

MATHS-CURRICULUM INTENT

ASPIRE-CHALLENGE-ACHIEVE

The vision of the Mathematics department at Bourne Academy is underpinned by the whole school ethos of “Aspire, Challenge, Achieve”. Students follow an aspirational flight path which prepares them effectively for their next stage of study, allowing them to be successful whatever their level of ability. Students are supported to develop a mind-set such that they can face Mathematical challenges with confidence. We aim for this confidence to be a lasting legacy in their use of Mathematics throughout their lives.

Opportunities for regular recap, assessment and review form a significant part of our curriculum intervention. This ensures mastery of key objectives. The key objectives in Maths have been selected in order to ensure progression from one stage to the next. Mastery of the key objectives ensures that students are well prepared to tackle the demands of the next stage.

Throughout all key stages regular curriculum intervention ensures that students make at least their expected progress with many students exceeding expected progress. Our intervention weeks are mapped into the scheme of work and are based on the outcomes of assessments. This strategy is highly valued by both staff and students and there is evidence that it has a positive impact on progress.

Students are encouraged to become independent learners and are provided with extensive opportunities to embed their skills outside of the classroom. Weekly extra-curricular support is offered to all students irrespective of their ability but aspiring to be successful in Mathematics.

The number of Mathematics lessons students receive per week varies in order to meet the differing needs of students. Extra lessons ensure a confidence in basic numeracy and prepare students for the demands of our curriculum. Students are prepared to be Mathematically articulate using subject vocabulary in a range of contexts. Our varied and structured approach to teaching and learning develops resilience, reasoning and recall. This is achieved through starters, problem solving, key assessed work and formal assessments.

Aspirational targets combined with an appropriate level of challenge ensure that every student is provided with the skills they need in order to achieve success in their study of Mathematics at Bourne Academy.

Key Stage 3

Year 7	2-4	4-6	6-9
Year 8	2-4	4-6	6-9

Key Stage 4

Year 9	Foundation B	Foundation A	Higher B	Higher A
Year 10	Foundation B	Foundation A	Higher B	Higher A
Year 11	Foundation B	Foundation A	Higher B	Higher A

Year Seven: Target Range 2 -4

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Numbers & Number System			Pattern Sniffing	Calculating: Addition and Subtraction	Calculating: Multiplication and Division		Holiday	Multiplication & Division	Assessment
Measuring Space	Intervention	Calculating Fractions/Decimals/Percentages			Holiday		Counting and Comparing		Assessment
Presentation of data	Intervention	Estimating	Holiday	Fractions, Dec, %		Mathematical Movement		Assessment	Exploring Time
Holiday	Holiday	Intervention	Angles		Properties of Shapes	Calculating Space		Holiday	Visualising & Constructing
Review of Year	Assessment	Rich Task	Intervention	Rich Task	Holiday				

Year Seven: Target Range 4 -6

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Numbers & Number System			Pattern Sniffing	Calculating	Calculating: Division		Holiday	Proportional Reasoning	Assessment
Measuring Space	Intervention Rich Task	Calculating Fractions/Decimals/Percentages			Holiday		Algebraic Proficiency	Measuring Data	Assessment
Presentation of data	Intervention Rich Task	Solving Equations &	Holiday	Fractions, Dec, %		Calculating Space		Assessment	Estimating
Holiday	Holiday	Intervention Rich Task	Angles	Properties of Shapes		Visualising & Constructing		Holiday	Mathematical Movement
Review of Year	Assessment	Problem Solving	Intervention Rich Task	Problem Solving	Holiday				

