Mathematics

A Bit About Us

The Maths Department at Impington Village College is successful and ambitious. It is staffed by dedicated, experienced and enthusiastic mathematicians. We aim to deliver a relevant curriculum that encompasses all aspects of everyday life and also to support fully, those wishing to develop their skills at higher level.

Our commitment is to excellent teaching and learning, to ensure that mathematics is enjoyable, interesting and accessible for all pupils, regardless of ability.

Where We Teach

The faculty is housed in a recently built block shared with the English department. There are a total of nine maths classrooms, each of which has a PC and a data projector, as well as a roller whiteboard. All classrooms now have SMART boards and it is the intention to furnish all classes with interactive boards. There is also a cafe-style canteen in the block where students and staff can purchase sandwiches and cakes.

Years 7 to 9 ICE Programme

At Key Stage 3 students follow an innovative Mathematics Curriculum which takes inspiration from the very successful mathematics teaching in Shanghai. Students make frequent use of concrete manipulatives to develop a solid mathematical understanding. All lessons involve collaborative work and problem solving where everyone is encouraged to describe, explain and justify the mathematics that they discover and use. Students are given the opportunity to explore and master topics at a deep level before they move on.

Years 10 and 11

As students approach their final GCSE exam they continue to learn through problem solving and investigation, whilst applying their knowledge to the specific requirements of the GCSE exam specification. Students who excel in year 10 are given the opportunity to study towards the OCR Additional Mathematics Free Standing Maths Qualification in year 11. This is a Level 3 course which will give both UCAS points and a solid basis for further study of mathematics in Sixth Form.

Year 11 Maths Revision

Click the link below to go to the revision resources-

Y11 GCSE Maths Revision 2019

Y7 STRAND 1 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Introduction to being a learner of Mathematics at IVC:

- Using concrete manipulatives to explore mathematical concepts.

- Developing mathematical communication and reasoning skills
- Delving more deeply into our place value system and how we calculate with numbers

Assessed Tasks:

ICE homework

IMP Task to be completed in class

Written assessment on all Strand 1 material

SMSC & British Values:

- Enjoy the logic in numbers and patterns.
- Understand there are rules to Maths just like to life in general.
- Understanding of numbers in different communities
- ICE task helps students' understanding of other cultures.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Take part in the National Cipher Challenge.

See https://www.cipherchallenge.org for details.

Assessment Criteria:

Place value: multiply and divide by powers of 10; round whole numbers to the nearest 1000, 100 or 10; explore different number systems.

Addition and Subtraction: Use bar-modelling to represent word problems; calculate and work with perimeters; use decimal addition and subtraction to solve problems; investigate and use decimal notation.

Literacy/Numeracy:

Deciphering word problems with the aid of bar-modelling.

Careers Links(CAEIG):

Detailed knowledge of our number system and how it can be used links to Accountancy or Insurance amongst other fields.

Intervention Tasks:

1. Review of Strand skills using Mathswatch and/or Mymaths
2. Complete Skills-Check booklet (sent out by email)
3. Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
4. Seek guidance from teacher if needed
5. Hand completed booklet in to teacher.

Year 7 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y7 STRAND 2 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Extension of numerical ability to include all four major operations for integers and decimals.

Development of mathematical communication and reasoning skills so that students can think about how to solve problems, and justify their choice of method

Assessed Tasks:

ICE homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Develop mathematical imagination enabling problems to be solved using different methods
- See consequences of not following rules, via the use of order of operations.
- ICE task helps understand about charity
- Understand Maths as an international language.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Take part in the National Cipher Challenge. See https://www.cipherchallenge.org for details.

Assessment Criteria:

Division and multiplication:

Use mental and formal methods to multiply and divide integers and decimals;

use correct terminology; solve problems involving multiplication and division, including length, perimeter and area; time problems and finding the mean average.

Order of operations:

Calculate using +, - x and ÷, plus the use of brackets and index notation.

Literacy/Numeracy:

Key words: product, multiple, LCM, quotient, remainder, factor, HCF, length, perimeter, area, mean.

Deciphering word problems.

Careers Links(CAEIG):

Good understanding of basic numeracy skills helps in purchasing and budgeting

Intervention Tasks:

1. Review of Strand skills using Mathswatch and/or Mymaths
2. Complete Skills-Check booklet (sent out by email)
3. Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
4. Seek guidance from teacher if needed
5. Hand completed booklet in to teacher.

Year 7 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**

How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y7 STRAND 3 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Introduction to metric units to enable students to make realistic estimates and accurate measurements of length, volume and weight.

Explore different sorts of angles, triangles and quadrilaterals.

Also explore the connections between angles and the properties of shapes.

Assessed Tasks:

ICE homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Appreciate different shapes and the connections between them.
- Understand that shapes obey rules just like we have to.
- ICE task shows how individuals can help create wonderful outcomes.
- Development of metric units aid understanding between different nationalities

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Try the puzzles at https://www.mathsisfun.com/puzzle.html

Assessment Criteria:

Units:

Estimate and measure weight, length and volume using metric measures

Angles:

Estimate, draw and measure angles; know and use facts about angles

Triangles and Quadrilaterals:

Classify and construct; use properties in order to solve problems.

Symmetry and tessellation

Literacy/Numeracy:

Keywords: length, volume, weight, acute, obtuse, construct, triangle, quadrilateral, symmetry, tessellation.

Careers Links(CAEIG):

A good understanding of metric measures is important in all careers. Understanding angles and the properties of shapes are particularly important for careers in Art and building trades.

Intervention Tasks:

1. Review of Strand skills using Mathswatch and/or Mymaths
2. Complete Skills-Check booklet (sent out by email)
3. Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
4. Seek guidance from teacher if needed
5. Hand completed booklet in to teacher.

Year 7 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y7 STRAND 4 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Gain a good understanding of fractions. Using manipulatives and diagrams, students will gain a deep understanding of the concepts of fractions plus their relationship to decimals and percentages.

