 **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?**

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| **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/> |

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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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