Bosworth Academy
Super Curriculum

Mathematics

Collaboration	Citizenship
Communication	Critical Thinking
Creativity	Character

KS3 MATHEMATICS SUPER CURRICULUM
YEAR 7

Wild Maths – explore, imagine, experiment, create! – try and explore one of the games from the nrich site: http://wild.maths.org/	Everything Kids: Maths Puzzle Book, by Meg Clements Puzzles, games and trivia; find how to make maths fun and entertaining.	Help running Maths Clubs and being Maths ambassadors. Help the department to create efficient resources for learning.
Life of Fred Maths, by Stanley F. Schmidt Series of stories based on 5 year math genius Fred Gauss	Create poster on everything you know about different shapes – develop it further with additional facts you learn through research;	Science Museum – Maths Gallery - visit newly open section of Science Museum involving various aspects of Maths http://www.sciencemuseum.org.uk/visitmuseum/plan_your_visit/exhibitions/mathematics?keywords=mat hematics
King's College London – visit KCL site and attempt one of the weekly challenge competitions – https://www.kcl.ac.uk/mathsschool/Weekly-Maths- Challenge/Weekly-maths-challenge.aspx	The Everything Kids: Maths Puzzle Book, by Meg Clements Puzzles, games and trivia; find how to make maths fun and entertaining. Create a song or rhyme to help you remember your formulae	Create poster on everything you know about different shapes – develop it further with additional facts you learn through research;
Research Pythagoras and the maths he explored – find out all his contributions to modern Mathematics	Watch biography based drama on Srinivasa Ramanujan Indian Mathematician in Trinity College, England – 'The Man Who Knew Infinity' directe by Matthew Brown	BBC Universe Documentary The Great Math Mystery BBC Documentary 2015 – https://www.youtube.com/watch?v=JiH7lMGW60A
A Brief History of Mathematics, by Marcus du Sautoy – podcast – 10 episodes BBC 4 Radio – http://www.bbc.co.uk/programmes/b00srz5b	Listen to the podcast on mathematics, logic and puzzles with Chaim Goodman-Strauss and Kyle Kellmas series – The Math Factor http://mathfactor.uark.edu/	Watch biography based drama on Srinivasa Ramanujan Indian Mathematician in Trinity College, England – 'The Man Who Knew Infinity' directe by Matthew Brown- and present the key facts to the class.

