

Maths Learning Design

Topic:	Basic Operations	Class:	Year 3 Year 4 Year 6 (I)	Duration:	8 periods
Subtopic :	Multiplication (Part 2)				
Content Learning Objectives:	Pupils should be able to: <ul style="list-style-type: none"> • Find the factors and multiples of first 12 multiples of 1 digit numbers • Multiply 2 digit by 2 digit • Estimate answers for multiplication 				

Teaching & Learning Activities		Resources	Summary						
<p>Tuning in (Introduction) <i>Determine prior knowledge and prepare pupils</i></p>	<ol style="list-style-type: none"> Brief review on factors and multiples of one digit number: <ol style="list-style-type: none"> How to find the factors of 1 digit number (from 2 to 9) and the multiples of 2 to 9. <i>Example:</i> multiples of 2 = 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24 Factors of 8: 1, 2, 4 and 8 Brief review on multiplication of 2 digits number by 2 digits numbers and its estimation: <ol style="list-style-type: none"> Teacher writes 17 x 13 on the board. Ask pupils to estimate the answer and write down the estimated answer on the board Then, ask pupil to work out the actual answer by using any method of their preference. (grid, column or lattice) 	<ul style="list-style-type: none"> • PowerPoint slides with questions and place value chart 							
<p>Finding out & Sorting out (Lesson Development) <i>Time to locate, gather information, organise and process ideas.</i></p>	<ol style="list-style-type: none"> Group the pupils into groups of 5. Distribute <i>Activity Sheet 1</i> (consist of questions – multiples and factors). Ask pupils: “What can you tell me about your answers in the first activity?” Then distribute <i>Activity Sheet 2</i> (consists of 3 questions on 2d by 2d) Ask the pupils to carry out estimation before doing the actual calculation. Ask the pupils to look at the information gathered and organised the information according to the task given. <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Question</th> <th>Estimate</th> <th>Actual</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>choose any method they prefer</td> </tr> </tbody> </table> Ask the pupils to explain the different method used and share to the whole class. 	Question	Estimate	Actual			choose any method they prefer	<ul style="list-style-type: none"> • Visualizer • projector • Activity Sheet 1 • Activity Sheet 2 	<p>Expected outcomes:</p> <ul style="list-style-type: none"> • Find the factors and multiples of first 12 multiples of 1 digit numbers • Multiply 2 digit by 2 digit • Estimate answers for multiplication
Question	Estimate	Actual							
		choose any method they prefer							
<p>Making Conclusions <i>Draw conclusion and consolidate understanding</i></p>	<ol style="list-style-type: none"> Discuss relationships of their findings, from factors and multiples and then 2 digits by 2 digits with the estimation. After the discussion, the pupils know the importance of multiplication and estimation. Provide pupils with worksheet which consist of factors and multiples (<i>Activity Sheet 3</i>) and multiplication of 3 digit by 2 digit (<i>Activity Sheet 4</i>). Example: Multiples of 4 are ... Factors of 12 are ... 	<ul style="list-style-type: none"> • Activity Sheet 3 • Activity Sheet 4 	<ul style="list-style-type: none"> • Estimate answers for multiplication • Solve multiplication • Find factors and multiples 						

<p>Go further (Enrichment) <i>Apply knowledge to develop further understanding</i></p>	<p>1.</p>	<p>•</p>	
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Evaluation *(with respect to the Content Learning Objectives)*

<p>What worked well?</p>	<p>What would make it even better next time?</p>
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Mathematics Lesson Planning for Effective Learning Project
Multiplication Part 2 - Activity Sheet 1
Factors and Multiples

Name: _____ **Class:** _____ **Date:** _____

1. The factors of:

a) $6 =$ _____

b) $9 =$ _____

c) $4 =$ _____

d) $8 =$ _____

2. The first 12 multiples of:

a) $5 =$ _____

b) $4 =$ _____

c) $8 =$ _____

d) $3 =$ _____



Mathematics Lesson Planning for Effective Learning Project
Multiplication Part 2 - Activity Sheet 2
Multiplication of 2-digits with 2-digits

Name: _____ **Class:** _____ **Date:** _____

Answer all questions and show your working.

	Question	Estimated	Actual
1.	21×11		
2.	36×23		
3.	56×28		



Mathematics Lesson Planning for Effective Learning Project
Multiplication Part 2 - Activity Sheet 3
Factors of numbers more than 9

Name: _____ **Class:** _____ **Date:** _____

Main Task: Solve the following.

1. What are the factors of 12?

<Ans.> _____

2. State the factors of 18.

<Ans.> _____

3. List down the factors of 26.

<Ans.> _____

4. Find the factors of 36.

<Ans.> _____

5. Write the factors of 42.

<Ans.> _____



Mathematics Lesson Planning for Effective Learning Project
Multiplication Part 2 - Activity Sheet 3
Factors of numbers more than 9

Name: _____ **Class:** _____ **Date:** _____

Main Task: Solve the following.

1. What are the factors of 12?

<Ans.> _____

2. State the factors of 18.

<Ans.> _____

3. List down the factors of 26.

<Ans.> _____

4. Find the factors of 36.

<Ans.> _____

5. Write the factors of 42.

<Ans.> _____



Mathematics Lesson Planning for Effective Learning Project

Multiplication Part 2 - Activity Sheet 4

Multiplication of 3-digits with 2-digits

Name: _____ **Class:** _____ **Date:** _____

Answer all questions and show your working.

	Question	Estimated	Actual
1.	421×12		
2.	235×21		
3.	518×49		