

Maths Learning Design

Topic:	Basic Operations	Class:	Year 4 Year 6 (I)	Duration:	6 periods
Subtopic :	Multiplication (Part 1)				
Content Learning Objectives:	Pupils should be able to: <ul style="list-style-type: none"> Recall multiplication facts up to 10 x 10 Multiply 3 digit by 1 digit and 4 digit by 1 digit Multiply 3 digit and 4 digit by 10: 100 or multiples of 10s 				

	Teaching & Learning Activities	Resources	Summary								
<p>Tuning in (Introduction) <i>Determine prior knowledge and prepare pupils</i></p>	<ol style="list-style-type: none"> Recap on how to multiply 3 digit numbers by 1 digit and 4 digit by 1 digit numbers and estimate the answer by rounding off. We are going to focus on 3d by 1d multiplication first with estimated answer. Example $123 \times 3 \approx 100 \times 3$, estimate answer is 300, actual answer is 369. Recapping the basic calculation on multiplication facts (example: 3×4, 10×4) Then recap basic calculation on multiplication of 3 digits and 4 digits numbers by 10: 100 or multiple of 10s Able to multiplying by grid method, column or lattice method: 321×3 <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Grid method:</p> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td>x</td> <td>300</td> <td>20</td> <td>1</td> </tr> <tr> <td>3</td> <td>900</td> <td>60</td> <td>3</td> </tr> </table> <p>900 + 60 + 3 <hr/>963</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Column method:</p> $\begin{array}{r} 321 \\ \times 3 \\ \hline 963 \end{array}$ <p>Lattice method:</p> </div> </div> <ol style="list-style-type: none"> Able to present the information on multiplication in groups or pairs using paper/manila cards (pupils can choose their preferred method). 	x	300	20	1	3	900	60	3		
x	300	20	1								
3	900	60	3								
<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 (4/5 pupils in one group). Give out the pupils <i>Activity Sheet 1</i> (consist of 4 questions – 3d by 1d) and <i>Activity Sheet 2</i> (consist of 4 questions on 4d by 1d). Ask the pupils to choose one of these methods – <i>grid method, column or lattice method</i> in answering the questions and solve it. Give out the pupils <i>Activity Sheet 3</i> (consist of 10 questions – 3d and 4d by multiples of 10) Asks the pupils if they do know how to multiply these numbers mentally. Ask the pupils how they get their answers then encourage them to choose another method for rechecking. 	<ul style="list-style-type: none"> Visualizer projector Activity Sheet 1, 2 and 3. 	<p>Expected outcomes:</p> <ul style="list-style-type: none"> Recall multiplication facts up to 10 x 10 Multiply 3 digit by 1 digit and 4 digit by 1 digit Multiply 3 digit and 4 digit by 10: 100 or 10s 								

<p>Making Conclusions <i>Draw conclusion and consolidate understanding</i></p>	<ol style="list-style-type: none"> 1. Teacher asks and discusses relationships of their findings, from 3 digit by 1 digit and then 4 digit by 1 digit, and estimate it. 2. After the discussion, the pupils know the importance of multiplication and estimation. 3. Provide pupils with more exercise which consist of 3 digit by 1 digit and 4 digit by 1 digit. Example: 235 x 6, 4267 x 3 	<ul style="list-style-type: none"> • Worksheet 	
<p>Go further (Enrichment) <i>Apply knowledge to develop further understanding</i></p>	<ol style="list-style-type: none"> 1. 	<ul style="list-style-type: none"> • 	

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		