 **LPS Mathematics: Year 8 Unit 5 – Geometric Reasoning 1**

 **Enquiry Question:** **Why are there 360o in a full turn?**

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| **Key Topics and Learning Sequence**  |
| **= First Steps** |  **= Moving On** |  **= Stretch** |  **= Challenge** |
| **1. Angles**1. Can define what an **angle** is.
2. Can define **acute**, **obtuse**, **reflex** and **right angles**.
3. Label an angle correctly **using notation**.
4. Know what the **angle sum** on a straight line is.
5. Know the angle sum **around a point**.
6. Know the history of the measurement of an angle.
 | **2) Measuring lengths and angles**1. Use a **protractor** to measure and draw an acute angle.
2. Measure and draw obtuse angles.
3. Measure and draw reflex angles.
4. Measure a **line segment**.
 | **3) Understanding what lines are**1. Know what we mean by a **point**.
2. Can define a line, line segment and **line ray**.
3. Understand the links between line segments and an angle in terms of a **rotation**.
4. Know the history of the language in geometry.
 | **4) Understanding what parallel means**1. Can define and draw parallel lines
2. Draw and identify a **transversal line**
3. Can reason to find opposite angles
4. Can reason to find **corresponding** and **alternate** angles
5. Can reason to find **supplementary** angle
 | **5) Reasoning with angle facts**1. Can find missing angles on a straight line
2. Can find missing angles around a point
3. Prove/Use the angle sum in a triangle
4. Can **apply** angle facts to other geometric shapes
5. Can find the angle between clock hands
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| **How does this unit fit into your mathematical learning journey?** | **Further Exploration, Enrichment and Cultural Capital** |
| **Reasoning** in mathematics is an especially important skill and one which is applied in many areas. You first developed this skill during your **proportional reasoning** unit in **Year 7** and later will reason when working on further algebraic and geometric topics you meet in **Year 9** and **Year 10.**  | **Reading:** [**https://kids.britannica.com/kids/article/geometry/353174**](https://kids.britannica.com/kids/article/geometry/353174)**Enrichment:** Explore the Babylonians 1. Explore who the Babylonians were
2. Explore their number system and why they chose it
3. Explore other forms of measuring angles apart from degrees

**Cultural Capital:** Visit the Tate and go view artwork by the artist Piet Mondrian. How does this connect to this unit of work? |

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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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