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| **Key Topics and Learning Sequence**  |
| **= First Steps** |  **= Moving On** |  **= Stretch** |  **= Challenge** |
|  **1. Multiplicative Relationships**1. You can use **repeated addition** when a **multiplicative relationship** exists
2. **Justify** when a multiplicative relationship exists
3. Understand that any two numbers can be expressed as **multiples** of each other.
4. Use and apply a multiplicative relationship.
 | **2. Using the Grid/number lines**1. Put information into the grid correctly from context
2. **Use the grid/number lines** to work out missing quantities
3. Draw and complete your own grid/number line to represent a problem
 |  **3. Multipliers**1. Find and apply a **multiplier** of 2 and ½
2. Find and apply any **integer multiplier**
3. Find and apply a **decimal multiplier**
4. Find and apply a **fractional multiplier**
 | **4. Problem Solving with geometry**1. **Convert** between units (simple)
2. Find **dimensions** of an **enlarged** shape using proportional reasoning
3. Find the **area** of a shape, given a **scale factor**
4. Find the **volume** of a shape given a scale factor and understand the **relation between linear, area and volume scale factors**
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| **How does this unit fit into your mathematical learning journey?** | **Further Exploration, Enrichment and Cultural Capital** |
| You probably apply proportion and scaling in your day to day life without realising it, i.e. when following a pancake recipe.In this unit we will explore the importance of **multiplicative relationships** that will help us deepen our understanding of **Ratios**, which you will be **introduced** to later in **Year 7** and developed further in **Year 8 with measuring the world** and **9** in with **further ratio** and **similarity** units | **Reading:** Read the Harry Potter novels. Start with Harry Potter and the Philosopher’s Stone and go from there!**Enrichment:** Check out the Lego sculptures of many animals and attractions in Legoland. Be a builder too by building your own models of big builds, on a small scale, using the idea of **Proportion.** <https://www.legoland.co.uk> |

**LPS Mathematics: Year 7 Unit 3 – Proportional Reasoning**

 **Enquiry Question:** **What mathematical magic is there in Harry Potter?**

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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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