Assessed Tasks:

ICE homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Develop capacity for critical and independent thinking.
- Gain confidence to cope with setbacks and learn from mistakes
- ICE homework deals with environmental issues.
- Consideration of development of fractions in different cultures.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Practice UKMT Junior challenge questions here:

http://www.mathster.com/challenge/

Assessment Criteria:

Understand and use fractions:

Represent fractions using different models; recognise equivalent fractions; convert between fractions and decimals and percentages; convert between mixed numbers and improper fractions; express one quantity as a fraction of another; find fractions of amounts, find whole given a fraction, multiply and divide fractions

Literacy/Numeracy:

Key words: fraction, decimal, percent, numerator, denominator, mixed number, improper fraction.

Understand word problems

Careers Links(CAEIG):

Fractions are an important concept in everyday life and, as such, are useful for every career. In particular a good understanding of fractions is necessary for careers in catering and retail.

Intervention Tasks:

1. Review of Strand skills using Mathswatch and/or Mymaths
2. Complete Skills-Check booklet (sent out by email)
3. Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
4. Seek guidance from teacher if needed
5. Hand completed booklet in to teacher.

Year 7 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**

How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y7 STRAND 5 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Introduction to the basic concepts of algebra. Manipulatives and pictorial representations will be used to help students appreciate that an unknown quantity can be represented by a letter but that this letter can be manipulated in exactly the same way as could a number.

Assessed Tasks:

ICE homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Appreciate the simplicity of using letters to represent unknown values.
- Understand that algebra has its own set of rules that must be obeyed.
- ICE homework considers aspects of health and society..
- Understand that algebra is an international language which is used by all cultures.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

For more practice see:

https://www.mathspad.co.uk/teach/linkedDocuments/expressions/numberTricks.pdf

https://www.mathspad.co.uk/interactives/expressions/simplifyingExpressions.php

https://corbettmaths.files.wordpress.com/2013/02/expanding-brackets-pdf1.pdf

Assessment Criteria:

Introduction to algebra:

Recognise and continue sequences; represent unknown quantities using a letter; write and simplify algebraic expressions; substitute values into expressions; expand brackets and factorise expressions; recognise algebraic identities.

Literacy/Numeracy:

Key words: substitute, brackets, factorise

Understanding how written problems can be expressed algebraically.

Careers Links(CAEIG):

The understanding of algebra is essential for any science-based career, such as different forms of engineering or software development

Intervention Tasks:

1. Review of Strand skills using Mathswatch and/or Mymaths
2. Complete Skills-Check booklet (sent out by email)
3. Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
4. Seek guidance from teacher if needed
5. Hand completed booklet in to teacher.

Year 7 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y7 STRAND 6 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Extend work on fractions to include percentages, such as finding percentages of quantities and increasing decreasing by a percentage

Explore statistics and how charts can aid the understanding of data.

Assessed Tasks:

2 IMP Tasks to be completed in class

Written end-of-year exam

SMSC & British Values:

- Develop a logical approach and the ability to question the way the world works.
- Understand the different forms of 'average' and why people have chosen to use a particular form.
- Recognise when statistics are being used in a meaningful way.
- Investigate the use of statistics in different cultures.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Try these logic puzzles:

http://www.mathwarehouse.com/puzzles/math-puzzles.php

Assessment Criteria:

Percentages: understand what a percentage is; write fractions and decimals as percentages; find percentages of quantities; increase and decrease by a percentage.

Handling data:

Understand different sorts of data; construct and interpret tables and charts (including pie charts); explore misleading representations.

Literacy/Numeracy:

Key words: primary, secondary, qualitative, quantitative

Students will write a statistical report

Careers Links(CAEIG):

Understanding data and being able to analyse it, forms the basis of many careers, such as Meteorology Actuary and,Psychology,

Intervention Tasks:

1. Review of Strand skills using Mathswatch and/or Mymaths
2. Complete Skills-Check booklet (sent out by email)

3. Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
4. Seek guidance from teacher if needed
5. Hand completed booklet in to teacher.

Year 7 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y8 STRAND 1 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Increase understanding of number, including prime numbers, factors, multiples, and indices.

Increase understanding of fractions including adding and subtracting proper and improper fractions.

Assessed Tasks:

ICE homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Enjoy the logic in numbers and patterns.
- Understand there are rules to Maths just like to life in general.
- Use maths to analyse information about other countries (ICE)
- Understand Maths as an international language.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Take part in the National Cipher Challenge.

See https://www.cipherchallenge.org for details.

Assessment Criteria:

Number:

Find factors and multiples

Find HCF and LCM by prime factorisation

Find squares, square roots, cubes and cube roots by prime factorisation

Use indices

Fractions

Use equivalent fractions

Add and subtract proper fractions

Add and subtract mixed numbers and improper fractions

Literacy/Numeracy:

Key words or phrases

Factor, multiple, prime, square/cube number, square/cube root, index. Indices, proper/improper fraction, mixed number

Careers Links(CAEIG):

Basic numeracy and understanding of fractions is important in every career, but in particular the catering and building trades.

Intervention Tasks:

1. Review of Strand skills using Mathswatch and/or Mymaths
2. Complete Skills-Check booklet (sent out by email)
3. Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
4. Seek guidance from teacher if needed
5. Hand completed booklet in to teacher.

Year 8 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**

How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y8 STRAND 2 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Extend knowledge of numbers to include negative numbers including ordering and basic calculations.

Explore sequences, as patterns and numbers.

Increase understanding of algebra, to allow problems to be solved through the formation and solving of linear equations

Assessed Tasks:

ICE homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Question the way that things work and how this relates to the world.
- See consequences of not following rules, via the use of order of operations
- See how the language of Maths has developed over time
- Explore cultural developments inMaths

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Take part in the National Cipher Challenge. See https://www.cipherchallenge.org for details.

Assessment Criteria:

Number:

Represent positive and negative numbers on a number line; use <, ≤, > and ≥; add, subtract, multiply and divide using positive and negative integers and decimals.

Algebra:

Recognise and represent sequences, including finding algebraic expression for nth term; collect like terms to simplify algebraic expressions; substitute values into expressions; form and solve equations in one unknown.

Literacy/Numeracy:

Keywords: negative, sequence, term, coefficient, expression, simplify, expand, factorise,.

Be able to understand written problems and express them mathematically.

