The North Gosforth Academy Maths Learning Journey – Year 8

The below descriptions are indicative of the skills a pupil working at these levels will develop throughout their journey through our Year 7 mathematics curriculum. Some criteria are cumulative and therefore levels include many elements of the preceding levels by implication.

Knowledge and Application

Level	Definition
Emerging	Students are able to carry out calculations involving the basic mathematical principles and are increasingly able to apply these principles to problem solving. Students working at this level can: • Carry out routine tasks requiring single step solutions • Recall basic number facts with increasing accuracy. • Use notation correctly • Begin to communicate basic information
Developing	Students are able to demonstrate fluency in Mathematics and a developing ability to decision make and solve problems. Students working at this level can: • Accurately recall number facts, terminology and definitions • Use and interpret notation correctly • Accurately carry out routine procedures or tasks requiring single step solutions • Recall basic number facts with increasing accuracy. • Communicate basic information
Achieving	Students have an increasing ability to use and apply standard mathematical concepts. Their ability to solve problems and select correct techniques is increasing. Students working at this level can: • Recall and use notation, terminology, facts and definitions; perform routine procedures, including some multi-step procedures • Interpret and communicate basic information; make deductions and use simple reasoning to obtain results • Begin to solve problems by translating simple mathematical and non-mathematical problems into mathematical processes • Provide basic evaluation of methods or results • Interpret results in the context of the given problem
Exceeding	Students have an increasing ability to use and apply standard techniques. They have increasing independence when solving problems within mathematics and in other relevant contexts. Students working at this level can: • Confidently recall terminology, facts and definitions; perform routine procedures, including multi-step procedures • Solve problems by translating simple mathematical and non-mathematical problems into mathematical processes • Begin to make and use connections between different parts of mathematics and apply them to a range of problems • Interpret results in the context of the given problem • Evaluate methods used and results obtained
Excelling	Students are confident in their ability to reason, interpret and communicate mathematically. Students working at this level can, generally: • Make deductions, inferences and draw conclusions from mathematical information

- Construct chains of reasoning to achieve a given result
- Interpret and communicate information accurately
- Present arguments and proofs with increasing confidence
- Perform multi-step procedures effectively by applying terminology and using formulae
- Interpret and communicate information effectively
- Use strategies to solve mathematical and non-mathematical problems by translating them into mathematical processes, realising connections between different parts of mathematics and confidently combining skills to solve problems

Throughout Key Stage 3 assessments are designed to assess both skills and knowledge. They will assess newly taught content as well as some previous taught topics to ensure students can recall content over time.

A mathematical concept e.g. area, will be taught every year and will get progressively more complex over time. If you require more specific detail on what topic is taught when please refer to the departmental curriculum intentions.

	In Year 9, the students' Knowledge journey increases in challenge further to include…								
	In Year 8, students' Knowledge journey increases in challenge to include…						Assessment 1	Assessment 2	Assessment 3
	In Year 7, students' Knowledge journey includes…			Assessment 1	Assessment 2	Assessment 3			
	Assessment 1	Assessment 2	Assessment 3						
Content	**Number:** properties, calculations, FDP equivalence, fractions, indices **Probability**	**Number:** ratio, proportional reasoning **Algebra** expressions, substitution, **Geometry** angles, constructions, properties of 2D shapes	**Number:** percentages **Algebra** equations, inequalities sequences coordinates and graphs, **Geometry** area, volume, units of measure, transformations **Data** averages, charts and graphs	**Number:** properties, calculations, FDP equivalence, indices and standard form **Algebra** expressions, substitution,	**Number:** fractions, percentages ratio, proportional reasoning **Algebra** equations, formulae, inequalities **Geometry** angles, constructions,	**Algebra** sequences, graphs **Geometry** area, volume, units of measure, transformations **Data** averages, charts and graphs	**Number:** FDP equivalence, fractions, percentages indices and standard form **Algebra** expressions, substitution, **Geometry** constructions	**Number:** ratio, proportional reasoning **Algebra** equations, formulae, inequalities, sequences **Geometry** area, volume, units of measure	**Algebra** graphs **Geometry** angles, Pythagoras' theorem, transformations **Data** probability, averages, charts and graphs