

## **MATHEMATICS**

Mathematics is broken into 2 main streams Functional Skills and GCSE

### **A. Functional Skills**

The aim of the Functional Skills standards is to develop and recognise the ability of learners to transfer and apply skills to solve mathematical problems in ways that are appropriate to the situation. The process skills apply at all levels. These are:

- ❖ Representing- Identifying the problem and selecting the mathematics and information to model the situation
- ❖ Analysing- processing and using mathematics and checking the results
- ❖ Interpreting- Communicating the results of the analysis.

### **Level 1 Skill Standards**

Representing:

1. Understand practical problems in familiar and unfamiliar contexts and situations, some of which are non-routine.
2. Identify and obtain necessary information to tackle the problem
3. Select mathematics in an organised way to find solutions

Analysing:

4. Apply mathematics in an organised way to find solutions to straightforward practical problems for different purposes.
5. Use appropriate checking procedures at each stage.

Interpreting:

6. Communicate solutions to practical problems, drawing simple conclusions and giving explanations

### **Level 2 Skill Standards**

Representing:

1. Understand routine and non-routine problems in familiar and unfamiliar contexts and situations
2. Identify the situations and problems and identify the mathematical methods needed to solve them
3. Choose from a range of mathematics to find solutions

Analysing:

4. Apply a range of mathematics to find solutions
5. Use appropriate checking procedures and evaluate their effectiveness at each stage

Interpreting:

6. Communicate solutions to multi-stage practical problems in familiar and unfamiliar contexts and situation.
7. Draw conclusions and provide mathematical justifications.

### **Level 3 Skill Standards**

Representing:

1. Understand practical problems in familiar contexts and situations
2. Begin to develop own strategies for solving problems
3. Select mathematics to obtain answers to simple given practical problems that are clear and routine.

Analysing:

4. Apply mathematics to obtain answers to simple given practical problems that are clear and routine
5. Use simple checking procedures

Interpreting:

6. Communicate solutions to practical problems in familiar contexts and situations

### **B. GCSE**

Key stage 4 is a vital time for students and it is important that the students achieve the required grades. The following GCSE Maths skills will be taught;

<b>Key Stage 4</b>				
<b>Algebra</b>	<b>Statistics</b>	<b>Number</b>	<b>Probability</b>	<b>Other Topics</b>
<ul style="list-style-type: none"><li>• Linear Equations</li><li>• Sequences</li><li>• Substitution</li></ul>	<ul style="list-style-type: none"><li>• Average and Spread</li><li>• Data Collection</li><li>• Graphs</li><li>• Data Analysis</li></ul>	<ul style="list-style-type: none"><li>• Fractions</li><li>• Prime Numbers</li><li>• Properties</li><li>• Ratio and Proportion</li></ul>	<ul style="list-style-type: none"><li>• Coin tossing</li><li>• Pin dropping</li><li>• Theoretical probability</li><li>• Dice games</li></ul>	<ul style="list-style-type: none"><li>• Averages</li><li>• Indices</li><li>• Pythagoras</li><li>• Volume and Surface</li></ul>