Hele's School

Year 8 IA2 Mastery Curriculum

Following the national removal of levels in 2015, schools were given the opportunity to create their own assessment system. The underlying principal of assessment in Year 7 and 8 is that students are **assessed against the key concepts and skills** that departments have identified as being important to allow students to make progress in their subject areas.

In Year 7 and 8, students are assessed into four bands of attainment – Mastering, Securing, Developing and Emerging – judged against the specific key concepts that have been taught and **assessed up to that particular point**. In order to track progress of students we identify which band we would expect students to be working in according to their prior attainment in reading and maths at KS2, as this is the main measure used by the Government and OFSTED, although our ultimate aim is for all students to aim to be at least secure in all the key concepts.

We would expect that students who are working in the following bands would be likely to go on to achieve the following grades at GCSE:

Band	**KS2 Average Scaled Score (Reading and Maths)**	**Target GCSE Grades (new grades)**	**Target GCSE Grades (old grades for comparison)**
Emerging	80-94	1/2/3/4/5	G/F/E/D/C
Developing	95- 105	4/5/6	C/B
Securing	106-111	6/7/8	B/A/A*
Mastering	112-120	8/9	A*

It is important to understand that your child's attainment band may move up or down at each IA point depending on the performance in that particular unit of work and progress towards the specific key concepts taught. Please also note that **the concepts are designed to get progressively more challenging as the year goes on and that a student who remains in their target band throughout the key stage is making good progress.**

Art

Key Concepts taught and assessed in Year 8 at IA2:

1. Translating ideas from 2 dimensions to 3 dimensions
2. Relating individual ideas to artistic styles.
3. Working effectively with clay.

Emerging	Developing	Securing	Mastering
Can copy some detailed 2D (two-dimensional) shapes. Can use a pencil, charcoal, crayons, chalk pastels and oil pastels to draw with some control. Can use different strengths and thicknesses of line. Can use a paintbrush with some control to make steady outlines and flat shapes. Can model simple shapes and forms in clay. Can also add texture to the surface of my clay by making different marks. Can follow instruction and show some personal elements Can see the connections the task and the related artist.	Can copy some detailed 2D (two-dimensional) shapes and some simple 3D (three-dimensional) forms. Can use different strengths of tonal shading to make the highlights, mid-tones and shadows that create the illusion of 3D form. Can use a paintbrush with control to paint different shapes without going over the outlines. Can model forms in clay that feature extra shapes added to the surface. Can also add textural effects by making different marks. Can follow instruction and show personal elements. Can include your own resources which are gathered independently. Can see the connections the task and the related artist.	Can copy 2D and 3D images from Primary and Secondary sources realistically Can use different strengths of tonal shading to make the highlights, mid-tones and shadows that create the illusion of 3D form. Can use a paintbrush with control to paint a range of different shapes and details without going over the outlines. Ccn make detailed shapes and forms using clay. I have control with tools to make different marks in the clay's surface and can smooth areas out well. Can add clay pieces to the main body of my model for extra detail using score-and-slip and when these are fired in the kiln they don't fall off. Can follow instruction and show personal elements. Can include your own resources which are gathered independently. Can show an understanding of the work of the selected artists in the artwork.	Can copy 2D and 3D images from Primary and Secondary sources realistically to communicate the SHAPE, FORM and TEXTURE of the things I see. I can use a wide range of drawing materials with confidence to communicate what they are like. Can paint with confidence to communicate LINE, TONE, SHAPE, FORM, SPACE, COLOUR, PATTERN and TEXTURE. Can mix a wide range of colours and use highlights, mid-tones and shadows to successfully create 3D form, Can use a range of experimental modelling methods to successfully make complicated shapes and forms using clay. I have good control with tools Can use a range of experimental modelling methods to successfully make complicated shapes and forms using clay. I have good control with tools Can follow instruction and show personal elements. Can include your own resources which are gathered independently. Can show an understanding of the work of the selected artists in the artwork and appreciate why they worked in the manner they did

Computing

Key Concepts taught and assessed in Year 8 at IA2:

- JavaScript programming

Emerging	Developing	Securing	Mastering
Draw shapes using the ellipse(), rect(), line() and triangle() commands.	Colour and add outlines to drawings with background(), fill(), stroke() and noStroke() commands. Create and use global variables with operators. Pass variable values to commands.	Make animations using the draw() function. Use the mouseX and mouseY coordinates to make interactive programs. Display text on the canvas, resize it, colour it, and animate it.	Group code into functions, and then make those functions accept parameters anD return values. Create a local variable to store and retrieve data, only accessible within the function it is defined. Make appropriate improvements to solutions based on feedback received and comment on the success of the solution.

