St John Fisher RC Primary School
Year 6 Maths Knowledge Organiser
Spring 2 Block 5 – Perimeter, Area & Volume (1)

Objectives	Teacher
• I can recognise that shapes with the same area can have different perimeters and vice versa	
• I can recognise when it is possible to use formulae to find the area shapes.	
• I can calculate the area of triangles.	

Perimeter & Area

perimeter = length + width + length + width or (length + width) × 2

5cm
4cm   4cm
5cm

5cm + 4cm + 5cm + 4cm
perimeter = 18cm

6cm
2cm

(6 + 2) × 2
perimeter = 16cm

length × width = area of a rectangle

Counting squares:
area = 18cm²
Use formula:
6cm × 3cm
area = 18cm²

4cm
8cm

8cm × 4cm area = 32cm²

base × perpendicular height ÷ 2 = area of a triangle

3cm
8cm

8cm × 3cm ÷ 2
area = 12cm²

perpendicular height = 5cm

6cm × 5cm ÷ 2
area = 15cm²

6cm

Counting squares:
6 whole squares = 6cm²
6 half squares = 3cm²
6cm² + 3cm² = 9cm²
area = 9cm²

Using formula:
6cm × 3cm ÷ 2 = 9cm²

Key Vocabulary

perimeter	The continuous line around the boundary of a shape.
area	The measure of the surface of a shape.
volume	The amount of space that an object or shape takes.
cubic units	Units used to measure the volume of an object or shape.
cuboid	A solid shape with 6 rectangular faces at right angles.
width	The measurement or extent of something from side to side.
length	The measurement or extent of something from end to end.
rectilinear	Shapes that are rectangular in nature.
parallelogram	A four-sided shape with opposite sides that are equal.
perpendicular height	The measurement or extent of something from base to top.

Sentence Stems

The total number of squares in the rectangle is _____	The approximate area of the triangle is _____
The formula to find the area of a rectangle is _____	The formula to find an area of a triangle is _____

Assessment

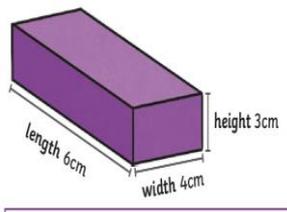# St John Fisher RC Primary School
Year 6 Maths Knowledge Organiser
Spring 2 Block 5 – Perimeter, Area & Volume (2)

Objectives	Teacher
• I can recognise when it is possible to use formulae to find the volume of shapes.	
• I can calculate the area of parallelograms.	
• I can calculate, estimate and compare volumes of cubes and cuboids using standard units.	

Area, Perimeter & Volume

base × perpendicular height = area of a parallelogram

A parallelogram can be transformed into a rectangle.

base = 12cm

base = 12cm

6cm
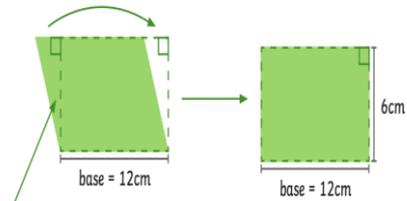
perpendicular height = 6cm

12cm × 6cm =72cm²

Volume - Counting Cubes
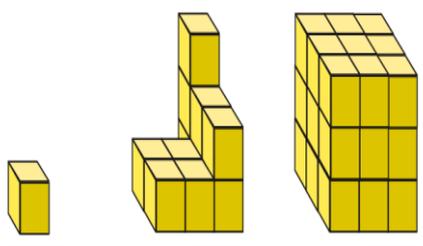
= 1cm³

11cm³

27cm³

length × width × height = volume of a cuboid

height 3cm

length 6cm

width 4cm

Multiply dimensions in **any** order:
3cm × 6cm × 4cm
volume = 72cm³

Key Vocabulary

perimeter	The continuous line around the boundary of a shape.
area	The measure of the surface of a shape.
volume	The amount of space that an object or shape takes.
cubic units	Units used to measure the volume of an object or shape.
cuboid	A solid shape with 6 rectangular faces at right angles.
width	The measurement or extent of something from side to side.
length	The measurement or extent of something from end to end.
rectilinear	Shapes that are rectangular in nature.
parallelogram	A four-sided shape with opposite sides that are equal.
perpendicular height	The measurement or extent of something from base to top.

Sentence Stems

The base of a parallelogram is ___ cm. The perpendicular height of the parallelogram is ___ cm.
The area of the parallelogram is ___ x ___ = ___ cm squared.

Assessment