Year Seven: Target Range 6 – 9

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Numbers and the Number System		Pattern Sniffing	Calculating		Counting & Comparing	Measuring Data	Holiday	Proportional Reasoning	Assessment
Measuring Space	Intervention Rich Task	Calculating Fractions, Decimals and Percentages			Holiday		Algebraic Proficiency: Tinkering		Assessment
Presenting Data	Intervention Rich Task	Exploring FDP	Holiday	Solving Equations and Inequalities		Calculating Space		Assessment	Checking & Estimating
Holiday	Holiday	Intervention Rich Task	Angles	Properties of Shapes		Mathematical Movement		Holiday	Visualising & Constructing
Review of Year	Assessment	Problem Solving	Intervention Rich Task	Problem Solving	Holiday				

Year Eight: Target Range 2 - 4

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Calculating		Calculating: Division		Properties of Shapes		Algebraic Proficiency	Holiday	Pattern Sniffing	Assessment
Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20
Angles	Intervention Rich Task	Solving Equations & Inequalities	Visualising & Constructing		Holiday		Fractions, Decimals, %		Assessment
Week 21	Week 22	Week 23	Week 24	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30
Measuring Space	Intervention Rich Task	Proportional Reasoning	Holiday	Calculating Space		Numbers & Number System		Assessment	Measuring Data
Week 31	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40
Holiday	Holiday	Intervention Rich Task	Calculating Fractions/Decimals/Percentages			Mathematical Movement	Estimating	Holiday	Presentation of data
Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50
Review of Year	Assessment	Problem Solving	Intervention Rich Task	Problem Solving	Holiday				

Year Eight: Target Range 4 - 6

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Calculating		Counting & Comparing	Properties of Shapes		Algebraic Proficiency: Tinkering		Holiday	Pattern Sniffing	Assessment
Angles	Intervention Rich Task	Solving Equations and Inequalities		Visualising & Constructing	Holiday		Exploring FDP	Checking & Estimating	Assessment
Measuring Space	Intervention Rich Task	Proportional Reasoning	Holiday	Calculating Space		Numbers and the Number System		Assessment	Measuring Data
Holiday	Holiday	Intervention Rich Task	Calculating Fractions, Decimals and Percentages			Mathematical Movement		Holiday	Presenting Data
Review of Year	Assessment	Problem Solving	Intervention Rich Task	Problem Solving	Holiday				

Year Eight: Target Range 6 – 9

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Calculating		Understanding Risk 1		Algebraic Proficiency: Tinkering			Holiday	Understanding Risk 2	Assessment
Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20
Angles	Intervention Rich Task	Solving Equations	Algebraic Proficiency: Visualising	Holiday		Proportional Reasoning		Assessment	
Week 21	Week 22	Week 23	Week 24	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30
Exploring FDP	Intervention Rich Task	Pattern Sniffing	Holiday	Calculating Space		Numbers and the Number System	Assessment	Measuring Data	
Week 31	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40
Holiday	Holiday	Intervention Rich Task	Measuring Data	Calculating Fractions, Decimals and Percentages		Visualising & Constructing		Holiday	Presenting Data
Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50
Review of Year	Assessment	Problem Solving	Intervention Rich Task	Problem Solving	Holiday				

Year Nine: Foundation B

September			October					November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Basic number	Factors and multiples		Basic algebra		Basic decimals		Holiday	Rounding	Assessment Week	Angles	RI	Scale diagrams and bearings	Coordinates and linear graphs	
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday		Basic fractions	Assessment Week	Basic Fractions	RI	Introduction to perimeter and area		Holiday	Basic percentages		Introduction to circumference and area		Equations	
April			May					June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday		Scatter graphs	Assessment Week	Basic probability		RI	2D representations of 3D shapes	Holiday	Ratio and proportion		Review of Number	Assessment Week	Properties of polygons	
July		August												
Wk 46	Wk 47	Wk 48												
Review	w/b 25/7 w/e 31/7	w/b 1/8 w/e 7/8												

