

# Level 2 MULTIPLICATION & DIVISION

Bloomsmath is a comprehensive mathematics program which provides a fun way for every student to be learning to the best of their ability.

By Rachel McCann (B. Teach; B.Ed Hons; M.ED (Special Ed.)



## **Multiplication & Division**

Level 2 is designed for students in their second year at school which is most often referred to as Year 1. The Multiplication & Division strand allows students to use a range of mental strategies and concrete materials for multiplication and division.

Knowledge: Students complete a number of activities where they can count items in groups and sets to find the multiplication answers and the missing elements in division questions.



Students who demonstrate proficiency in this activity move on to Comprehension.



Students stop here as they require additional teacher support to master this activity.

Comprehension: Students use the given number lines to demonstrate that multiplication is repeated addition and division is repeated subtraction. They also complete a table of the first 5 multiplication facts.



Students who demonstrate proficiency in this activity move on to Application.



Students stop here if time has run out or they require additional support with this activity.

Application: Students recognise the difference between odd and even numbers and correctly identify whether a number is odd or even and select the correct operation symbol between x and ÷.



Students who demonstrate proficiency in this activity move on to Analysis.



Students stop here if time has run out or they require additional support with this activity.

Analysis: Students complete a number of multiplication and division word problems and play memory or snap using 3 times table cards as 2, 5 and 10 tables should already be known.



Students who demonstrate proficiency in this activity move on to Synthesis.



Students stop here if time has run out or they require additional support with this activity.

Synthesis: Students create lemonade for the class and calculate the cost of making it for themselves, their family and then their classmates and how much of each ingredient they will be consuming each time.

Evaluation: Suggested questions provide a starting point for discussions related to Multiplication & Division.



Students may complete more or fewer activities for each learning outcome depending on the time allocated and their strength in the area being covered.



All students should participate in the Evaluation discussion to encourage the use of mathematical language, logical reasoning and reflection on that which they have completed.

#### Multiplying Stars & Dividing Circles

Count the stars to solve each multiplication equation.



Use the circles and sets below to help you solve each division equation.



MD 2 KN

Comprehension

Application

Analysis

Synthesis

Evaluation

#### **Repeated Addition & Subtraction**

Use the number line to show that multiplication is repeated addition.

4 +	4 +	4 +	4 =	16 is	the	e sar	ne a	s 4 :	x 4	= 16										
		1	-	$\checkmark$	_	1		$\checkmark$		1		$\checkmark$	_	1			I	I	I	
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3 +	3 T	3 T	3 -		ic	the	com		. / 、	/ 2 -										
5 +	5 +	3 +	5		_ 15	me	Sun	ie us		. 5 -										
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2 +	2 +	2 +	2 + 3	2 + 2	2 + 2	= _		_ is t	he	same	e as	7 x	2 =							
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
5+	5 +	5 +	5 = .		_ is	the	sarr	ie as	:4>	(5 =										
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3 +	3 +	3 +	3 + 3	3 + 3	3 = _		_ is <sup>.</sup>	the	sam	e as	6 x	3 =								
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Complete the table to see the patterns between these first multiplication facts.

×	1	2	3	4	5
1					
2					
3					
4					
5					





**Progress To Application** 

Knowledge

Comprehension



Evaluation

#### Odd Or Even & Multiply Or Divide?

Choose whether each set of fingers is odd or even. Remember even numbers have no remainders as every finger has a partner.



4 🗔 5 = 20	9 🛄 2 = 18	9 🗔 3 = 3	1 🗔 7 = 7	6 🗔 3 = 18
1 🛄 5 = 5	12 🗔 6 = 2	5 🗔 5 = 1	25 🛄 5 = 5	6 🛄 4 = 24
14 🗔 7 = 2	18 🗔 6 = 3	10 🛄 2 = 5	7 🛄 2 = 14	21 🗔 7 = 3
8 🛄 2 = 4	7 🗔 3 = 21	24 🛄 4 = 6	16 🗔 8 = 2	4 🛄 4 = 1
3 🛄 5 = 15	15 🗔 5 = 3	20 🛄 5 = 4	5 🗔 3 = 15	5 🛄 2 = 10

MD 2 AP

Progress To Analysis



Multiplication & Division - Level 2 - Students will use a range of mental strategies & materials Analysis Synthesis Evaluation

