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| **Key Topics and Learning Sequence**  |
| **= First Steps** |  **= Moving On** |  **= Stretch** |  **= Challenge** |
| **1. Circles and triangles** 1. The language of **circles**
2. **Drawing** circles accurately
3. **Triangles** formed in circles
4. What is **congruence?**
5. How do you **know** two triangles are congruent?
 | **2. What’s special about a Rhombus and a Kite?**1. What is a **rhombus?**
2. What are the properties of a rhombus?
3. How do two intersecting **identical** circles create a rhombus?
4. What happens if the **circles** are different sizes?
5. What’s the same and different between a **rhombus** and a **kite**?
 | **3. Perpendicular bisectors and angle bisectors**1. What is meant in maths by **construction**?
2. How can we use what we have already learned to construct a **perpendicular bisector** of a **line segment**?
3. How do you extend this to construct a perpendicular from a **point** to a **line**?
4. How do we use what we have already learned to construct an **angle bisector**?
 | **4. More constructions**1. Constructing an **equilateral** triangle.
2. Constructing a triangle given three sides
3. Constructing angles of 60, 30, 45 degrees.
4. Constructing a regular **hexagon**
 | **5. Applying constructions to loci problems**1. What do we mean by **locus** and **loci**?
2. **Equidistant** from a point, two points, two lines
3. Constructions in loci problems
4. Identifying **regions** in loci problems
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| **How does this unit fit into your mathematical learning journey?** | **Further Exploration, Enrichment and Cultural Capital** |
| This unit builds on work you did on **Shapes and Symmetry** in **year 7,** **Geometric Reasoning** in **year 8** and **Circles** in **year 9**. You will explore how an understanding of shape allows you to do **precise mathematical constructions** that are important in fields such as design and architecture. If you go on to study higher mathematics after GCSE, you will explore these ideas again in more depth. | **Enrichment:**  Construct a regular dodecagon and a regular pentagon. Research Islamic tiling patterns**Cultural Capital:**Take the Oyster Travel Challenge: details will be posted on Google Classroom. |

**LPS Mathematics: Year 10 - Unit 7 Construction and Geometry**

 **Enquiry Question:** “**How do you cut a line or an angle exactly in half?”**

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**Date: Initial Thoughts:**

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**Date: New Thoughts:**

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**Date: Final Thoughts:**

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