Careers Links(CAEIG):

A good understanding of number and algebra is essential in many careers, For example various forms of engineering such as electrical, mechanical, civil, and aeronautical.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 8 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y8 STRAND 3 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Exploration of different aspects of 2D geometry such as the construction and classification of triangles and quadrilateral; the identification of different types of angles ; finding perimeter and area; converting between metric units of measure and the transformations of 2D shapes.

Assessed Tasks:

ICE homework

IMP Task to be completed in class

Written test on all material covered so far

SMSC & British Values:

- Develop sense of wonder at the elegance of shapes
- Understand that shapes obey rules just like we do.
- Recognise benefits of metric units to allow countries to work together.
- Explore use of Maths in Islamic art.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Watch this video on why the metric system matters:

https://www.youtube.com/watch?v=7bUVjJWA6Vw&feature=youtu.be

Assessment Criteria:

Triangles, quadrilateral and angles in parallel lines: construction, classification of triangles and quadrilaterals, identification of alternate and corresponding angles and using them to find other missing angles.

Length and area: Conversion between cm^2 and m^2; finding area and perimeter of quadrilateral and triangles and composite shapes.

Transformations: performing translations, rotations and reflections and also identifying transformations

Literacy/Numeracy:

Keywords: triangle, quadrilateral, square, rectangle, parallelogram, rhombus, trapezium, construct, alternate, corresponding, interior, area, perimeter, transform, translation, rotation, reflection

Careers Links(CAEIG):

A good understanding of shape is important in many careers, particularly those involving shape such as those in Art or Construction.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 8 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
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Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y8 STRAND 4 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Extend understanding of percentages, comparing percentages, increasing and decreasing by a percentage and finding the original quantity when given a percentage. Problems involving percentages will be solved.

Explore ratios, using concrete manipulatives and pictorial representations, such as bar models.Explore the relationship between distance, speed and time.

Assessed Tasks:

ICE homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Develop sense of awe and wonder.
- Explore interest rate implications on loans.
- Investigate which deal gives best value for money.
- Appreciate significance of the Golden Ratio..

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Practice UKMT Junior challenge questions here:

http://www.mathster.com/challenge/

Assessment Criteria:

Percentages: increase/decrease by a given percentage; compare quantities using percentages; use reverse percentages; solve problems involving percentages

Ratios:

Interpret a:b and a:b:c, where a, b and c are whole numbers; understand equivalent ratios; solve problems involving ratios; use the relationship between distance, time and speed; convert speeds between different units; solve word problems involving speed.

Literacy/Numeracy:

Keywords: increase, decrease, percentage, ratio, speed

Understand word problems and see how percentages and ratios can be used to solve them.

Careers Links(CAEIG):

A good understanding of percentages and ratios is useful in retail but also for most careers and general life.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 8 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**

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Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y8 STRAND 5 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Extend understanding of number to include rounding and its use to estimate answers.

Extend existing 2D knowledge to include circles

Explore 3D shapes, starting with 2D representations of 3D shapes.Students will also find the volume and surface area of a variety of different prisms.

Assessed Tasks:

ICE homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Appreciate different shapes and the connections between them.
- Understand that shapes obey rules just like we have to.
- ICE task considers aspects of life in Cambridge.
- Development of metric units aid understanding between different nationalities.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

For more practice try:

http://www.accessmaths.co.uk/uploads/4/4/2/3/44232537/circle_sector_problems.pdf

http://www.thechalkface.net/resources/golden_balls.pdf

Assessment Criteria:

Rounding: Round to given number of decimal places or significant figures, and use rounding to estimate the answer to a problem.

Circles: Find area and circumference of circles and parts of circles.

3D shapes: Draw and recognise nets; draw and recognise plans and elevations; find surface area and volume of cubes, cuboids, prisms, cylinders and composite solids made from these shapes; convert between units of volume.

Literacy/Numeracy:

Keywords: Round, truncate, significant, estimate, circumference, net, plan, elevation, prism, cylinder, cuboid, volume, area.

Careers Links(CAEIG):

A good understanding of 3D geometry helps in many careers, such as architecture, construction and civil engineering.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 8 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
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Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y8 STRAND 6 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Extend the understanding of data handling, including exploring different forms of data and the means by which it can be collected. Students will then look at different tables and charts that can be used to show the data and then the averages that can be found from the data.

Assessed Tasks:

2 IMP Tasks to be completed in class

Written End-of-Year exam.

SMSC & British Values:

- Develop a logical approach and the ability to question the way the world works.
- Understand the different forms of 'average' and why people have chosen to use a particular form.
- Recognise when statistics are being used in a meaningful way.
- Investigate the use of statistics in different cultures

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Try the problems given here:

https://nrich.maths.org/11993

Assessment Criteria:

Data:

Find mean, median, and range from raw data sets and use them to compare data sets; data collection methods, including surveys, questionnaires and the use of secondary data; appreciate the difference between discrete and continuous data; classify and tabulate data; draw, analyse and interpret graphs including those seen in Year 7.

Literacy/Numeracy:

Keywords: mean, median, mode, range, data, secondary, primary, discrete, continuous, survey, questionnaire.

Write statistical report, explaining results of analysis.

Careers Links(CAEIG):

A good understanding of data handling helps with many careers where people are collecting and analysing data. For example psychology, biology, meteorology and in the insurance industry.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 8 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y9 STRAND 1 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Explore a coordinate grid, initially looking at plotting coordinates in all four quadrants and progressing to drawing straight lines.

Investigate proportion.

Extend understanding of the number system to include using standard form to express very large or small numbers.

Assessed Tasks:

ICE Homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Develop sense of wonder with large numbers.
- Students will reflect on and respond appropriately to the views of others.
- ICE task investigates caring and communication.
- See Maths as a universal language.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Take part in the National Cipher Challenge. See https://www.cipherchallenge.org for details.

Assessment Criteria:

Coordinates: Plot coordinates in all four quadrants; find midpoints of lines and solve problems using coordinate grids.

Linear Graphs: identify and generate straight lines on a graph; identify parallel lines; make links between graphical and algebraic representations.

