculations.

70	70	70	70	70	70	70

Factor tree: Factor trees are used to show the factors a given number has.

12
3 × 4

17
1 × 17

Misconceptions: Why?

I must understand that when multiplying and dividing by 10, 100 and 1,000 just 'adding or taking a zero' from a number is not correct and instead the number is getting mathematically bigger or smaller.

I understand the difference between a multiple and a factor. A multiple is a number that can be divided by another **number** a certain number of times without a remainder. A factor is one of two or more numbers that divides a given number without a remainder.

Factual & Conceptual Fluency progression

Addition and subtraction within 10.

Secure and maintain fluency in addition and subtraction within and across 10, through continued practice.

Recall the 2, 4 and 8 multiplication tables, and corresponding division facts.

Recall the 7-multiplication table, and corresponding division facts.

Addition and subtraction across 10.

Recall the 10 and 5 multiplication tables, and corresponding division facts.

Recall the 3, 6 and 9 multiplication tables, and corresponding division facts.

Recall the 11 and 12 multiplication tables, and corresponding division facts.

Secure and maintain fluency in all multiplication tables, and corresponding division facts, through continued practice.