 **LPS Mathematics: Year 8 Unit 2 – Estimation 1**

**Enquiry Question:** **How many steps does it take to walk from Langdon Park DLR to Crisp Street Market?**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Key Topics and Learning Sequence** | | | | | | |
| **= First Steps** | **= Moving On** | | **= Stretch** | | **= Challenge** | |
| **1. Use estimation on everyday objects**   1. **Estimate lengths** and **widths** of a classroom, table and door.      1. **Estimate lengths** for small objects e.g. coin, pencil, calculator.      1. **Estimate distances** e.g. **length** of Langdon Park.      1. **Estimate** from a photo or **scale drawing.**      1. **Estimate** for **volumes** and **weights** of objects**.** | **2. Rounding with integers**   1. **Round** to the nearest **integer.** 2. **Round** to the nearest 10. 3. **Round** to the nearest 100 or 1000. 4. Can perform appropriate **rounding** for varied problems. | **3. Rounding with decimals**   1. Know what is meant by a **decimal place.**      1. **Round** to 1 **decimal place.** 2. **Round** to 2 d**ecimal places.** 3. **Round** to any number of **decimal places.** | | **4. Rounding with significant figures**   1. Know what is meant by a **significant figure.** 2. **Round** to 1 or 2 **significant figures.** 3. **Round** with **decimals** less than 1 to **significant figures** 4. **Round** any number to any number of **significant figures.** | | **5. Sensible Rounding**  a) Use estimation to make estimates for calculations in **context**.  b) Use **reasoning** to determine an estimate for the **square roots** of numbers which are not perfect squares.  cUse **reasoning** to determine an estimate for the **cube roots** of numbers which are not perfect squares. |
| **How does this unit fit into your mathematical learning journey?** | | | **Further Exploration, Enrichment and Cultural Capital** | | | |
| This unit gives you more tools for dealing with **estimation** in a formal setting. These skills will be useful in almost every area of maths involving measurements, geometry, number properties and decimals such as **circles** later in **Year 9.** | | | **Reading:**  Read about the **History of Measurements**: <https://nrich.maths.org/2434>  **Enrichment:** Research **Enrico Fermi** and learn about his  **back-of-the-envelope calculations**.  **Cultural Capital:** Visit the Natural History Museum and estimate the length of Hope, the giant blue whale skeleton! <https://www.nhm.ac.uk/> | | | |

**Enquiry Question: How many steps does it take to walk from Langdon Park DLR to Crisp Street Market?**

**Date: Initial Thoughts:**

**………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

**Date: New Thoughts:**

**…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

**Date: Final Thoughts:**

**………………………………………………………………………………………………………………………**

**………………………………………………………………………………………………………………………**

**………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

**………………………………………………………………………………………………………………………**