



The James Young High School

S1 Phase Information Evening

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Presentation Outline



Course Structure and Pathways In S1



Overview of Content S1



Digital Learning Resources / Extra Support



Attitude and Homework Expectations



Supporting at Home

Why maths

The book of nature is written in language of mathematics – Galileo

- The objects in mathematics behave according to the rules.
- The quest of mathematics is to uncover and describe these rules governing the inhabitants of the abstract plane, to find the laws of these realms and explore their implications and applications.
- To see the behavior of mathematics and to live-in it is to see rational, elegant truth in the world, and it is beautiful.
- The school mathematics curriculum is typically categorised according to the following areas: number, algebra, shape, ratio and proportion, probability, and statistics, and in some places a separate area called “mathematical reasoning”

S1 Classes

Unlike many other subjects students come to maths classes based on prior attainment.

Mathematical knowledge is vertical and it's important that all knowledge is mastered.

Students have chance to change classes at key points throughout the year.

Assessments in November.

End of year test April.

Teachers feedback at regular intervals

1MA4

1MA2

1MA1

1MA3

1MB5

1MB2

1MB1

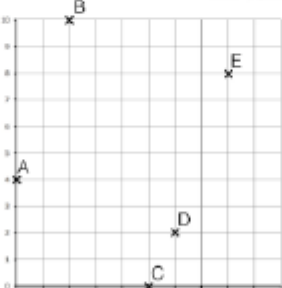
1MB3

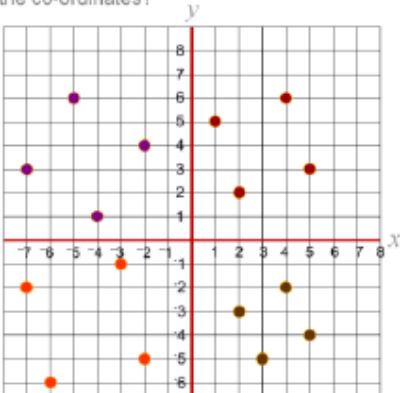
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Coordinates Prerequisites

<p>Number lines extended in negative numbers vertical and horizontal</p>	<p>Checking students can draw a number line that involves negative numbers. Draw both vertical and horizontal number lines.</p>	<p>Draw a number line on board and get students to complete. Place a few numbers including zero students completes.</p>
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Coordinates Main Block

<p>Reading coordinates in the first quadrant.</p>	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 2;"> <p style="text-align: center;">Examples </p> <p>Write down the coordinates of the points marked A, B, C, D and E.</p> <p>Then plot and label the following points:</p> <p>F at (3, 0)</p> <p>G at (0, 7)</p> <p>H at (9, 1)</p> </div> </div>	<p style="text-align: center;"><u>CIMT Booklet pg 2</u> <u>- pg 4</u></p> <p style="text-align: center;"><u>Coordinate message Reading 1st Quad.pdf</u></p>
<p>Plotting points in the first quadrant</p>	<p>Worked Example 1</p> <p>Plot the points with coordinates (3, 8), (6, 1) and (2, 5)</p>	<p style="text-align: center;"><u>CIMT Booklet pg 2</u> <u>- pg 4</u></p>

<p>Reading coordinates in all four quadrants.</p>	<p>what are the co-ordinates?</p> 	<p>CIMT Booklet pg 5 - pg 8</p>
<p>Plotting points in all four quadrants.</p>	<p>6. (a) Draw a set of axes with x-values from -4 to 4 and y-values from -5 to 4. (b) Plot the following points and join them in the order listed. (3, -5), (2, -5), (-4, -2), (-2, -3), (0, -2), (0, 0), (3, 2), (3, 3), (4, 3), (4, 2), (3, 2), (3, 0), (-2, 2).</p>	<p>CIMT Booklet pg 5 - pg 8</p>
<p>Plotting/completing missing shapes in all four quadrants.</p>	<p>4. Draw a set of axes with x-values from -5 to 5 and y-values from -3 to 9. (a) Join together the points with coordinates (5, 0), (0, 9) and (-5, 0). What shape do you get?</p>	<p>CIMT Booklet pg 5 - pg 8</p> <p>Quadrilaterals</p>
<p>Problem Solving Activity</p>	<p>All students should have the chance to complete at least one of the non-routine problems listed , please add resources as you find them.</p>	<p>Exploring Squares</p> <p>Slides 16 to 19 coordinates presentation</p>

History of Maths	Could be embedded in lessons or taught as separate learning point. Some sample resources given.	Coordinates.pdf
Week 6: Block Test Coordinates .All students should complete and peer mark, copies should be retained by teacher but not entered onto database. (30 minutes Max)		Coordinates S1 Block Check.pdf
Coordinates Extension (only if students have completed the main block and completed the assessment to high standard in less that the time indicated)		
Drawing pictures coordinates	Student use given data to draw pictures and could create their own.	Slides 13 to 15 coordinates presentation

