Addition, Subtraction, Multiplication and Division: Bonkers Brackets (2)

Aim:	**Success Criteria:**	**Resources:**
Use their knowledge of the order of operations to carry out calculations involving the four operations. I can explore the order of operations using brackets.	I know the order of operations. I know how the use of brackets affects the order of operations. I can use the order of operations to work out and check calculations.	**Lesson Pack**
	Key/New Words: BODMAS, brackets, order, division, multiplication, addition, subtraction.	**Preparation:** **BODMAS Top Cards** – 1 per pair **BODMAS Matching Cards** – 1 per pair **BODMAS Calculation Comparison Activity Sheet** – 1 per pair **Extra Challenge Activity Sheet** – as required

Prior Learning:	It will be helpful if children are familiar with methods of calculations for the four main operations (addition, subtraction, multiplication and division).

Learning Sequence

	**Function Machine:** Show children the function machine on the Lesson Presentation. Click through to reveal an input and an output. Children work out the missing step in the calculation. Explain to children that there may be more than one possible answer.	
	**Brackets in BODMAS:** Go through the slides from the **Lesson Presentation** to explain BODMAS and the use of brackets in mathematical calculations, giving examples. Repeat with additional examples if necessary.	
	**Solve the Crime:** Using the **Lesson Presentation**, the children complete the calculation by inserting brackets into the correct place. Can the children explain how they completed the calculation? Did the children use BODMAS? Did the children check their answer?	
	**Playing with Brackets:** Explain to the children that they will be completing a range of questions that will require them to perform calculations using BODMAS.  In pairs, the children cut up the **BODMAS Matching Cards**, shuffle and place face down. Taking turns, the children choose two cards, solving calculations involving brackets. If the calculation and the answer match, the child keeps both cards. Play until all of the cards have been used. The player with the most cards by the end of the lesson wins.  In pairs, the children solve calculations involving brackets using the **BODMAS Top Cards**. Children shuffle the cards and then share them equally. Taking turns, the children reveal a card. The person with the highest answer to the calculation wins both cards. The player with the most cards by the end of the lesson wins.  In pairs, children complete a series of calculations including solving calculations with two lots of brackets (e.g. (5 ×3) (9 ÷ 3)), and then think of a calculation that can be used to complete the matching sentence using the **BODMAS Calculation Comparison Activity Sheet**. An **Extra Challenge Activity Sheet** is provided as an extension activity if required.	
	**More or Less:** As a whole class, children complete the calculations on the **Lesson Presentation** to insert the correct symbol (>, < or =) to compare the calculations.	

Masterit

Huntit: Children create their own set of calculations involving BODMAS and hide them around the classroom. Then another set of children tries to find and solve the calculations. Can they children find all of the hidden calculations?

Practiseit: Children complete mastery questions using **Calculation Order of Operations Maths Mastery Activities**.

Rapit: Children create a song or mnemonic to remember BODMAS.