Knowledge

Comprehension



#### **Problems and Games**

Name:						Multi	Kno		
Proble	ems and	d Game	2.5			plication	wledge		
Solve the follo	owing word pro Ben has 3 chic	blems. The fir	rst one has been leas of	en done to help	o you.	& Divi	Comp		
Working: 3 Chickens x 2 Leas = 3 x 2									
Working: 3 Chickens x 2 Legs = 3 x 2.   Answer: 6									
2) IT Mary no	as 3 dogs now 1	many legs do n	er dogs nave a	Itogether?		<u>e</u> 2			
Working				Answer:		- Stu	Applic		
3) If Sue has	s 15 sweets to	give to 5 child	ren how many s	sweets will ead	ch get?	dent	ation		
Working:				Answer:		s will			
4) If Joe sol	d 7 cakes for s	\$4 each how m	uch money did	Joe make?		luse	A		
Working:				Answer:	a ran	nalysis			
5) If Liam sp	ent \$20 on 10	different toys	s how much did	each toy cost	?	ge of			
Working:				Answer:	Answer:				
Cut out these	3 x table card	ls and play mer	nory with one s	set or snap wit	h all 3 sets.	al str	ynthes		
1 × 3	3	1 × 3	3	1 x 3	3	ateg	Sis		
2 x 3	6	2 x 3	6	2 x 3	6	ies &			
3 x 3	9	3 x 3	9	3 x 3	9	mater	Evalua		
4 x 3	12	4 × 3	12	4 × 3	12	ials.	tion		
5 x 3	15	5 x 3	15	5 x 3	15				
6 x 3	18	6 x 3	18	6 x 3	18		<u>.</u>		
7 x 3	21	7 x 3	21	7 x 3	21				
8 x 3	24	8 × 3	24	8 × 3	24				
9 x 3	27	9 × 3	27	9 x 3	27				
10 × 3	30	10 × 3	30	10 × 3	30		F		
						<u> </u>			

MD 2 AN





#### Sweet Lemonade

The following list of ingredients makes enough lemonade for one person.

1/4 cup caster sugar Juice from 2 lemons

1/4 cup boiling water 1 cup soda water

Fill in the table below to make lemonade for more people.

	1 Person	2 People	4 People	8 People	16 People	32 People
Caster Sugar	1/4 Cup	1/2 Cup				8 Cups
Boiling Water	1/4 Cup		1 Cup			
Lemons	2 Lemons				32 Lemons	
Soda Water	1 Cup			8 Cups		

	1 Person	2 People	4 People	8 People	16 People	32 People		
Caster Sugar	1/4 Cup	1/2 Cup				8 Cups		
Boiling Water	1/4 Cup		1 Cup					
Lemons	2 Lemons				32 Lemons			
Soda Water	1 Cup			8 Cups				
1. If lemons cost 20c each how much does it cost to buy lemons for 4 people?								
1. If lemons cost 20c each how much does it cost to buy lemons for 4 people?								
1. It lemons co	st 20c each	how much	does it cost	to buy lem	ons for 4 p	eople?		
1. If lemons co Working:	st 20c each	how much	does it cost	to buy lem	ons for 4 p Answer:	eople?		
<ol> <li>If lemons co</li> <li>Working:</li> <li>If caster su</li> <li>person?</li> </ol>	st 20c each gar costs \$	how much	does it cost ow much do	to buy lem es it cost b	ons for 4 p Answer: uy sugar fo	eople? r 1		

3. If soda water comes in 4 cup bottles how much of a bottle is needed for one person?

Working:	Answer:	
----------	---------	--

4. If lemonade was made for 4 people how much water would be in the lemonade?

Working:	Answer:
----------	---------





Progress To Evaluation

**Multiplication & Division - Level 2** Comprehension Application Analysis Synthesis Evaluation

Knowledge



### Multiplication & Division Discussion

The following questions and activities are provide as a starting point for fun discussions related to Multiplication & Division. During these conversations students will have an opportunity to use appropriate mathematical language in its correct context, to engage in reflection on the Multiplication & Division activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context.



Give students collections of counters to divide into groups and sets to work out how many counters are in the collection. Wultiplication & Division - Level 2 - Students will use a range of mental strategies & materials

Knowledge

Comprehension

Application

Analysis

Synthesis

lua



Discuss whether it makes any difference whether students multiply the groups by the sets or the sets by the groups and demonstrate using varying collections of counters.



Look at the first 5 multiplication facts and that if students know 2  $\times$  3 then they already know 3  $\times$  2. Use a tables chart up to 10  $\times$  10 and cross out all multiple facts.



Give students incredibly large numbers such as 136,849 and have students identify the number as odd or even based on the final digit.



Let students suggest their own word problems for other students or the class as a whole to solve. They must have a written solution prior to posing the question.