Proportion: Recognise when 2 quantities are directly or inversely proportional and solve problems involving such quantities.

Standard form: convert between ordinary numbers and standard form and solve simple problems

Literacy/Numeracy:

Keywords: Coordinate midpoint, linear, parallel, direct, indirect proportion and standard form.

Understand word problems.

Careers Links(CAEIG):

A good understanding of graphs can help in many careers, such as marketing. Use of standard form is essential for many engineering careers.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 9 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**

How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y9 STRAND 2 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Extend understanding of sequences to include non-linear sequences such that students can solve problems involving sequences.

Extend understanding of algebra, possibly using concrete manipulatives, to include the use of brackets, changing the subject of the subject and forming and solving linear equations and inequalities.

Assessed Tasks:

ICE homework

IMP Task to be completed in class

Written assessment of the material covered so far.

SMSC & British Values:

- See Maths as the Science of number to explain sequences.
- ICE work teaches about being principled.
- Help build numerical fluency to aid student functioning in society
- Understand that algebra is a universal language.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Take part in the National Cipher Challenge. See https://www.cipherchallenge.org for details.

Assessment Criteria:

Sequences: Generate nth term of linear sequences; generate and explore non-linear sequences.

Algebra: Factorise single and double brackets; expand single or multiple brackets; write expressions to represent relationships; rearrange formulae; form and solve linear equations and inequalities in one unknown.

Literacy/Numeracy:

Keywords: sequence, linear, geometric, factorise, expand, bracket, formula, expression, quadratic, coefficient, subject, inequality.

Careers Links(CAEIG):

A good understanding of algebra and the ability to rearrange formula is important in most computer-based careers including software engineering and computer game development.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 9 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y9 STRAND 3 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Explore the construction of 2D shapes and learn how to carryout standard constructions. Investigate what information is required in order to say that 2 shapes are similar or identical (congruent) which will allow problems using similar shapes to be solved.

Extend understanding of polygons to include symmetry, the properties of diagonals and finding interior and exterior angles.

Assessed Tasks:

ICE Homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Encourage students to ask "why"?
- Develop resilience.
- ICE homework considers how communication helps individuals succeed.
- Polygons form basis of many art forms around the world.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Practice UKMT Intermediate challenge questions here:

http://www.mathster.com/challenge/

Assessment Criteria:

Construction: use ruler and compass to complete standard constructions; construct regular polygons within circles.

Congruency and similarity: derive and use congruency conditions for triangles; enlarge shapes; solve problems involving similar triangles.

Triangles and Quadrilaterals: investigate symmetry of triangles and quadrilaterals and the properties of their diagonals.

Angles in polygons: discover, prove and use facts about interior and exterior angles in polygons

Literacy/Numeracy:

Keywords: construct, perpendicular, bisector, congruent, similar, enlarge, symmetry, corresponding, interior, exterior, polygon.

Careers Links(CAEIG):

A good understanding of 2D shapes can help in many careers, including architecture, construction, civil and mechanical engineering.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 9 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y9 STRAND 4 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Introduction to the concept of simultaneous equations via real life examples. These equations will then be solved graphically.

Graphical knowledge will be extended to include non-linear graphs.

Explore probability including understanding the difference between theory and experiment, and using different approaches to list various outcomes

Assessed Tasks:

ICE Homework

2 IMP Tasks to be completed in class

SMSC & British Values:

Students develop their communication and collaborative skills through deep learning and problem solving.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

For more on venn diagrams see here:

https://drive.google.com/file/d/0B9L2lYGRiK2bMWozMEVGQi13ckE/view

Assessment Criteria:

Simultaneous Equations: Form equations and appreciate the link between the equation and the graphical representation; use graphs to solve the simultaneous equations.

Graphs: Draw and recognise non-linear graphs including quadratic; reciprocal; piece-wise and exponential.

Probability: probability scale; probability language; relative probability; list possible outcomes; understand and use Venn diagrams

Literacy/Numeracy:

Keywords: simultaneous, graphical, quadratic, reciprocal, exponential, certain, impossible, intersection, union.

Form simultaneous equations from word problems. Understand worded probability problems.

Careers Links(CAEIG):

A good understanding of probability is essential in all insurance based industries.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 9 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but**

	please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y9 STRAND 5 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Introduction to the use of Pythagoras' theorem and trigonometry to find missing sides and angles in right angled triangles.

Explore the concept of proof, starting with understanding the difference between a demonstration and a proof.

Assessed Tasks:

ICE Homework

2 IMP Tasks to be completed in class

SMSC & British Values:

- Develop the idea of proof.
- Listen and respond appropriately to the views of others.
- ICE homework considers real-life issues.
- Consider the lives of mathematicians such as Pythagoras.

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

For extra help with trigonometry see here:

http://general-maths.wikispaces.com/file/view/apps+trigonometry.pdf

Assessment Criteria:

Pythagoras and Trigonometry: use Pythagoras' theorem to find missing sides in right angled triangles and to decide if a triangle is right angled; investigate the trigonometric ratios for a 90°, 60°, 30° triangle and solve problems involving such triangles; use the sin, cos and tan ratios for right angled triangles.

Simple proof: know the difference between a demonstration and a proof; follow and understand a formal argument; use known results to develop geometric proofs.

Literacy/Numeracy:

Keywords: hypotenuse, opposite, adjacent, sine (sin, cosine (cos), tangent (tan), inverse, demonstration, proof.

Draw diagrams from word problems involving right angled triangles.

Careers Links(CAEIG):

Pythagoras' theorem and trigonometry are important for anyone working in architecture or construction.

Following logical arguments, such as proofs, is essential for all legal workers.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 9 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y9 STRAND 6 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Extend understanding of data, to include grouped data. Explore difference representations of data and bi-variate data.

Assessed Tasks:

2 IMP Tasks to be completed in class

Written end-of-year exam

SMSC & British Values:

- Develop a logical approach and the ability to question the way the world works.
- Understand the different forms of 'average' and why people have chosen to use a particular form.
- Recognise when statistics are being used in a meaningful way.
- Investigate the use of statistics in different cultures

Enrichment Ideas:

Visit www.nrich.org.uk and look at their puzzle of the week.