Drama

Key Concepts taught and assessed in Year 8 at IA2:

1. Characterisation
2. Vocal Control
3. Physicality

Emerging	Developing	Securing	Mastering
Characterisation - When performing your role, you laugh on stage and seem to lose control of your character on stage. Vocal control - Vocal delivery is often inappropriate and inconsistent. There is no control of vocal techniques. Physicality - On stage you are very nervous and cannot present the style or genre which you have explored	Characterisation - On stage you are unable to stay in role and perform without losing focus. Vocal control - Vocal delivery is appropriate but inconsistent at times. Physicality - You have energy and drive within your performance	Characterisation - You may be able to sustain your role; however, you come out of character easily and are unable to sustain your role on stage. Vocal control - There is a secure use of vocal tone, pace, pitch and volume. Physicality - There is a secure use of gesture, expressions and use of space. You can control your character on stage with	Characterisation - Pupils will be able showcase a clear character on stage. Vocal control - Students are able to demonstrate an assured use of pace, pitch, projection and tone. Physicality - Movement is engaging, dynamic and skilful throughout. On stage your performance is engaging and energetic

English - Reading

Key Concepts taught and assessed in Year 8 at IA2:

1) Explaining how a text is informed by its context;
2) Considering multiple meanings and effects of language
3) Single word analysis
4) Using a range of evidence to justify inferences.
5) Clear and formal academic writing
6) Accurately identifying grammatical terms/techniques used by the writer.

Emerging	Developing	Securing	Mastering
• I can communicate my ideas clearly • I explain words and phrases that are usually relevant to the question • I always explain the effect of my chosen words/phrases • I can sometimes write about relevant parts of texts • I show some awareness that there is more than one way of understanding a text • I show an understanding of some features of Revenge Tragedy • I can spell and punctuate with reasonable accuracy • I use technical names of words and dramatic devices but not always accurately • My sentence structures generally allow me to communicate my ideas	• I use formal language to make my writing sound professional with only minor inconsistencies • I can consistently select relevant language examples to explain • I can sometimes consider multiple interpretations of language examples • I usually write about the most relevant parts of texts • I provide some evidence to support an alternative view • I show an understanding of a wide variety of features of a Tragedy • I spell and punctuate with only infrequent and minor errors • I frequently use technical names of words and dramatic devices with considerable accuracy • My sentence structures allow me to communicate my ideas clearly with only occasional error • My vocabulary is clear and beginning to successfully vary	• I can write in a formal analytical register • I can analyse judiciously chosen examples of language – often single words • I always consider multiple effects of language examples • I judiciously select the key aspects of a text to analyse • I can explain clearly how the question might be argued against • I can make judicious links between the text and the Tragedy genre • I can spell and punctuate with consistent accuracy and variety • I can consistently use technical names of word classes and dramatic devices accurately • I can write grammatically correct sentences to contribute to the consistent clarity of my analysis • Vocabulary is varied and beginning to become sophisticated.	• An authoritative critical voice with use of consistently tentative language in recognition of the multiple interpretations possible within examples of language and structure (e.g. While I recognise… I would argue…) • The emergence of a critical counterargument which recognises an alternative viewpoint (see above) • Perceptive linking of language examples to the text's literary context of Tragedy • Spelling and punctuation is confident and used to influence line of argument (e.g. use of rhetorical questions or asides) • Judicious example of technical language, recognising the relationship between different word classes within a quote. • Grammatically accurate sentences which are ambitious in their structure (extended subordinate clauses to add detail for instance) whilst still maintaining clarity. • Vocabulary is extensive and ambitious

English - Writing

Key Concepts taught and assessed in Year 8 at IA2:

1) Structuring a written piece of a specific form (monologue).
2) Using knowledge of a text to inform the ideas in the writing for accuracy
3) Choosing vocabulary and discourse markers to manipulate the tone and audience of the piece;
4) Adding detail through choice of figurative language.
5) Manipulating punctuation choices for effect.
6) Manipulating sentence types to create a particular effect.

