Subject Curriculum Vision:

The Maths Curriculum at AJK

INTENT

Why should all students learn this subject?

At AJK, we believe passionately that reasoning and problem-solving in mathematics is the entitlement of every child. We aim to create a culture of mathematical enquiry, in which children and adults alike delight in pattern-spotting, conjecture, generalisation and proof. We know that, for every child to excel mathematically, it is essential that they master fundamental knowledge and skills. These can then be deployed fluently in a variety of contexts to solve mathematical problems – and, in so doing, deepen their sense of curiosity in, wonder about and understanding of the world.

What is the core knowledge in this subject?

Throughout their time at AJK, pupils are given extensive practice at the following, to secure fluent recall:
- **Number bonds**
- **Times tables**
- **Arithmetical procedures**

In addition, we aim through our teaching, task design and classroom culture to develop mathematical skills, including the following:
- **Exemplifying**
- **Completing**
- **Correcting**
- **Sorting**
- **Changing**
- **Reversing**
- **Generalising**
- **Specialising**
- **Explaining**
- **Verifying**

IMPLEMENTATION

How is this subject taught at AJK?

Pupils in Years 1 and 2 have five one-hour maths lessons per week. In addition, they have a 15-minute slot each day in which they practise key content to the point of automaticity. Pupils in KS2 have five one-hour maths lessons per week. One of these is devoted to explicit arithmetic teaching, with opportunities for consolidation of previously-covered material.

Where appropriate, pupils make use of concrete manipulatives and pictorial representations to support and deepen their understanding. Opportunities are given where possible for pupils to apply their growing mathematical understanding to reasoning and problem-solving tasks.

IMPACT

What does assessment look like in this subject?

Pupils in Years 2-6 complete an arithmetic paper each half-term, designed by Ark. The results from this are analysed to identify areas in which pupils are struggling. This allows teachers to make adaptations to future units of work to address misconceptions. In addition, each full term, pupils complete a reasoning assessment. The results from this are again analysed to identify pupils in need of further support, as well as areas of the curriculum that require further consolidation.

UNIT OVERVIEW

Maths Curriculum Content Overview		
Autumn	**Spring**	**Summer**
Y1 Numbers to 10 Addition and subtraction within 10 Shape and patterns Numbers to 20 Addition and subtraction within 20	Time Exploring calculation strategies within 20 Numbers to 50 Addition and subtraction within 20 Fractions Measures: Length and mass	Numbers Numbers 50 to 100 and beyond Addition and subtraction Money Multiplication and division Measures: Capacity and volume
Y2 Number within 100 Addition and subtraction of 2-digit numbers Addition and subtraction word problems Measures: Length Graphs Multiplication and division: 2, 5 and 10	Time Fractions Addition and subtraction of 2-digit numbers Money Faces, shapes and patterns; lines and turns	Numbers within 1000 Measures: Capacity and volume Measures: Mass Exploring calculation strategies Multiplication and division
Y3 Number sense and calculation strategies Place Value Graphs Addition and subtraction Length and perimeter	Multiplication and division Deriving multiplication and division facts Time Fractions	Angles and Shape Measures Securing multiplication and division Exploring calculation strategies and place value
Y4 Reasoning with 4-digit numbers Addition and subtraction Multiplication and division Interpreting and presenting data	Securing multiplication facts Fractions Time Decimals Area and perimeter	Solving measure and money problems Shape and symmetry Position and direction Reasoning with patterns and sequences Shape
Y5 Reasoning with large whole numbers Problem solving with integer addition and subtraction Line graphs and timetables Multiplication and division Perimeter and area	Fractions and decimals Angles Fractions, decimals and percentages Transformations	Solving measure and money problems Shape and Symmetry Position and Direction Reasoning with patterns and sequences Shape
Y6 Integers and decimals Multiplication and division Calculation problems Fractions Missing angles and lengths	Coordinates and shape Fractions Decimals and measures Percentages and statistics Proportion problems	Transition work