Try the various exercises here:

https://justmaths.co.uk/probability/

in particular, the Whodunnit

Assessment Criteria:

Grouped Data: find estimate of the mean of grouped data and understand why it is only an estimate.

Comparing distributions: Compare distributions using representations such as a stem and leaf diagram.

Scatter Graphs: Plot scatter graphs; describe correlation, interpret the correlation in the context of the data set.

Literacy/Numeracy:

Keywords: discrete, continuous, estimate, mean, median, mode, correlation

Write report as a result of completing statistical analysis.

Careers Links(CAEIG):

A good understanding of statistics is important is many careers, particular those which involve analysing data such as meteorology, insurance and financial analyst.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)

- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 9 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink and over each holiday period.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes. The ICE homework may take slightly longer, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The ICE homework will be marked by the student's teacher. Other homework may be self/peer assessed in class or marked electronically.**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y10 STRAND 1 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Working with numbers in a variety of formats:

- Fractions (F)
- Decimals (F)
- Percentages
- Indices
- Surds
- Standard Form
- Sequences
- Recurrence formulae (H)

Assessed Tasks:

3 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions.

In addition, there will also be a Lagged Homework, and a Prep Homework, and weekly homeworks. These may be self-marked or peer-marked, or auto-marked (online).

SMSC & British Values:

- Students use creativity to develop new ways of manipulating numbers.
- Discover the ethics of pay-day loans companies
- Develop understanding of loans in society and its effects
- Different cultures' attitudes towards debt

Enrichment Ideas:

Use ICT to model how much is owing after several months of making fixed payments on a loan at a given interest rate.

Use pay-day loan information online to explain how some people can end up owing tens of thousands of pounds.

Assessment Criteria:

Calculate with different formats of numbers.

Convert between fractions, decimals and percentages, including mixed numbers

Solve problems using percentages, such as compound interest.

Use indices to help write numbers in standard form.

Describe sequences.

Manipulate surds (H)

Use iteration to help approximate solutions to equations (H)

Fully understand quadratic and geometric sequences (H)

Literacy/Numeracy:

Deciphering word problems and determining which techniques are required with the aid of visual representations as necessary.

Careers Links(CAEIG):

Use of percentages has many links to careers and students' development into adults in the real world, such as calculating taxes on earnings, and VAT calculations.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 10 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y10 STRAND 2 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

Geometry topics are the key focus in this module, and some consolidation of ratio work for Foundation students:

- Ratios (F)
- Reflections and rotations (F)
- Enlargement of shapes
- Similar shapes
- Pythagoras' Theorem
- Bearings
- Trigonometry in right-angled triangles
- Negative and fractional enlargements (H)

Assessed Tasks:

2 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions. There will be a formal assessment to check progress.

In addition, there will also be a Lagged Homework, a Prep Homework to help prepare for the following module, and weekly homeworks. These may be self or peer-marked, or auto-marked (online).

SMSC & British Values:

- Students develop fascination in learning about the world around them with Pythagoras' theorem
- Students work with peers to develop their problem-solving skills and listen to others' ideas
- Exploration of Greek culture of non-acceptance of any numbers that were not rational

Enrichment Ideas:

Verify Pythagoras' theorem using knotted string.

www.nrich.org has got multiple investigations based on Pythagoras Theorem

Assessment Criteria:

Transform shapes and describe given transformations from an object and image.

Find missing lengths in similar shapes

Use Pythagoras' Theorem to find missing side lengths in right-angled triangles.

Use trigonometry to find missing side lengths and angles in right-angled triangles (including using exact values)

Enlarge using negative and fractional scale factors (H)

Apply knowledge of Pythagoras and trigonometry to solve 3D problems by identifying appropriate right-angled triangles. (H)

Literacy/Numeracy:

The focus for much of the exam-style questions will be on deciphering the problems given so that they can be understood.

Careers Links(CAEIG):

Civil engineering makes heavy use of trigonometry, other trades use Pythagoras, etc.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 10 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**

Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y10 STRAND 3 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

This module builds on the geometry skills from Module 2; making links with new areas of maths

- Angles (F)
- Midpoints between coordinates
- Algebraic reasoning
- Geometric reasoning
- Vectors
- Proof
- Trigonometric graphs (H)
- Inequalities (including on graphs) (H)

Assessed Tasks:

3 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions.

In addition, there will also be a Lagged Homework, a Prep Homework to help prepare for the following module, and weekly homeworks. These may be self or peer-marked, or auto-marked (online).

SMSC & British Values:

- Students develop enjoyment of a rigorous mathematical proof
- Students understand what is right and wrong by creating valid arguments and helps show when arguments are invalid
- Students present reasoned arguments to peers to help express their ideas

Enrichment Ideas:

Plan a trip to Mars…

https://artofproblemsolving.com/videos/algebra1/chapter9/306

Assessment Criteria:

Solve missing angle problems using correct terminology for reasons (involving polygons, parallel lines, angles around a point, etc.)

Solve problems on coordinate grids such as finding the equation of a line, or problems involving midpoints

Use angle facts to prove statements

Add and subtract vectors

Multiply a vector by a scalar

Recognise and reproduce trigonometric graphs

Prove statements using vectors

Identify perpendicular lines from their equations

Shade regions solving 2D inequalities

Literacy/Numeracy:

The focus for much of the exam-style questions will be on deciphering the problems given so that they can be understood.

Careers Links(CAEIG):

Students learn that terminology and being accurate in language is very important. This is a transferable skill in many workplaces, as well as the reasoning skills developed in this module.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 10 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**

How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y10 STRAND 4 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

This module further develops geometry skills, and measuring 2D and 3D objects

- Decimal review including rounding (F)
- Areas
- Circles
- Constructions
- 3D shapes
- Limits of accuracy
- Convert between units
- Loci
- Congruency
- Similar shapes (H)
- Trigonometry in all triangles (H)

Assessed Tasks:

2 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions. There will also be a formal assessment completed in class.

In addition, there will also be a Lagged Homework, a Prep Homework to help prepare for the following module, and weekly homeworks. These may be self or peer-marked, or auto-marked (online).

