

HIAS MOODLE+ RESOURCE

# **Year 6 Unit Plan: 6.8**

**Spring Term**

HIAS Maths Team  
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Final version

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# Overview

## **In this document**

Year 6 Unit Plans linked to Medium Term Overview

## **Points to consider when using this resource**

These unit plans provide an example of how medium term planning could be developed into units of work. These unit plans will need to be adapted to meet the needs of students. The unit plan provides an outline of a possible learning journey with suggestions of types of tasks that could be used. They also identify key prior learning, some common misconceptions and an indication of key skills students need to develop towards competency. It is assumed that teachers will make use of appropriate mathematical representations (manipulatives, visuals and symbolic) to support conceptual understanding for students alongside procedural fluency.

# Year 6 Unit 6.8 Plan – Statistics (line graphs including temperature and negative numbers, mean average)

This unit is about pupils understanding of negative numbers on a numberline and within a context and making links with line graphs. Pupils will also understand how to calculate the mean as an average and what this means.

| Session | Unit Objectives                                                                                                                                                                                                                                             | Types of task                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1-5     | <ul style="list-style-type: none"> <li>Use negative numbers in context and calculate intervals across zero</li> <li>Interpret and construct line graphs and use these to solve problems.</li> <li>Calculate and interpret the mean as an average</li> </ul> | <p><b>Reintroduce pupils to negative numbers</b> using the visual image of a numberline. Solve questions including negative numbers within a context – <i>The temperature measured -3 degrees in the morning. By the afternoon, the temperature decreased by 5 degrees. What is the temperature now?</i> Vary the task to ensure pupils experience adding and subtracting negative numbers.</p> <p><b>Line graphs</b> – make a possible link with negative numbers and temperature over time. Model how to read line graphs encouraging annotations. Include questions that require pupils to add information to a given line graph.</p> <p><b>Teach mean</b> using the graph. What was the mean temperature in a day? Share that mean is an average. Demonstrate the different ways in which data could be presented such as graphs, tables etc and encourage pupils to find the mean of different forms of data.</p> <p>Vary questions such as – <i>I asked 10 pupils how much pocket money they received every week. I calculated the mean average pocket money earned and it was £5. What could the data have been? Is there more than one way?</i></p> |

| Check and refresh                                                                                                                                                               | Watch out for...                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Building fluency                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Pupils' understanding of negative numbers and their place within the number system.</p> <p>Pupils being able to read line graphs and how to plot points on a line graph.</p> | <p>Pupils not understanding that negative numbers are part of the number system.</p> <p>Pupils believing that decimals are in the place where negative numbers should be. Pupils believe that -5 is larger than -3.</p> <p>Pupils forgetting 0 when they are calculating with negative and positive numbers.</p> <p>When finding the mean, pupils forgetting to divide by the number of people/items etc.</p> <p>Pupils not annotating line graphs and making estimations.</p> | <p>Multiplying and dividing numbers where there is a remainder – convert remainders to fractions and decimals such as 16 divided by 5 = 3 remainder one (the same as <math>\frac{1}{5}</math>, which is the same as 0.2) Therefore the answer is 5.2.</p> <p>Multiplying and dividing numbers using facts and related facts.</p> |

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