Assessment

Assessment is integral to achieving our curricular objectives, aiming to facilitate the embedding of learning into long-term memory. We subscribe to the philosophy that if learning has not occurred, then teaching has not happened. Our assessment strategy is underpinned by four pivotal elements:

Responsive Teaching: This involves the collection of as much information as possible about student responses, as frequently as possible. It is imperative that the teacher responds to this feedback and adjusts lessons accordingly. Should a small number of students struggle with a concept, it may be attributed to their individual focus. However, if the difficulty is more widespread, it necessitates reflection and appropriate action from the teacher.

Basic Skills: A significant number of students progress to senior phases lacking fluency in tables and number bonds, which impedes learning in mathematics. Addressing this within the Broad General Education (BGE) is crucial. As part of our new assessment regime, we will introduce a timed tables test covering the 1-12 times table, lasting 5 minutes, with results entered into the departmental database. The goal is for all students to achieve 100% proficiency.
(Once every two months)

Topic Assessment: To reinforce long-term learning, short block assessments will be conducted at the conclusion of each topic. These assessments will comprise approximately 70% of the material from the current block and 30% review material from previous blocks. Lasting around 30 minutes, they will be peer-marked, with teachers overseeing the process. Results will not be recorded centrally.

Block Assessment: We will continue with significant assessments covering extended periods of learning. In S1, this includes a profile test, a pre-Christmas test, and an April test. In S2, tests will be administered in December and April. These assessments, featuring both non-calculator and calculator sections, will cover material from any prior learning. To align with our goal of becoming a problem-solving-oriented school, each major assessment will include some non-standard problems and at least one open-ended question.

Homework: Homework is vital for developing self-study habits. Research indicates its effectiveness when it serves as mixed review. There is no expectation for teachers to mark all homework, doing so can be beneficial but must be balanced against the overall workload. Alternatives include marking selected questions (without prior student knowledge), random selection of samples for teacher marking, peer marking, and self-marking.

This structured approach to assessment and feedback is designed to maximise educational outcomes, ensuring that teaching methods are responsive and that students acquire essential mathematical skills and knowledge.


Corrective Maths


Part of worlds largest ever educational experiment
Project follow through.

Focus on building the foundation of maths and catching students up to required level by S3

Scripted lessons and workbooks.

Distance Learning Scheme of Work

 [S1 Scheme of Distance Learning](#) [382.0KB]

 [S2 Scheme of Distance Learning](#) [153.31KB]

Link to website to download distance learning materials – [Website Link](#)

Zeta Maths Subscription

[Log in - Zeta Maths](#)

Password : Jysch

After School Support BGE

Selected Wednesdays after school – See bulletin

A typical maths lesson

Lesson Evaluation Toolkit :typical features of high-quality lessons		
Elements	Illustrations	Notes
Smooth Start	<ul style="list-style-type: none">• Students come into lessons and settle within the first 5 minutes.• Students have a set routine to begin the lesson• Students know how to collect all resources for the lesson	
Shared Goal	<ul style="list-style-type: none">• The goal of the lesson is shared with the students.• The goal is highlighted throughout the lesson.• Links to applications, the curriculum as appropriate• The students can articulate when asked what the goal of lesson was.	

<p>Teaching for long term retention</p>	<p>Lesson was.</p> <ul style="list-style-type: none"> • Previous learning is reviewed. • Quizzes are used to check for understanding • Linking of current content to previous content, interleaving/ interweaving. 	
<p>Modelling the learning</p>	<ul style="list-style-type: none"> • Clear verbal and visual presentation of the material. • Analogies and concrete representation used where appropriate • Prerequisites are checked before beginning new content. • Presentation is interactive with frequent checks for understanding. • All students participating in questioning, whole class response, cold call, show me boards. • Wait time given for high order questions / think pair shares used. • Students obtain a high success rate before independent practice. 	