SMSC & British Values:

Many meditation images involve symmetry and circles. These can be explored in a more analytical way using Maths.

Enrichment Ideas:

https://nrich.maths.org/5635

Assessment Criteria:

Convert between metric units (F)

Round to a number of decimal places (F)

Calculate areas of 2D shapes and recall the formulae (including circles)

Find surface area of 3D shapes

Understand nets and elevations

Perform standard constructions

Use interval notation to describe limits of accuracy of measurements.

Convert between units of area and volume

Know and state conditions for congruent triangles as part of a proof

Use upper and lower and lower bounds(H)

Know how areas and volumes change in similar shapes

Use sine and cosine rules to find missing lengths and angles in any triangle (H)

Find area using ½ absinC (H)

Literacy/Numeracy:

The focus for much of the exam-style questions will be on deciphering the problems given so that they can be understood.

Careers Links(CAEIG):

When doing many practical careers, degrees of tolerance need to be considered. E.g. Carpentry

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 10 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**

How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y10 STRAND 5 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

This module focuses on data and probability, with some algebra towards the end of the module

- Probability fundamentals(F)
- Sampling
- Theoretical and Experimental Probabilities
- Counting outcomes
- Combining events
- Conditional Probability (H)
- Algebra review (F)
- Solve quadratic equations
- More complex manipulation(H)

Assessed Tasks:

3 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions.

In addition, there will also be a Lagged Homework, a Prep Homework to help prepare for the following module, and weekly homeworks. These may be self or peer-marked, or auto-marked (online).

SMSC & British Values:

- Students use creativity to explore different ways of representing probability problems
- There are opportunities for students to learn of the risks (including some moral) involved in gambling.
- Getting a 'fair' sample is important for all information gathering in a social survey
- Understanding of polling predictions and how those figures are calculated

Enrichment Ideas:

https://nrich.maths.org/1394

Assessment Criteria:

Use the language of probability and find probabilities as fractions and decimals. (F)

Calculate using stratified sampling

Create and use Venn diagrams and 2-way tables to solve probability problems

Count numbers of events using multiplication rules.

Use tree diagrams to solve problems

Solve conditional probability problems (H)

Expand and factorise quadratics

Solve quadratic equations by factorising, completing the square (H) and formula (H)

Solve more complex equations by factorising (H)

Literacy/Numeracy:

The focus for much of the exam-style questions will be on deciphering the problems given so that they can be understood.

Careers Links(CAEIG):

Sampling and probability are important to medicinal companies who are developing new drugs and testing findings.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 10 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y10 STRAND 6 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

This module has some more algebra, and also includes the end of year assessment.

- Algebra fundamentals(F)
- Using real life graphs (F)
- Non-linear graphs
- Simultaneous linear equations
- Simultaneous linear and quadratic equations (H)
- Quadratic inequalities (H)
- Exponential graphs (H)
- Algebraic fractions (H)

Assessed Tasks:

1 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions. There is also a formal end of year assessment, which will be closely looked through afterwards.

In addition, there will also be revision homework, after the exam a Prep Homework to help prepare for the following module in Year 11, and weekly homeworks. These may be self or peer-marked, or auto-marked (online).

SMSC & British Values:

- Students develop their understanding and the beauty of mathematics, seeing links between different topics
- Engage with students' alternative methods for solving problems and justify why one method might be preferred
- Different solution methods for simultaneous equations from different nationalities

Enrichment Ideas:

Linking simultaneous equations to Chemistry:

https://nrich.maths.org/1347

Assessment Criteria:

Solve linear equations (F)

Construct and interpret real-life graphs including distance-time graphs (F)

Use tables and calculators to help plot non-linear graphs

Recognise shapes of common graphs

Solve simultaneous linear equations algebraically

Solve simultaneous equations graphically

Solve non-linear simultaneous eqns (H)

Sketch quadratic graphs including turning point by completing the square (H)

Sketch exponential graphs (H)

Simplify and manipulate algebraic fractions (H)

Literacy/Numeracy:

The focus for much of the exam-style questions will be on deciphering the problems given so that they can be understood.

Careers Links(CAEIG):

Scientists often need to fit curves to experimental data that has been collected to model a problem and make predictions.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 10 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y11 STRAND 1 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

This module uses the algebra skills learnt in year 10 and applies them to new situations, and then includes work on proportion and circles.

- Algebra review (F)
- Ratio and proportion
- Direct and inverse proportion
- Measuring parts of circles
- Proof
- Circle Theorems (H)
- Equations of tangents to circles (H)
- Proportion with powers (H)

Assessed Tasks:

3 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions. At least once every fortnight students will have a silent lesson completing exam questions.

In addition, there will also be a Lagged Homework covering topics from two modules previously, a Prep Homework to help prepare for the following module, and weekly homeworks. These may be self or peer-marked, or auto-marked (online).

SMSC & British Values:

- Students use their imagination to help derive proofs of circle theorems.
- Students develop their understanding of consequences of behaviour when sitting fortnightly silent tests.
- Students working collaboratively on problem-solving questions
- Circle theorems can be applied to sporting and artistic scenarios

Enrichment Ideas:

Making lemonade – which batch is stronger?

https://nrich.maths.org/6870

Assessment Criteria:

Plot straight line graphs(F)

Solve ratio problems e.g. recipes (F)

Solve direct and inverse proportion problems

Set up proportion equations and use them to solve problems

Follow and form logical arguments to prove results in algebra and geometry

Name and measure parts of circles

Prove and use circle theorems (H)

Recognise the equation of a circle (H)

Find the equation of the tangent of a circle at a point (H)

Solve more complex proportion problems involving powers (H)

Literacy/Numeracy:

The focus for much of the exam-style questions will be on deciphering the problems given so that they can be understood.

Careers Links(CAEIG):

Understanding of proportional reasoning is often listed as a skill needed for careers involving analysis (such as an Energy analyst) who works as part of a larger company to analyse data.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 11 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y11 STRAND 2 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

This module completes the Foundation scheme of learning, and focuses mainly on data and statistics. The formal Mock exams are in this module

- Statistics review (F)
- Representing data
- Measuring characteristics of data
- Line graphs
- Correlation and Outliers
- Compound units

Assessed Tasks:

2 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions. At least once every fortnight students will have a silent lesson completing exam questions. The Mock exams also fall in this module.