Year Nine: Foundation A

September			October					November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Basic number		Factors and multiples	Angles	Scale diagrams and bearings	Basic algebra		Holiday	Basic fractions	Assessment Week	Coordinates and linear graphs	RI	Basic decimals	Rounding	2D representations of 3D shapes
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday		Basic percentages	Assessment Week	Basic Percentages	RI	Equations		Holiday	Introduction to perimeter and area		Ratio and proportion		Basic probability	
April			May					June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday		Properties of polygons	Assessment Week	Constructions and loci		RI	Standard form	Holiday	Scatter graphs	Introduction to circumference and area		Assessment Week	Real life graphs	
July		August												
Wk 46	Wk 47	Wk 48												
Review	w/b 25/7 w/e 31/7	w/b 1/8 w/e 7/8												

Year Nine: Higher B

September			October					November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Basic number		Factors and multiples	Angles	Basic algebra review	Coordinates and linear graphs		Holiday	Basic fractions	Assessment Week	Basic decimals	RI	Rounding	Basic percentages	
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday		Basic probability	Assessment Week	Scatter graphs	RI	Equations		Holiday	Standard form		Constructions and loci	Real life graphs		
April			May					June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday		2D representations of 3D shapes	Assessment Week	Properties of polygons		RI	Scale diagrams and bearings	Holiday	Introduction to Perimeter and Area	Introduction to Area and Circumference		Assessment Week	Ratio and proportion	
July		August												
Wk 46	Wk 47	Wk 48												
Review	w/b 25/7 w/e 31/7	w/b 1/8 w/e 7/8												

Year Nine: Higher A

September			October					November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Basic number		Factors and multiples	Angles	Basic algebra review	Basic fractions	Basic decimals	Holiday	Coordinates and linear graphs	Assessment Week	Rounding	RI	Collecting and representing data		Sequences
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday		Basic percentages	Assessment Week	Basic Percentages	RI	Perimeter and area		Holiday	Circumference and area		Ratio and proportion	Equations		2D representations of 3D shapes
April			May					June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday		Basic probability	Assessment Week	Scale diagrams and bearings	Standard form	RI	Scatter graphs	Holiday	Real life graphs	Constructions and loci		Assessment Week	Transformations	
July		August												
Wk 46	Wk 47	Wk 48												
Review	w/b 25/7 w/e 31/7 +	w/b 1/8 w/e 7/8 +												

Year Ten: Foundation B

September				October				November				December			
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	
Calculating with percentages		Measures		Indices	Collecting and representing data		Holiday	Assessment Week	Statistical measures		RI		Algebra recap and extension		
December		January				February				March					
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30	
Holiday		Transformations		Review of basic probability	Assessment Week	RI		Holiday	Further perimeter and area		Further circumference and area		Graphs recap and extension		Assessment Week
April				May				June				July			
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	
Holiday		Constructions and loci		RI	Real life graphs		Review of Ratio and Proportion	Holiday	Probability		Assessment Week	RI		w/b 10/7 w/e 18/7	

Year Ten: Foundation A

September			October					November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Sequences	Pythagoras' theorem	Calculating with percentages	Measures	Indices	Holiday	Assessment Week	Collecting and representing data	RI	Review of basic probability	Further perimeter and area				
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday	Algebra recap and extension	Statistical measures	Assessment Week	Graphs recap and extension	RI	Holiday	Further circumference and area	Probability	Introduction to trigonometry	Assessment Week				
April			May				June				July			
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday	Simultaneous equations	RI	Transformations	Review of Ratio and Proportion	Holiday	Algebra: quadratics, rearranging formulae and identities	Assessment Week	RI						w/b 10/7 w/e 16/7

Year Ten: Higher B

September				October				November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Sequences	Indices	Calculating with percentages	Surds	Algebra recap and review	Holiday	Assessment Week	Collecting and representing data	RI	Pythagoras theorem and basic trigonometry	Number recap and review				
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday	Perimeter and area	Circumference and area	Assessment Week	Growth and decay	RI	Holiday	Algebra: introduction to quadratics and rearranging formulae	Measures	Simultaneous equations	Assessment Week				
April				May				June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday	Transformations	RI	Statistical measures	Inequalities	Holiday	Volume	Assessment Week	RI						w/b 10/7 w/e 16/7

