

## Autumn 1

### Volume

1	To find the volume of cuboids by counting cubes
3	To know and use the formula for finding the volume of a cuboid
4	To find the volume of a triangular prism
4	To find the volume of any prism
4	To find the density of a solid
4	To calculate pressure
5	To find the volume of pyramids, cones and spheres

## TEST 1

### Inequalities

1	To use the symbols $<$ $>$ $\leq$ $\geq$
2	To show simple inequalities on a number line
2	To list the possible solutions to a single inequality
3	To show double inequalities on a number line
3	To list the integer solutions to double inequalities
3	To solve simple inequalities
5	To use inequality notation to specify simple error intervals
6	<i>To solve inequalities when the sign must be reversed</i>
6	<i>To solve double ended inequalities</i>
7	<i>To solve inequalities with two variables graphically</i>

### Units

1	To know that type of metric units are used for lengths, areas or volumes
2	To know the metric units for weight and capacity and have a feel for the size of each one
2	To convert from one metric unit to another

### Vectors

5	To illustrate a vector
5	To understand and use addition and subtraction of column vectors
6	<i>To use diagrammatic vectors</i>
9	<i>Vector proofs</i>

## Autumn 2

### 3D Shapes

1	To sort 3D shapes giving reasons
1	To make 3D shapes from nets
1	To count edges, faces and vertices
2	To know the names of cube, cuboid, prisms, pyramids, cone, cylinder and sphere

2	To sketch nets of 3D shapes
2	To visualise 3D shapes from different view points
3	To use representations of 3D objects
4	To draw accurate nets of 3D shapes
5	To draw cross sections, plans & elevations
5	To calculate surface area of 3D shapes
5	To calculate the surface area of cylinders

### Similarity and Congruence

1	To identify congruent shapes
5	To use similarity to find missing lengths
6	<i>To use enlargement to find areas and volumes</i>
7	<i>To understand how to find the area and volume scale factors for similar shapes and solids</i>
7	<i>To know the conditions for congruent triangles and similar triangles</i>
9	<i>To understand a formal approach to congruent triangles and demonstrate links with formal constructions</i>

## MOCKS 1

### Spring 1

#### - Area under a graph

#### Graphs (Travel, conversion and real life)

1	To interpret a conversion graph
1	To draw a conversion graph
2	To find distances and time from a travel graph
2	To draw a velocity-time graph
3	To understand that the gradient of a distance-time graph shows the speed
4	To know and use the distance/speed/time formulas
4	To calculate speed and average speed from a distance-time graph
6	<i>To draw and interpret real life graphs (bottles and baths etc)</i>
7	<i>To find the gradient at a point on a curve using a tangent</i>
7	<i>To find speed from a distance-time curve using a tangent or average speed using a chord</i>
8	<i>To find the acceleration from a velocity-time graph curve using a tangent, or average acceleration using a chord</i>
8	<i>To find the area under a graph by cutting it into trapeziums</i>
9	<i>To use area under a velocity-time graph to find distance travelled</i>

## Transforming Graphs

9 To know the meaning of  $f(x)$

9 To transform graphs of functions (linear, quadratic, cubic etc)

- Interpretation of statistical diagrams

## MOCK 2