Emerging	Developing	Securing	Mastering
• Writing uses some features of a monologue e.g. first person • I can sometimes match the tone of my writing to my character (e.g. angry all the way through). • Use of vocabulary signals some understanding of how the character feels (this will be one dimensional, e.g. angry only). • I try to engage my reader but this may come in the form of over the top language. • I can include some key facts that have happened to my character. • Simple range of sentence forms (tends to be simple and compound) with some control of agreement. • Some evidence of conscious punctuation . , ? ! " " • I can use some discourse markers to link my ideas • I spell simple words accurately but struggle to spell more complex ones. • I am beginning to vary my vocabulary (1-3 interesting words).	• Writing attempts to match to the audience all the way through • Writing uses a wide variety of key features of a monologue • I can use a tone which is appropriate to the character with some minor inconsistencies • Use of vocabulary and imagery for effect on the reader • A variety of relevant ideas informed by the text are included in my monologue. • I can use a range of sentences, including complex and compound-complex, though with one or two errors (was/were) • Some control of a range of punctuation for effect and sentence demarcation . , " " ? ! … ( ) • I can use a range of discourse markers and some topic sentences • Some accurate spelling of more complex words • Increasing variety of vocabulary (more consistent use of interesting vocabulary)	• Writing is well-matched to the audience throughout • Writing clearly begins to adapt monologue conventions to meet my specific purpose • I can sustain a tone which is wholly suitable for my chosen character to communicate their emotions and thoughts. • Vocabulary and imagery is effective and sophisticated • I attempt to integrate quotations from characters to inform the ideas in my monologue further. • Uses a variety of sentence forms for effect and I may occasionally use non-grammatical sentence structures to achieve specific effects • Range of punctuation is used, mostly with success . , ! ? " " ( ) : ; ... - • I can consistently use precise discourse markers and clear topic sentences • Generally accurate spelling, including complex and irregular words • Vocabulary is more interesting and becoming sophisticated.	• The reader is convinced that this voice reflects the character well throughout. • A structure which fully follows the conventions of a monologue, with a fluent structure e.g. rhetorical questions informed by integrated quotations. • Tone is multi-layered and shows conflicts within the character (e.g. desire but self-loathing reverting back to desire or guilt). • A very wide range of vocabulary and well-crafted imagery (i.e. extended metaphor, epic simile etc.) • Well integrates quotations and ideas from the story which may be extended convincingly. • Confident control of a full range of sentence structures. • A range of examples of non-grammatical constructions used to create a specific effects on the reader. • Wide range of punctuation is used with a high level of accuracy . , ! ? " " ( ) : ; ... - • High level of accuracy in spelling, which includes complex vocabulary. • Extensive and ambitious use of vocabulary

French

Key Concepts taught and assessed in Year 8 at IA2:

1. Using 2 tenses accurately
2. Giving opinions
3. Using reflexive verbs
4. Using 1st and 3rd person accurately
5. Forming questions

