

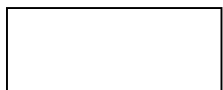
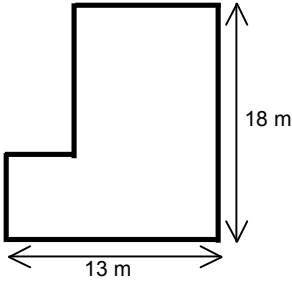


Maths Learning Design

Topic:	Measurements	Class:	Year 4 Year 6 (I)	Duration:	3 periods
Subtopic :	Perimeter of a composite figure				
Content Learning Objectives:	Pupils should be able to: <ul style="list-style-type: none"> • find the unknown length of a given figure. • find the perimeter of a composite figure. 				

Teaching & Learning Activities	Resources	Summary																
<p>Tuning in (Introduction) <i>Determine prior knowledge and prepare pupils</i></p> <ol style="list-style-type: none"> Teacher recaps and discusses previous knowledge on: <ul style="list-style-type: none"> • the simple addition and subtraction $8 + \square = 10$ $\square + 3 = 17$ $18 - \square = 10$ • the properties and perimeter of a square and rectangle. <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> s  s </div> <div style="text-align: center;"> l  l </div> <div style="text-align: center;"> l  b </div> </div> Teacher guides pupils to find the perimeter of a composite figure by measuring the given cut-out figure with the ruler. 																		
<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"> Pupils will be grouped in 4 or 5 (mixed abilities). Teacher provides the cut-out figure for each group. Teacher asks pupils, “What do we need to know and have in order to calculate the perimeters of these irregular shapes?” Expected answers: Number of sides, lengths of each side Teacher reiterates, “Perimeter is the sum of the sides (outside length) of the figures”. Pupils will use a ruler to measure length a, b, c, d, e and f of the composite figure given and record their answers. Ask the pupils to look at the answers recorded and organised in a table. Pupils will share and discuss their findings. 	<ul style="list-style-type: none"> • Cut-out figures • Ruler • Pencil 	At this stage, the pupils should be able to measure the length using a ruler.																
<p>Making Conclusions <i>Draw conclusion and consolidate understanding</i></p> <ol style="list-style-type: none"> Inform the pupils that the findings they have gathered will be put in a table. <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Length</th> <th style="padding: 5px;"><i>a</i></th> <th style="padding: 5px;"><i>b</i></th> <th style="padding: 5px;"><i>c</i></th> <th style="padding: 5px;"><i>d</i></th> <th style="padding: 5px;"><i>e</i></th> <th style="padding: 5px;"><i>f</i></th> <th style="padding: 5px;">Total length</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Length in cm</td> <td style="width: 30px; height: 20px;"></td> <td style="width: 30px; height: 20px;"></td> <td style="width: 30px; height: 20px;"></td> <td style="width: 30px; height: 20px;"></td> <td style="width: 30px; height: 20px;"></td> <td style="width: 30px; height: 20px;"></td> <td style="width: 30px; height: 20px;"></td> </tr> </tbody> </table> From the table they have completed, the pupils will find the total length of a composite figure. Then the teacher will introduce the word perimeter. The perimeter of a figure means the total length around that figure. Perimeter = $a + b + c + d + e + f$ 	Length	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	Total length	Length in cm								<ul style="list-style-type: none"> • Visualizer 	At this stage, the pupils should be able to: <ul style="list-style-type: none"> • find the total length • explain total length is equal to perimeter • find the unknown side with given perimeter and one side.
Length	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	Total length											
Length in cm																		

<p>Go further (Enrichment) Apply knowledge to develop further understanding</p>	<ol style="list-style-type: none"> Pupils will be grouped in 4 or 5 (mixed abilities). Teacher provides the activity sheet on perimeter of the garden for pupils to solve in group. <p><i>“We want to put up a fencing around the school garden for planting roses. Do you know how many metres of fencing we will need?”</i></p>  <ol style="list-style-type: none"> Remind the pupils that the figures are usually not drawn to scale. Before the pupils find the perimeter of the garden, they need to find the unknown side first. Let the pupils explore if there are sides with equal measurement. The groups will present their work. The pupils will complete the worksheet given. 	<ul style="list-style-type: none"> Activity sheet 2 Visualizer Worksheet 	<p>At this stage, the pupils should be able to find the perimeter that is related to real life situation.</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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Activity Sheet 1

Group Name: _____

Group Members:

1. _____
2. _____
3. _____
4. _____
5. _____

You need:

- Cut-out figure
- Ruler.
- Pencil.

Task:

1. Use a ruler to measure length of the figure given.
2. Record your answers in the table provided.
3. Then find the total length of the figure.

Length							Total length
Length in cm							

Question:

How do you find the total length? Explain.

Activity Sheet 2

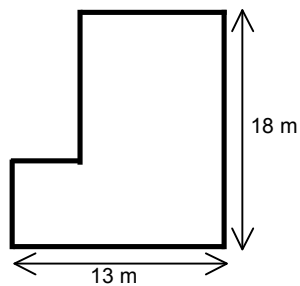
Group Name: _____

Group Members:

1. _____
2. _____
3. _____
4. _____
5. _____

Task:

We want to put up fencing around the school garden for planting roses.

