

Using and Applying Mathematics Levelling Criteria

Solving problems:

- Solve practical problems involving money (pence) measures and numbers (addition, subtraction, doubling, halving, paying and giving change).
- Select the mathematics used in some activities (all 4 operations). Be able to use £ and p, numbers, measures and numbers in one step problems.
- Solve two step problems involving money (correct decimal notation) and measures (including time). Choose and carry out appropriate calculations. Begin to organise work and check results, trying different approaches and overcoming difficulties.
- Develop and apply own strategies for solving problems, including applying mathematics to practical contexts. Solve multi-step problems using fractions, decimals and percentages. Use calculator methods where appropriate.
- Identify information necessary to carry out tasks and solve problems. Check results and know whether they are sensible.

Level 1

Level 2

Level 3

Level 4

Level 5

Representing:

- Describe and solve a puzzle or problem using numbers, pictures or practical materials. Be able to set the solution in the original context.
- Identify and record information needed to solve a puzzle or problem. Carry out steps to solve it and check the solution in the context of the problem.
- Represent information from a puzzle or problem using numbers, images or diagrams. Use these to find and represent the solution in context, using units of measure or £and p notation as appropriate.
- Represent puzzles and problems by identifying and recording calculations or information required to solve them. Present and interpret all possible solutions in context.
- Systematically tabulate information in problems. Identify and record calculations and steps needed to solve them, using symbols where appropriate. Interpret solutions in the original context and check for accuracy.

Level 1

Level 2

Level 3

Level 4

Level 5

<p>Enquiring:</p> <ul style="list-style-type: none"> • Select suitable equipment to answer a question, including sorting objects, shapes or information. Display results using pictures and simple tables. • Be able to follow a simple line of enquiry. Select, organise and present information in lists, tables and simple diagrams. • Follow a line of enquiry by deciding what information is important. Make and use lists, tables and graphs to organise and interpret the information. • Suggest a line of enquiry and plan a strategy to follow it. Organise and interpret selected information to find answers and be able to suggest an extension to the enquiry. • Develop further lines of enquiry including being able to answer related questions. Interpret results and review methods used. 	<p><i>Level 1</i></p> <p><i>Level 2</i></p> <p><i>Level 3</i></p> <p><i>Level 4</i></p> <p><i>Level 5</i></p>
<p>Reasoning:</p> <ul style="list-style-type: none"> • Recognise a simple pattern or relationship involving numbers or shapes. • Decide whether examples satisfy given conditions. Make predictions and test these with examples. • Identify properties of numbers and shapes and use patterns and relationships to show understanding of a general statement about numbers by finding examples to match it. • Search for patterns by trying out ideas of their own. Identify examples for which a statement about numbers or shapes is true or false, using patterns, properties and relationships. • Represent and interpret sequences patterns and relationships involving numbers and shapes. Suggest and test hypotheses and construct and use expressions and formulae in words then symbols. 	<p><i>Level 1</i></p> <p><i>Level 2</i></p> <p><i>Level 3</i></p> <p><i>Level 4</i></p> <p><i>Level 5</i></p>
<p>Communicating:</p> <ul style="list-style-type: none"> • Describe ways of solving puzzles and problems, explaining choices orally or with pictures. • Use some mathematical language and number sentences to explain results and decisions. Present solutions in a more organised way. • Use and interpret symbols and diagrams when discussing work and explaining thinking orally and in writing. • Explain reasoning using diagrams, graphs and text in a clear and organised way. Refine recording methods using symbols and images. • Explain reasoning and conclusions using mathematical symbols, words and diagrams which show clear understanding. 	<p><i>Level 1</i></p> <p><i>Level 2</i></p> <p><i>Level 3</i></p> <p><i>Level 4</i></p> <p><i>Level 5</i></p>
<p style="text-align: right;">Best-Fit Assessed Level :</p> <p><i>(It is <u>not</u> possible to sub-level an individual problem from this criteria)</i></p>	