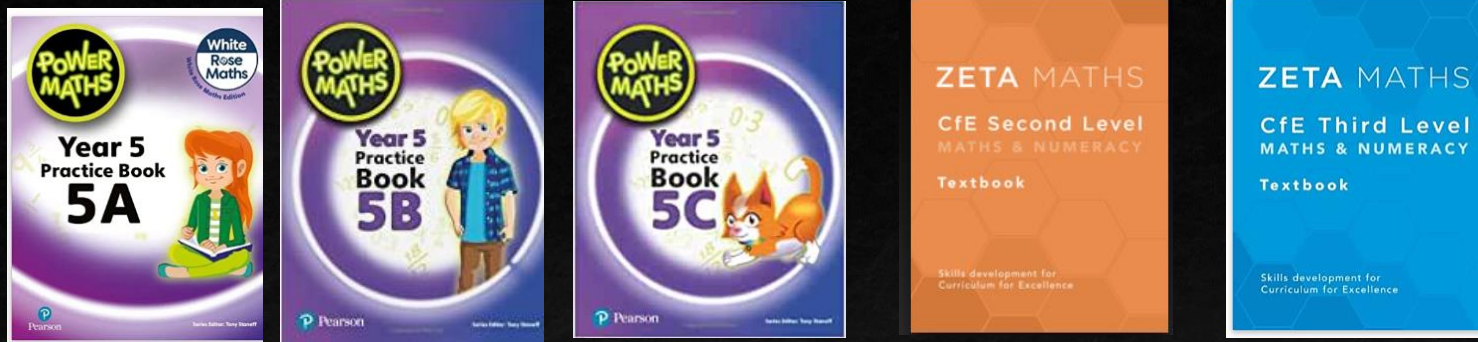
<p>Independent Practice</p>	<ul style="list-style-type: none"> • Students get chance to practice material independently • Students have access to answers to check progress. • Teacher observes throughout the room, giving feedback as necessary. • All students obtain success and appropriate challenge. 	
<p>Relationships</p>	<ul style="list-style-type: none"> • Teacher knows the students well. • Students are praised for effort. • High expectations of behaviour and quality of work. • Time and resources are used effectively • Poor student behaviour is dealt with in a systematic and calm manner. 	
<p>Lesson Exit</p>	<ul style="list-style-type: none"> • Lesson is ended in calm and orderly fashion. • Students have a chance to reflect on their learning • Exit tickets are used to check for understanding 	



Attitude and Expectations

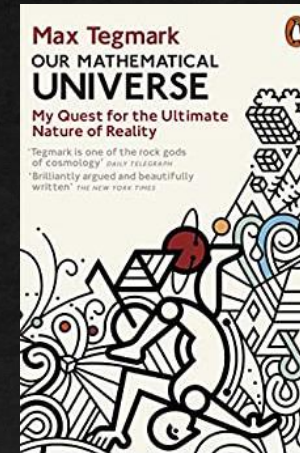
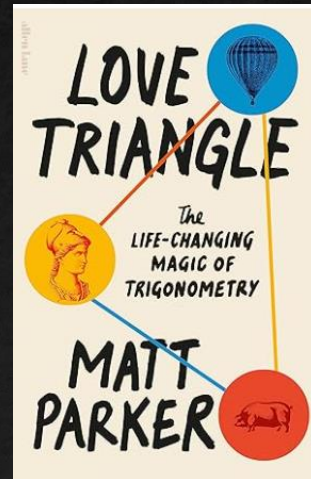
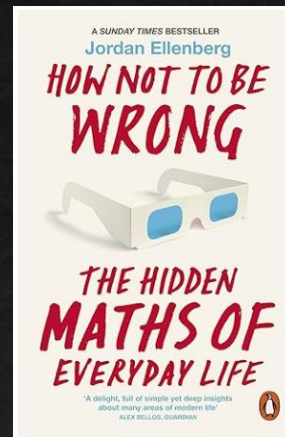
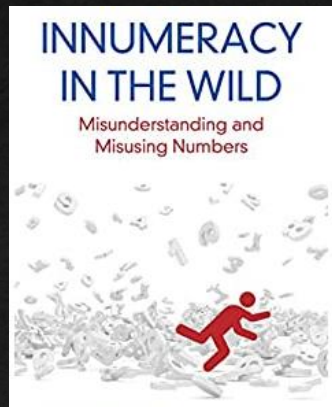
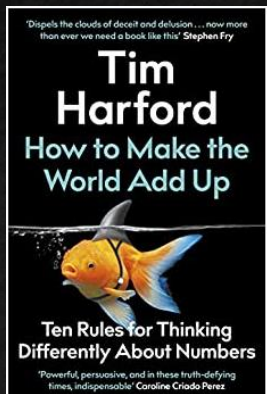
- Foster a constructive attitude towards mathematics. Encourage students to be agents of change and take personal responsibility, utilizing the additional classes and online resources available to them.
- It is essential for all students to have a calculator.
- Homework should be assigned to all students weekly, with each assignment designed to take approximately 30 minutes to complete.
- Be aware of the dangers associated with mobile phone usage and social media, particularly during the period leading up to assessments.
- Maintaining high attendance is crucial; a recent study in England identified that achieving above 95% attendance is the most significant predictor of securing at least five good GCSE grades.

Wanting the Extra Push



Podcasts : [Uncharted with Hannah Fry](#)

[Numberphile](#)



Questions Please

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