

Addition, Subtraction, Multiplication and Division: Marine Multiples

Aim: Identify common factors, common multiples and prime numbers. I can identify common multiples.	Success Criteria: I know what 'common multiple' means. I can identify common multiples.	Resources: Lesson Pack Whiteboards and pens Dice – one per child Colouring pencils
	Key/New Words: Multiple of, common multiple, lowest common multiple, LCM.	Preparation: Multiple Cards – one per class Marine Multiples Game – one per pair Common Multiples Activity Sheet – one per pair Extra Challenge Activity Sheet – as required

Prior Learning: It will be helpful if children have a secure understanding of place value, multiplication facts and corresponding number facts.

Learning Sequence

	Buzz, Whizz, Pop: Arrange the children into two circles. Inform the children that they will be counting in ones around the circle. Demonstrate this if required. Stop the children and introduce the rules: every multiple of three is replaced with the word 'buzz', every multiple of five is replaced with the word 'whizz' and every multiple of nine is replaced with the word 'pop'. Play the game. To extend, you can change the multiples substituted by the words. <i>Did you spot a pattern with the words used? Were there any numbers that required more than one word?</i>	
	Sea of Numbers: Using the Lesson Presentation , explain what the term 'common multiple' means.	
	In the Deep Sea: Give out the Multiple Cards , one per child. Get a child to call out two numbers, e.g. two and six. Using their cards, the children arrange themselves into two circles: common multiples e.g. 6, 12, 18 and non-common multiples, e.g. three, four, five. Repeat with a different set of numbers. <i>Are the children able to identify common multiples? Are there any numbers that didn't have any common multiples?</i>	
	Marine Multiples: Taking turns, the children roll two dice. Using the rolled numbers, the children shade any common multiples on the Marine Multiples Game . If their partner already has already shaded in a number, then they cannot claim the number. The child with the most shaded squares on the board at the end of the given time wins.	
	Sea of Numbers: Using the Lesson Presentation , explain what the term 'lowest common multiple' means.	
	Common Multiples: In mixed-ability pairs, explain to the children that they will be completing a range of questions on the Common Multiples Activity Sheet that will require them to identify common multiples, including lowest common multiple , as demonstrated earlier in the lesson. An Extra Challenge Activity Sheet is provided as an extension activity if required.	
	Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative activity. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding. <ul style="list-style-type: none"> Children use a 100 square to find the lowest common multiple of two numbers. Children investigate whether the lowest common multiple of two numbers is always the product of the two numbers. Children use reasoning skills to solve submarine-themed questions relating to the variation of a pressure gauge over different durations of time. 	
	What Am I? Ask the children to think of two numbers and then write their highest common factor (HCF) and their lowest common multiple (LCM) on a whiteboard. Get the children to swap their whiteboard with a partner. Can their partner guess what their two numbers are?	

Exploreit

Quizit: Invite children to complete the challenging questions on this amazing [Year 6 Calculation Factors Multiples Prime Numbers Maths Mastery Activities PowerPoint](#).

Playit: Children play this exciting [BBC Factors and Multiples Game](#) to practise identifying common factors and multiples.