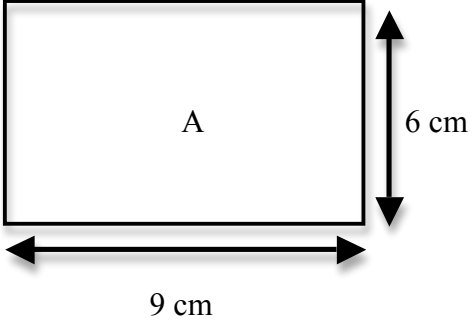
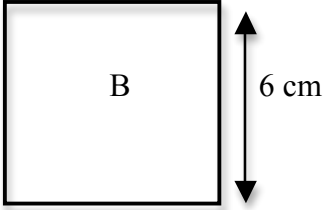
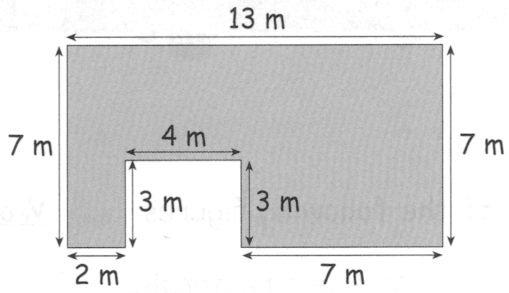
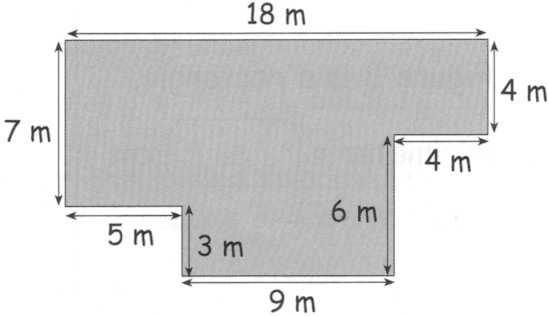


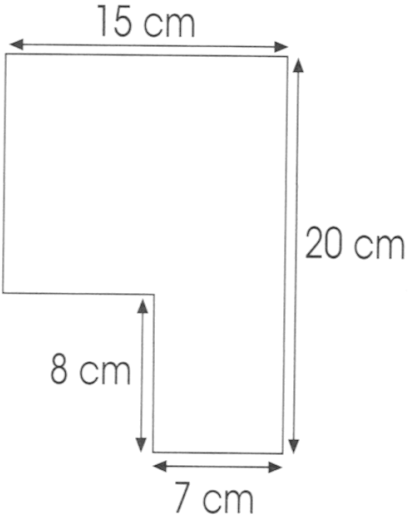
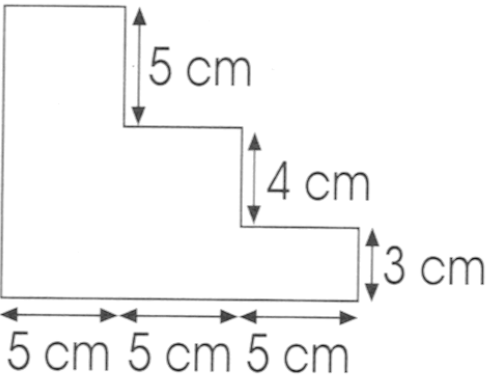
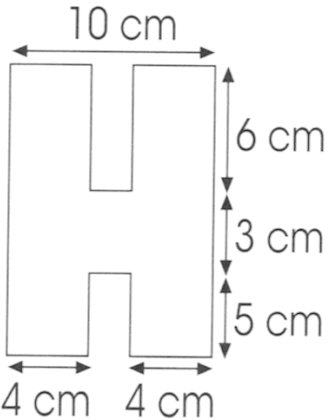
Do you know how many metres of fencing you will need?

Show your working.

EXERCISE 1:

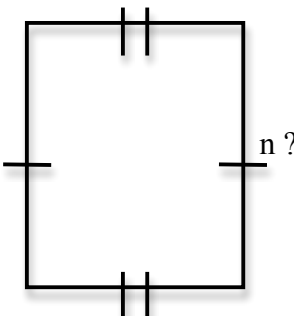
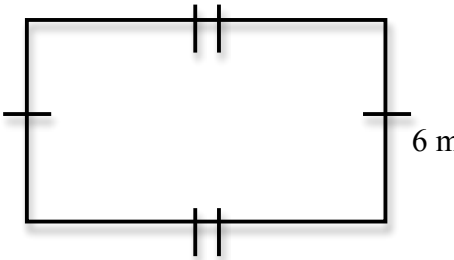
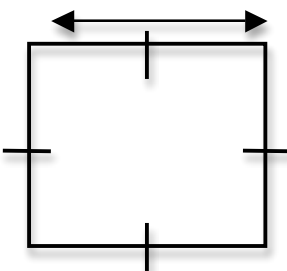
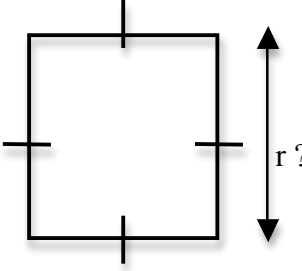
Find the perimeter of the following figures.

<p>a)</p>	<p>Figure A is a rectangle.</p> 	<p>Perimeter = _____ cm</p>
<p>b)</p>	<p>Figure B is a square.</p> 	<p>Perimeter = _____ cm</p>
<p>c)</p>		<p>Perimeter = _____ m</p>
<p>d)</p>		<p>Perimeter = _____ m</p>

e)		Perimeter = _____ cm
f)		Perimeter = _____ cm
g)		Perimeter = _____ cm

EXERCISE 2:

Find an unknown length of a rectangles or squares.

<p>a)</p>	<p>7 cm</p>  <p>Perimeter = 30 cm</p>	<p>n = _____ cm</p>
<p>b)</p>	<p>d ?</p>  <p>Perimeter = 32 m</p>	<p>d = _____ m</p>
<p>c)</p>	<p>s ?</p>  <p>Perimeter = 16 m</p>	<p>s = _____ m</p>
<p>d)</p>	 <p>Perimeter = 36 cm</p>	<p>r = _____ cm</p>