

Maths Learning Design

Topic:	Measurement	Class:	Year 5 Year 6 (I)	Duration:	2 periods
Subtopic :	Conversion of Mass				
Content Learning Objectives:	Pupils should be able to: <ul style="list-style-type: none"> • convert grams to kilograms and grams to kilograms. 				

	Teaching & Learning Activities	Resources	Summary																														
<p>Tuning in (Introduction) <i>Determine prior knowledge and prepare pupils</i></p>	<p>1) Teacher recaps the units and instruments the pupils have learnt and used in Year 4 to measure mass. Ask questions:</p> <ul style="list-style-type: none"> ○ Can you give me units for measuring mass that you know? ○ Can you tell me the instrument used to measure weight ? ○ How many grams are there in 1 kilogram ? ○ How many kilogram is there in 1 000 grams? 	<ul style="list-style-type: none"> • weighing scale 																															
<p>Finding out & Sorting out (Lesson Development) <i>Time to locate, gather information, organise and process ideas.</i></p>	<p>1) In small groups, the pupils weigh five items found in the classroom using a weighing scale.</p> <p>2) Distribute Activity Sheet 1 to each group with items to be recorded in grams and converted from grams to kilograms.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 30%;">Objects</th> <th style="width: 20%;">Mass (grams)</th> <th style="width: 50%;">Conversion <i>Example: Grams to kilograms</i></th> </tr> </thead> <tbody> <tr> <td>Four Star Maths Textbooks</td> <td>1 300g</td> <td>1kg 300g</td> </tr> <tr> <td>Two school bags</td> <td></td> <td></td> </tr> <tr> <td>A box of colour pencils</td> <td></td> <td></td> </tr> <tr> <td>Six small exercise books</td> <td></td> <td></td> </tr> </tbody> </table> <p>3) Invite one pupils from each group to share their group Distribute Activity Sheet 2 to each group with items to be recorded in kilograms and converted from kilograms to grams.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 30%;">Objects</th> <th style="width: 20%;">Mass (kilograms)</th> <th style="width: 50%;">Conversion <i>Example: kilograms to grams</i></th> </tr> </thead> <tbody> <tr> <td>six Star Maths Textbooks</td> <td>1kg 600g</td> <td>1 600g</td> </tr> <tr> <td>two packets of drinks</td> <td></td> <td></td> </tr> <tr> <td>a chair</td> <td></td> <td></td> </tr> <tr> <td>a brick</td> <td></td> <td></td> </tr> </tbody> </table>	Objects	Mass (grams)	Conversion <i>Example: Grams to kilograms</i>	Four Star Maths Textbooks	1 300g	1kg 300g	Two school bags			A box of colour pencils			Six small exercise books			Objects	Mass (kilograms)	Conversion <i>Example: kilograms to grams</i>	six Star Maths Textbooks	1kg 600g	1 600g	two packets of drinks			a chair			a brick			<ul style="list-style-type: none"> • Weighing scales • Activity Sheet 1 • Activity Sheet 2 • Objects such as: four Star Maths Textbooks, two school bags, a box of colour pencils, ix exercise books • Objects such as: six Maths Textbooks, two packets of drinks, a chair, a brick 	<ul style="list-style-type: none"> • The pupils complete the table by converting grams to kilograms • The pupils complete the table by converting kilograms to grams.
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	<p>4) Work in front of the class.</p> <p>5) Ask the pupils to look at the information gathered. Observe the patterns and discuss with the pupils by asking questions</p> <p>a) What's the relationship between <i>kg</i> and <i>g</i>?</p> <p>b) How can we convert <i>kg</i> to <i>g</i>? What must we do?</p> <p>c) How can we convert <i>g</i> to <i>kg</i>? What must we do?</p>		
<p>Making Conclusions <i>Draw conclusion and consolidate understanding</i></p>	<p>1) As pupils give the answers, write the operation.</p> <div style="text-align: center;"> </div> <p>2) Discuss the relationship of their findings. 1 kg = 1000 g 1000 g = 1 kg</p> <p>3) Written Work : Workbook 3 450 g = _____ kg _____ g 4 kg 555 g = _____ g</p>	<ul style="list-style-type: none"> • Workbook 	<ul style="list-style-type: none"> • The pupils complete conversion exercise in their workbook.
<p>Go further (Enrichment) <i>Apply knowledge to develop further understanding</i></p>	<p>1) Ask the pupils to change from grams to kilogram and grams, and finally to decimal form, and vice-versa. Example:</p> <p style="text-align: center;">1200g → 1kg 200g → 1.2kg</p>		<ul style="list-style-type: none"> • The pupils write the mass in decimal form.
Evaluation (with respect to the Content Learning Objectives)			
What worked well?		What would make it even better next time?	