In addition, there will also be a Lagged Homework covering topics from two modules previously, a Prep Homework to help prepare for the following module, and weekly homeworks. These may be self or peer-marked, or auto-marked (online).

SMSC & British Values:

- Students learn about the world around them by interpreting statistical diagrams.
- Recognise that in the media, different images are displayed of statistics to emphasize a particular point of view – is this ethical?
- Students develop skills of cooperation and communication by explaining diagrams
- Use of data to compare different cultures

Enrichment Ideas:

Developing statistical thinking and reasoning:

https://nrich.maths.org/7721

Assessment Criteria:

Construct charts to represent data

Recognise when graphs are misleading

Choose the most appropriate average in context

Interpret and construct line graphs for time series

Plot and use scatter diagrams

Interpret correlation

Interpolate and extrapolate from data

Recognise outliers

Use compound units E.g. density, speed Draw and interpret histograms (H)

Draw and interpret box plots (H)

Compare distributions using box plots (H)

Literacy/Numeracy:

The focus for much of the exam-style questions will be on deciphering the problems given so that they can be understood.

Careers Links(CAEIG):

Statisticians and managers will do the actual statistical work, but all should be able to understand what is being described.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 11 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y11 STRAND 3 IVC MATHS CURRICULUM OVERVIEW

Key Content/Topics:

The Foundation course is now complete, and so the time from now until the GCSE exams will involve consolidation of topics identified in the Mocks as needing improvement, and building up exam technique. Higher students have a couple of topics to cover, and then they will follow a similar pattern

- Functions (H)
- Further Graphs (H)

Assessed Tasks:

3 x IMP Task to be completed in class, based on the new material covered, comprising of exam-style questions. At least once every fortnight students will have a silent lesson completing exam questions.

In addition, there will also be a Lagged Homework covering topics from two modules previously and weekly homeworks. These may be self or peer-marked, or auto-marked (online).

SMSC & British Values:

- Imagination is needed to help approximate the area under a curve as a series of trapezia.
- Students working collaboratively on problem-solving questions
- Students recognising that even in a setted group there is a range of abilities, and everyone needs the chance to participate and learn.

Enrichment Ideas:

Investigation into the links between transforming graphs and the effect on gradient.

https://nrich.maths.org/11645

Assessment Criteria:

Understand and use function notation (H)

Find inverses and compositions of functions (H)

Translate and reflect graphs using function notation (H)

Find approximate solutions to equations by using trial and improvement, and sign change methods (H)

Calculate estimates of gradients of graphs by drawing tangents (H)

Calculate areas under graphs by splitting into trapezia (H)

Interpret gradients as rates of change (H)

On a velocity-time graph, know that gradient = acceleration and area = distance travelled (H)

Literacy/Numeracy:

The focus for much of the exam-style questions will be on deciphering the problems given so that they can be understood.

Careers Links(CAEIG):

Statisticians and economists will look at graphs and interpret gradients in context.

Intervention Tasks:

- Review of Strand skills using Mathswatch and/or Mymaths
- Complete Skills-Check booklet (sent out by email)
- Either self-assess or parent-assess Skill-Check booklet (markscheme sent by email)
- Seek guidance from teacher if needed
- Hand completed booklet in to teacher.

Year 11 Home Learning Expectations: Maths

When/how will homework be set?	**Weekly via Edulink.**
How long should each task take?	**Weekly teacher homework should take up to a maximum of 45 minutes, but please feel free to stop the student after an hour and write a letter to the teacher if they have not managed to complete it.**
Will this work be marked by a teacher?	**The homework will be marked in some way (often by the student's teacher, but it could be self/peer assessed in class or marked electronically.)**
How will Home Learning/ intervention tasks be used if a student is underachieving?	**Students will be directed to use Mathswatch and/or Mymaths to catch up on any skills that they have missed.**

Y7 STRAND 1 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Balanced and Reflective

How can I demonstrate good organisational skills?

How can I manage my concentration in lessons?

How can I make myself persevere with a task?

How can I make myself resilient to failure?

How can I maintain self-motivation?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Play games with students and encourage them to “fail well”. They need to be able to learn from their mistakes, show perseverance when they get frustrated and maintain concentration

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

These skills are necessary for all future careers.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 8 and 9.

Year 7 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.

Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y7 STRAND 2 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Open Minded and Principled

How can I be “information literate”?

How can I demonstrate “information literacy”?

How can I be “media literate”?

How can I demonstrate “media literacy”?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Write a “false advertisement” to convince someone to buy something silly. Create fake data to try to convince your audience.

See if you can spot similarly silly things on Social Media platforms.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Careers in the media and journalism.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 8 and 9.

Year 7 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y7 STRAND 3 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Communicators

How do I communicate effectively with my peers?

How can I successfully communicate my ideas?

How do I successfully communicate my ideas through writing?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Play “blind-folded artist”. One person closes their eyes and the other gives verbal instructions to draw a picture. Open your eyes when finished to view your masterpiece!

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Any careers which require strong communicational skills: e.g. Politics; Social Work.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 8 and 9.

Year 7 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.

Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y7 STRAND 4 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Caring

How can I support my peers?

How can I work successfully in a group?

How can I actively listen to, and respond to, other people's ideas?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Perform a "random act of kindness". Identify somebody who needs something that is easy to give and give it to them without any expectation of thanks or return.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Many careers require people to work with, and consider the needs of, other people.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 8 and 9.

Year 7 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y7 STRAND 5 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Thinkers and Risk-takers

How can I be a “critical thinker”?

How can I form a balanced argument?

How can I be good at “being wrong”?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Have a family debate. Choose a topic and assign different roles. Encourage everyone to form a coherent argument to present their role – even if they don't agree with it.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Legal Professions.

Journalism.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 8 and 9.

Year 7 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.

