

Multiplying Doubles and Digits: Maths : Year 4 : Summer Term, Week 4

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To use known facts and informal written methods to multiply by one-digit multiples including 0 and 1.	Children will consider and explain (in their own words) what happens when a number is multiplied by 0 or 1. They will go on to consider real-world scenarios where this knowledge is applied. After that they will recap, then practise, multiplying two- or three-digit numbers by a one-digit number using the grid method where appropriate.	<ul style="list-style-type: none"> Can children write calculations to show what happens when multiplying by 0 and 1? Can children use other known multiplication facts to solve $O \times O$ calculations? Can children use an informal written method to solve $TO \times O$, $HTO \times O$ and $ThHTO \times O$ calculations? 	<ul style="list-style-type: none"> Slides Worksheets 1A/1B/1C Maths resources: bead strings, counters, number lines Shopping Items cards (FSD...? activity only) Shopping List sheet (FSD...? activity only)
Lesson 2	To use known and derived facts to multiply two numbers, or three numbers together.	Children will develop strategies for mentally solving trickier multiplication calculations, e.g. $2 \times 12 \times 5$, or 6×24 . Strategies include drawing upon times tables knowledge and finding pairs of factors of large numbers in calculations, e.g. 6×24 could be changed to $6 \times 6 \times 4$. They will then go on to practise these skills, jotting notes to help them.	<ul style="list-style-type: none"> Can children use known times tables facts to simplify a calculation where three numbers are to be multiplied together? Can children simplify a multiplication calculation by replacing a large number with one of its factor pairs? Can children find all of the factors of a two-digit number? 	<ul style="list-style-type: none"> Slides Worksheets 2A/2B/2C 'Factor Pairs' Target Number Cards (FSD...? activity only) 'Factor Pairs' Pairs Cards (FSD...? activity only)
Lesson 3	To use place value knowledge, times tables knowledge and a formal written method to double large numbers.	Children will recap doubling three-digit numbers mentally using a partitioning method. They will then go on to learn and practise using written, short multiplication to double larger numbers quickly and efficiently, including those with one or more 'exchanges'.	<ul style="list-style-type: none"> Can children explain how to double numbers using only mental methods? Can children show doubling of three-digit+ numbers using informal written methods? Can children use a formal written method to calculate doubles of larger numbers? 	<ul style="list-style-type: none"> Slides 'Hot', 'Boiling' and 'On Fire!' Doubling Sticks Doubling Down Cards (FSD...? activity only) Doubling Down Challenge (FSD...? activity only)
Lesson 4	To multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	Children will compare various written methods for solving multiplication calculations, including a short multiplication method. They will then practise and consolidate their learning by solving multiplications, including those requiring 'exchanges', using a short multiplication method.	<ul style="list-style-type: none"> Can children solve short multiplication calculations requiring no exchanges? Can some children solve short multiplication calculations requiring two or more exchanges? Can some children solve tricky short multiplication calculations with multiple exchanges and an increase in the total digits? 	<ul style="list-style-type: none"> Slides Tiddlywinks Target 4A/4B/4C sheets Counters and paperclips Worksheet 4 (FSD...? activity only)
Lesson 5	To use place value, known and derived facts to multiply mentally, then use a formal, written multiplication method.	Children will consider how multiplication/division 'fact families' can help when solving and checking problems. They will then use them while estimating, solving and checking multiplication calculations.	<ul style="list-style-type: none"> Can children derive facts about a given times table multiplication up to 12? Can children use known times table facts to estimate answers up to 12? Can children use a formal written method to solve multiplication calculations (up to $HTO \times O$)? 	<ul style="list-style-type: none"> Slides Household Statistics 5A–5C cards Challenge Card 5 Word Problems 5A–5F (FSD...? activity only)