West Moors Middle School – Curriculum Component Profile

<table>
<tr><td>Subject: Maths</td><td>Year: 7</td></tr>
<tr><td colspan="2">Description of learning:
The curriculum in Key Stage 3 is more diverse and varied than Key Stage 2. The focus moves from number and calculation and broadens to include; algebra, ratio & proportion and probability.

Whilst all the elements of calculation, place value and fractions are still covered within Key Stage 3, it is instead under the heading, number.

By the end of year 7 a child should be increasingly fluent in making meaningful connections between different mathematical concepts and apply them readily. A child should understand and solve a variety of algebraic equations; understanding how to manipulate expressions and equations fluently.

A child is applying formulas and known rules to geometry and measures problems to find information.</td></tr>
<tr><td>Important questions:

What do square, cube numbers look like and why is this important when linking with order of operation?

How can we use rounding to help build accurate estimates?

How do negative numbers present themselves in the real world?

How can we apply letters to mathematical problems to substitute for unknown values?

How can we link the principles of equations and balancing?

How can we use a fraction to express the quantity of an amount?</td><td>Bigger picture and linking:

The Year 7 curriculum bridges the arithmetic and reasoning focus of the Year 6 SATS tests with units of work that encourage the application of previously learnt skills through open questions and real life contexts. A number of units within the Year 7 curriculum allow for over-learning of the foundations of the four operations from the previous year.</td></tr>
<tr><td>Overlearning required:

Pupils require a strong and robust understanding of the four operations and will need the ability to apply formal multiplication and division to a range of question types. Overlearning is required as often the questions for KS3 pupils involve multiple steps and a concrete understanding of how place value operates below zero.</td><td>WoW factor:

Pupils will be provided with opportunities to apply their learning through a range of substantial activities and mini research projects.

Micro-Tyco will be used periodically throughout the academic year to apply pupils to apply maths to finance projects and allow for basic accounting skills.

All pupils are provided access to Times Table Rock Stars – this pupil centred application encourages regular practice of multiplication and division. The software package includes supporting worksheets and pupil tracking.</td></tr>
<tr><td>How will our learning values be developed?

Pupils will be encouraged to develop their independence through mathematical toolkits provided on desks. Toolkits will enable pupils to select the equipment best suited to helping interpret question types.</td><td>How will our community values be developed?

Pupils will demonstrate respect when working in groups and understand the various dynamics that enable group work to be successful.

Pupils will engage in real-life scenarios using sensitivity where needed such as when discussing personal finance.</td></tr>
<tr><td>How will pupils' numeracy be developed?

N/A</td><td>How will pupils' literacy be developed?
Appropriate use of mathematical language that is used consistently across the department. Key vocabulary is incorporated within our SPAG focus for books.</td></tr>
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