Year Ten: Higher A

September				October				November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Calculating with percentages	Measures	Surds	Statistical measures	Holiday	Assessment Week	Pythagoras theorem and basic trigonometry	RI	Indices	Congruence and similarity					
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday	Number recap and review	Properties of polygons	Assessment Week	Algebra recap and review	RI	Holiday	Algebra: introduction to quadratics and rearranging formulae	Probability	Statistics recap and review	Sketching graphs	Assessment Week			
April				May				June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday	Volume	RI	Simultaneous equations	Geometry and measures recap and review	Holiday	Linear and quadratic equations and their graphs	Assessment Week	RI	w/b 10/7 w/e 16/7					

Year Eleven: Foundation B

September				October				November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Volume		Sequences		Inequalities	NUMBER REVISION FORTNIGHT		Holiday	Assessment Week	Pythagoras' theorem		RI	Algebra and graphs		Quadratic graphs
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday		GEOMETRY AND MEASURES REVISION FORTNIGHT		Year 11 Mocks		Sketching graphs	RI	Holiday	PROBABILITY AND STATISTICS REVISION FORTNIGHT		Standard form		2nd Mock	ALGEBRA REVISION FORTNIGHT
April				May				June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday		Revision						Holiday	Revision	June Examinations		w/b 25/6 w/e 1/7	w/b 2/7 w/e 8/7	w/b 9/7 w/e 15/7

Year Eleven: Foundation A

September				October				November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Volume		Algebra and graphs			Congruence and similarity		Holiday	Assessment Week	Sketching graphs		RI	Direct and inverse proportion		Inequalities
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday		Trigonometry		Year 11 Mocks		Growth and decay	RI	Holiday	Solving quadratic equations		Quadratic graphs		2nd Mock	Vectors
April				May				June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday		Revision						Holiday	Revision	June Examinations		w/b 25/6 w/e 1/7 +	w/b 2/7 w/e 8/7 +	w/b 9/7 w/e 15/7 +

Year Eleven: Higher B

September				October				November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Linear and quadratic equations and their graphs	Geometry and measures recap and review	Algebra: further quadratics, rearranging formulae and identities		Trigonometry recap and extension	Equation of a circle	Sketching graphs	Holiday	Assessment Week	Further equations and graphs	RI	Probability		Statistics recap and review	
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday		Vectors		Year 11 Mocks		Further sketching graphs	RI	Holiday	Sine and cosine rules	Transforming functions	Circle theorems	Congruence and similarity	2nd Mock	Direct and inverse proportion
April			May					June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday		Revision						Holiday	Revision	June examinations		w/b 25/6 w/e 1/7	w/b 2/7 w/e 8/7	w/b 9/7 w/e 15/7

Year Eleven: Higher A

September				October				November				December		
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15
Algebra: further quadratics, rearranging formulae and identities		Trigonometry recap and extension		Growth and decay	Vectors		Holiday	Assessment Week	Further equations and graphs		RI	Direct and inverse proportion		Equation of a circle
December		January				February				March				
Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	Wk 21	Wk 22	Wk 23	Wk 24	Wk 25	Wk 26	Wk 27	Wk 28	Wk 29	Wk 30
Holiday		Inequalities	Further sketching graphs	Year 11 Mocks		Algebraic fractions	RI	Holiday	Sine and cosine rules	Transforming functions	Circle theorems	Gradients and rate of change	2nd Mock	Pre-calculus and area under a curve
April			May					June				July		
Wk 31	Wk 32	Wk 33	Wk 34	Wk 35	Wk 36	Wk 37	Wk 38	Wk 39	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45
Holiday		Numerical methods	Revision					Holiday	Revision	June examinations		w/b 25/6 w/e 1/7 +	w/b 2/7 w/e 8/7 +	w/b 9/7 w/e 15/7 +