How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y7 STRAND 6 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Inquirers and Knowledgeable

How can I prepare to apply what I have learned to my exams?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Look at the Learning Scientists website

http://www.learningscientists.org/

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Developing the ability to maximise retention when studying will allow students to be successful in future qualifications, paving the way for multiple career opportunities.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 8 and 9.

Year 7 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y8 STRAND 1 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Balanced and Reflective

How can I demonstrate good organisational skills?

How can I manage my concentration in lessons?

How can I make myself persevere with a task?

How can I make myself resilient to failure?

How can I maintain self-motivation?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Play games with students and encourage them to “fail well”. They need to be able to learn from their mistakes, show perseverance when they get frustrated and maintain concentration

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

These skills are necessary for all future careers.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 9.

Year 8 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y8 STRAND 2 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Open Minded and Principled

How can I be “information literate”?

How can I demonstrate “information literacy”?

How can I be “media literate”?

How can I demonstrate “media literacy”?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Write a “false advertisement” to convince someone to buy something silly. Create fake data to try to convince your audience.

See if you can spot similarly silly things on Social Media platforms.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Careers in the media and journalism.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 9.

Year 8 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y8 STRAND 3 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Communicators

How do I communicate effectively with my peers?

How can I successfully communicate my ideas?

How do I successfully communicate my ideas through writing?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Play “blind-folded artist”. One person closes their eyes and the other gives verbal instructions to draw a picture. Open your eyes when finished to view your masterpiece!

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Any careers which require strong communicational skills: e.g. Politics; Social Work.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 9.

Year 8 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

<u>Y8 STRAND 4 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW</u>

Key Content/Topics:

Caring

How can I support my peers?

How can I work successfully in a group?

How can I actively listen to, and respond to, other people's ideas?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Perform a "random act of kindness". Identify somebody who needs something that is easy to give and give it to them without any expectation of thanks or return.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Many careers require people to work with, and consider the needs of, other people.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 9.

Year 8 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y8 STRAND 5 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Thinkers and Risk-takers

How can I be a "critical thinker"?

How can I form a balanced argument?

How can I be good at "being wrong"?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Have a family debate. Choose a topic and assign different roles. Encourage everyone to form a coherent argument to present their role – even if they don't agree with it.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Legal Professions.

Journalism.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 9.

Year 8 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y8 STRAND 6 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Inquirers and Knowledgeable

How can I prepare to apply what I have learned to my exams?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Look at the Learning Scientists website

http://www.learningscientists.org/

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Developing the ability to maximise retention when studying will allow students to be successful in future qualifications, paving the way for multiple career opportunities.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these topics in years 9.

Year 8 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.

How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y9 STRAND 1 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Balanced and Reflective

How can I demonstrate good organisational skills?

How can I manage my concentration in lessons?

How can I make myself persevere with a task?

How can I make myself resilient to failure?

How can I maintain self-motivation?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Play games with students and encourage them to “fail well”. They need to be able to learn from their mistakes, show perseverance when they get frustrated and maintain concentration

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

These skills are necessary for all future careers.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis.

Year 9 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

<u>Y9 STRAND 2 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW</u>

Key Content/Topics:

<u>Open Minded and Principled</u>

How can I be “information literate”?

How can I demonstrate “information literacy”?

How can I be “media literate”?

How can I demonstrate “media literacy”?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Write a “false advertisement” to convince someone to buy something silly. Create fake data to try to convince your audience.

See if you can spot similarly silly things on Social Media platforms.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Careers in the media and journalism.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis.

Year 9 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.

How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y9 STRAND 3 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Communicators

How do I communicate effectively with my peers?

How can I successfully communicate my ideas?

How do I successfully communicate my ideas through writing?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Play “blind-folded artist”. One person closes their eyes and the other gives verbal instructions to draw a picture. Open your eyes when finished to view your masterpiece!

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Any careers which require strong communicational skills: e.g. Politics; Social Work.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis.

Year 9 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y9 STRAND 4 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Caring

How can I support my peers?

How can I work successfully in a group?

How can I actively listen to, and respond to, other people's ideas?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Perform a “random act of kindness”. Identify somebody who needs something that is easy to give and give it to them without any expectation of thanks or return.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Many careers require people to work with, and consider the needs of, other people.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis.

Year 9 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.

How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y9 STRAND 5 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Thinkers and Risk-takers

How can I be a "critical thinker"?

How can I form a balanced argument?

How can I be good at "being wrong"?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Have a family debate. Choose a topic and assign different roles. Encourage everyone to form a coherent argument to present their role – even if they don't agree with it.

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Legal Professions.

Journalism.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis.

Year 9 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A

Y9 STRAND 6 IVC APPROACHES TO LEARNING CURRICULUM OVERVIEW

Key Content/Topics:

Inquirers and Knowledgeable

How can I prepare to apply what I have learned to my exams?

Assessed Tasks:

Students will complete an online self-assessment on each success criteria statement.

SMSC & British Values:

S: Students will work collaboratively and improve their social skills

M: Students will reflect on how to develop aspects of their personalities, e.g. resilience, self-motivation.

S: Students will self-critique and develop themselves as learners.

C: Students will explore the characteristics that are seen as successful in our culture

Enrichment Ideas:

Look at the Learning Scientists website

http://www.learningscientists.org/

Assessment Criteria:

Students will explore the key content through the media of discussions, short activities and games.

They will reflect on the skills that they have and focus on developing the skills that they need.

Each fortnight students will set themselves a target to address across their other lessons to enable them to develop their skills.

Literacy/Numeracy:

Development of verbal and written communication skills will be implicit in all activities.

Careers Links(CAEIG):

Developing the ability to maximise retention when studying will allow students to be successful in future qualifications, paving the way for multiple career opportunities.

Intervention Tasks:

All students are encouraged to develop their skills on a continuous basis. They will revisit these skills in years 10 and 11.

Year 9 Home Learning Expectations:

When/how will homework be set?	Students will set themselves a fortnightly target which they will be in charge of getting signed off by an adult before their next lesson.
How long should each task take?	There is no time length requirement – students will get their target signed off when they have achieved it.
Will this work be marked by a teacher?	The beginning of each lesson will provide a reflection of targets set and achieved.
How will Home Learning/ intervention tasks be used if a student is underachieving?	N/A