Capacity Matrix - Mathematics - Multiplication

Name:

			LEARNING				GOING FURTHER	
AIM	Capacity	Capacity Breakdown	Information (I have heard of this)	Knowledge (I understand and can explain this) Possible Student Tutorial (I.e. Using Doceri)	Know-how (I can do this on my own)	EVIDENCE (Maths book page number)	Wisdom (I can teach others)	Evidence of Wisdom (I have taught others) Student Name or Hyperlink to Student Tutorial (I.e. Using Doceri)
To understand and use multiple strategies to solve written and mental multiplication	Multiplication	**Recognise and represent multiplication as repeated addition, groups and arrays** (ACMNA031)						
		They represent multiplication and division by grouping into sets.						
		...and use digital technology to produce sequences by constant addition.						
		Recall multiplication facts of two, three, five and ten **and related division facts** (ACMNA056)						
		Represent and solve problems involving multiplication **using efficient mental and written strategies and appropriate digital technologies** (ACMNA057)						
		Students recognise the connection between addition and subtraction and solve problems using efficient strategies for multiplication with an without the use of digital technology.						
		They recall addition and multiplication facts for single digit numbers.						
		..and explore simple number sequences based on multiples.						
		Investigate number sequences **involving multiples of 3, 4, 6, 7, 8, and 9** (ACMNA074)						
		Recall multiplication facts **up to 10×10** and related division facts (ACMNA075)						
		Develop efficient mental and written strategies **and use appropriate digital technologies** for multiplication and for division where there is no remainder (ACMNA076)						
		Students choose appropriate strategies for calculations involving multiplication and division, with and without the use of digital technology, **and estimate answers accurately enough for the context**.						
		They recall multiplication facts to 10 x 10 and related division facts.						
		Identify and describe **factors** and multiples of **whole numbers** and **use them to solve problems** (ACMNA098)						
		Use **estimation and rounding** to **check the reasonableness of answers to calculations** (ACMNA099)						
		Solve problems involving multiplication of **large** numbers by one-or **two-digit** numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)						
		Use efficient mental and written strategies and **apply** appropriate digital technologies to solve problems (ACMNA291)						
		Students solve simple problems involving the four operations using a range of strategies including digital technology.						
		They estimate to check the reasonableness of answers and **approximate** answers by rounding.						
		Students identify and describe factors and multiples.						
		Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving **all four** operations with whole numbers (ACMNA123)						
		Multiply decimals by whole numbers and **perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies** (ACMNA129)						
		Identify and describe properties of **prime, composite, square and triangular** numbers (ACMNA122)						
		Multiply and divide decimals by powers of 10 (ACMNA130)						
		Students **make connections between the powers of 10 and the multiplication and division of decimals.**						
		They solve problems involving all four operations with whole numbers.						
		They add, subtract and **multiply decimals and divide decimals where the result is rational.**						
		Students recognise the properties of prime, composite, square and triangular numbers and **determine sets** of these numbers.						
		Multiply and divide **fractions** and decimals using efficient written strategies and digital technologies (ACMNA154)						
		Investigate **index** notation and represent whole numbers **as products of powers of prime numbers** (ACMNA149)						
		Investigate and use **square roots of perfect** square numbers (ACMNA150)						
		Apply the **associative, commutative and distributive laws to aid** mental and written computation (ACMNA151)						
		They make **the connections between whole numbers and index notation and the relationship between perfect squares and square roots.**						