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| **Core Knowledge Map** |
| Subject: **Mathematics** | Year: 10 | Term: Autumn 2 |
| What are we learning? |
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| How will I be assessed  |
| Retrieval Tasks, Exit tickets, end of half-term test. |
| Big questions: |
| Can you….?* Convert 180 m3 to mm3
* Estimate 3850 $÷$ 0.56
* Describe the difference between rounding and truncating?
* Find the side length of a cube if its volume is 330.38 cm3
* Calculate the length of the diagonal in a cuboid with dimensions 5cm, 8cm, 9 cm.
* $x=y×z$. $y=4.5$ correct to 1 decimal place. $z=3.68$ correct to 2 decimal places. Work out the lower and upper bound of $x$.

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| How does this build on previous learning? | How will this link to my future learning? |
| * Recall how to find the volume of cube/cuboid/prism and cylinder
* Use of Pythagoras’ theorem.
* Use of trigonometry ratios.
* Conversion of metric length units
 | * GCSE synoptic and multi-step problem solving questions.
* Volumes appear in A level maths where we look at optimisation problems and rate of change problems involving 3D shapes.
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| Core knowledge: | Key vocabulary: |
| Volume of a cube or cuboid = $b ×h×l$Volume of prism = $Area of cross section x l$Volume of a pyramid = $\frac{1}{3}Ah$ where A is the area of the base and h is the perpendicular height | VolumeSurface areaPlaneSphere, Hemisphere, Cone, Pyramid, CylinderPerpendicularFrustumTruncatedUpper bound and Lower boundSimilar |
| Need more help? Use the Sparx Independent Learning Codes above |