Unit 1 - Number Line & Place Value	Unit 2 - Types of number	Unit 3 - Calculations
	1) **Watch the TED talk by a mathemagician** https://www.ted.com/talks/arthur_benjamin_a_performance_of_mathemagic/transcript?referrer=playlist-math_talks_to_blow_your_mind 2) **Have a go at this TED talk activity:** https://www.ted.com/talks/ganesh_pai_can_you_solve_the_passcode_riddle 3) **Have a go at this TED talk activity:** https://www.ted.com/talks/daniel_finkel_can_you_solve_the_sea_monster_riddle#t-116051 4) **Have a go at this TED talk activity:** https://www.ted.com/talks/alex_gendler_can_you_solve_the_secret_sauce_riddle#t-115086 5) **Have a go at this TED talk activity:** https://www.ted.com/talks/lisa_winer_can_you_solve_the_river_crossing_riddle 6)	1) **Watch the TED talk about how maths slayed the dragon:** https://www.ted.com/talks/garth_sundem_how_to_defeat_a_dragon_with_math#t-71313 2) **Your number is:** https://nrich.maths.org/numbertricks 3) **THink of two numbers:** https://nrich.maths.org/thinkoftwonumbers 4) **Have a go at this TED talk activity:** https://www.ted.com/talks/alex_gendler_can_you_solve_the_bridge_riddle#t-125192 5) **Have a go at this TED talk activity:** https://www.ted.com/talks/ganesh_pai_can_you_solve_the_passcode_riddle 6) **Have a go at this TED talk activity:** https://www.ted.com/talks/dan_finkel_can_you_solve_the_rogue_ai_riddle#t-47507 7) **Have a go at this TED talk activity:** https://www.ted.com/talks/dan_katz_can_you_solve_the_cheating_royal_riddle 8) **Have a go at this TED talk activity:** https://www.ted.com/talks/alex_gendler_can_you_solve_the_multiplying_rabbits_riddle 9)
Unit 4 - Fractions	**Unit 5 - Expressions**	**Unit 6 - Sequences**
1) **Make a Fractions Jigsaw** https://nrich.maths.org/5467 2) **Have a go at this TED talk activity:** https://www.ted.com/talks/dan_finkel_can_you_solve_the_secret_werewolf_riddle 3) Farey Sequence. A man called John Farey investigated sequences of fractions in order of size - they are called Farey Sequences. **https://nrich.maths.org/2086**	1) **Your number is (Can you link it to starting with an unknown value x?):** https://nrich.maths.org/numbertricks 2) **Perimeter Expressions:** https://nrich.maths.org/perimeterexpressions 3) **Always a multiple??** https://nrich.maths.org/alwaysamultiple 4) **The simple life:** https://nrich.maths.org/13207	1) **Watch this TED talk about Fibonacci numbers:** https://www.ted.com/talks/arthur_benjamin_the_magic_of_fibonacci_numbers 2) **Rabbits multiplying:** https://nrich.maths.org/11164 3) **Have a go at this TED talk activity:** https://www.ted.com/talks/daniel_finkel_can_you_solve_the_cuddly_duddly_fuddly_wuddly_riddle#t-102104 4) **Have a go at this TED talk activity:** https://www.ted.com/talks/dan_finkel_can_you_solve_the_honeybee_riddle#t-106044 5) Farey Sequence. A man called John Farey investigated sequences of fractions in order of size - they are called Farey Sequences. https://nrich.maths.org/2086
Unit 7 - Equations	**Unit 8 - Graphs**	**Unit 9 - Angles**
1) **Find the value of the fruit:** https://nrich.maths.org/fruity 2) **What's it Worth?** https://nrich.maths.org/whatsitworth 3) **Reverse calculations (Link start number to x)** https://nrich.maths.org/7216 4) **Consective numbers and their sum:** https://nrich.maths.org/11612 5)	1) **Diamond Collector. In the game below, twenty diamonds have been placed on a grid. Try to collect as many diamonds as you can!** https://nrich.maths.org/5725 2) **Have a go at this TED talk activity:** https://www.ted.com/talks/alex_gendler_can_you_solve_the_alice_in_wonderland_riddle 3)	1) **Watch the TED talk about geometry and angles in the real world:** https://www.ted.com/talks/eddie_woo_how_math_is_our_real_sixth_sense/transcript?language=en 2) **Angles in real life and parallel lines problem:** https://www.youtube.com/watch?v=q3xVBudhud0 3) **Angle size guessing game:** https://nrich.maths.org/1235

		4) Do the polygons make a circle?? https://nrich.maths.org/polygonrings 5) Finding right-angled triangles on a peg-board: https://nrich.maths.org/rightangles 6) Angles Inside Problem: https://nrich.maths.org/13644 7) Have a go at this TED talk activity: https://www.ted.com/talks/daniel_finkel_can_you_solve_the_unstoppable_blob_riddle 8)
Unit 10 - Constructions & Bearings 1) Maths 4 real video. How are bearings used. https://www.youtube.com/watch?v=t_O9fcFlrZw 2) 3) Constructions, loci and three-figure bearings BBC Bitesize https://www.bbc.co.uk/bitesize/guides/zjqmn39/revision/1 4) Construct a diagram of the solar system. https://nrich.maths.org/7268	**Unit 11 - Transformations of Shapes** 1) Watch the TED talk about symmetry in the real world: https://www.ted.com/talks/marcus_du_sautoy_symmetry_reality_s_riddle?referrer=playlist-math_talks_to_blow_your_mind 2) Rangoli patterns - Create your own rangoli patterns using reflectional and rotational symmetry. 3) Origami Challenge, watch this TED talk about origami and have a go at some difficult shapes for yourself: https://www.ted.com/talks/robert_lang_the_math_and_magic_of_origami/transcript?referrer=playlist-math_talks_to_blow_your_mind#t-352233 4) Ever Played Tetris - try this transformation challenge where you have to fit all the shapes in the square and describe the transformation that moves the shape to where you want it to be. 5) Watch the Transformation STyle Song and then try and create your own: https://www.youtube.com/watch?v=NKtJd1hkl9k 6) Research Tessellations and create your own piece of artwork based off of them	**Random:** 1) Have a go at this TED talk activity: https://www.ted.com/talks/dan_van_der_vieren_can_you_solve_einstein_s_riddle 2) Have a go at this TED talk activity: https://www.ted.com/talks/dan_katz_and_alex_rosenthal_can_you_solve_the_sorting_hat_riddle 3)