Emerging	**Developing**	**Securing**	**Mastering**
• Developing knowledge of present tense regular verb endings & key irregular verbs adapting this knowledge to both question & answer formats. Starting to apply rules to unfamiliar verbs, although not always correctly. • Respond to simple questions with short answers. Sentences may be repetitive as tense formation is not understood. • A lot of repetition of key past participles in the 1st person is needed, in order to communicate in the perfect tense. • Do not understand how to form negative opinion phrases in the present tense & sentences make little sense. • Unable to express opinions in the imperfect tense, therefore gives opinions using the present tense instead. • Able to adapt model sentences with words specified by the teacher, in order to encourage greater fluency.	• Consolidating their knowledge of present tense regular verb endings & key irregular verbs adapting this knowledge to both question & answer formats. Show evidence that they can apply rules to unfamiliar verbs, although not always successfully. • Respond to questions in one tense, which a native speaker would understand. Errors are evident in verb formation however. • Able to cope with a few key past participles in 1st person perfect tense sentences. Être past participle agreement is often forgotten. • Attempt to form negative opinions in the 1st person present tense, although word order is incorrect. • Able to express opinions in the imperfect tense, although do not always choose an adjective which is appropriate to the context. • Conversation/writing is beginning to flow better when prompted to include simple connectives & sequencers.	• Consolidating their knowledge of present tense regular verb endings & key irregular verbs adapting this knowledge to both question & answer formats. Able to apply rules to unfamiliar verbs, although not always successfully. • Ask & respond to questions in the present & past tenses, although not always accurately formed. • Questioning draws out understanding of grammar, although may need reminding about irregular avoir past participles & accurate être past participle agreement in more creative sentences. • Form negative opinions in the present tense. The position of the negative phrase is mostly correct. • Express opinions in the imperfect tense, using a good range of positive & negative opinions. • Include a good range of connectives & sequencers. These are put to good effect, to ensure fluency in conversation/writing.	• Secure in their knowledge of present tense regular verb endings & key irregular verbs, adapting this knowledge to both question & answer formats. Able to apply rules to unfamiliar verbs. • Ask & respond to questions using the present, perfect & imperfect tenses. • Able to identify avoir irregular past participles & to explain grammar points, such as être past participle agreement. This knowledge is demonstrated in own creative sentences. • Form negative sentences in the 1st & 3rd person present tense & explain the position of the negative phrase. • Confident in spontaneously expressing opinions in the imperfect tense & researching new adjectives to communicate with greater creativity. • Include a range of connectives & sequencers, in order for conversation/writing to be more fluent. Independently seeks out new vocabulary to manipulate language for own purpose.

Geography

Key Concepts taught and assessed in Year 8 at IA2:

1. How processes shape the world
2. Explaining cause, effect, response

Emerging	Developing	Securing	Mastering
Can begin to describe and possibly explain processes that lead to change. Can identify causes and effects of earthquakes.	Can describe and explain the processes that lead to change. Can accurately describe the effects of earthquakes. Can make basic links between different effects and responses to earthquakes.	Can explain a range of effects and responses to earthquakes, and link ideas clearly. Can start to evaluate significance of different factors. Can accurately explains the causes of earthquakes and makes links between different effects and geographical processes. Can start to evaluate the significance of different effects of earthquakes.	Can analyse information and evaluate the significance of different factors and processes that influence the impact(s) of earthquakes. Can accurately evaluate the scale and significance of effects and responses to earthquakes.

German

Key Concepts taught and assessed in Year 8 at IA2:

1. Using 2 tenses accurately
2. Giving opinions
3. Clear understanding of word order
4. Understand formal and informal register

Emerging	Developing	Securing	Mastering
• Developing their knowledge of present tense regular verb endings & key irregular verbs adapting this knowledge to both question & answer formats. Starting to apply rules to unfamiliar verbs, although not always correctly. • Modal verb meanings are understood, yet word order rules are clearly not understood. • Simple sentences comparing places then & now are translated, although these are provided by the teacher, using a small bank of possible answers. • Unable to form the perfect tense + 'haben' without teacher scaffolding. Unable to identify the perfect tense in text. • Unable to form the perfect tense + 'sein' without teacher scaffolding. Unable to identify the perfect tense in text. • There may be the occasional correct imperfect/present tense sentence, but these come from simple sentences. The perfect tense is not properly formed, if attempted at all. Sentences are not coherent & do not communicate well.	• Consolidating their knowledge of present tense regular verb endings & key irregular verbs adapting this knowledge to both question & answer formats. Show evidence that they can apply rules to unfamiliar verbs, although not always successfully. • 1st person modal verbs are used in sentences, yet often the infinitive/correct positioning of the infinitive is forgotten. • Can translate simple sentences comparing places then & now, although may often forget to use the imperfect tense. • Can form the 1st person perfect tense + 'haben' using a few common past participles. Errors are frequent. • Can form the 1st person perfect tense + 'sein' using a few common past participles. Errors are frequent. • Attempt to use more than one tense, but rely heavily upon resources. Language is copied, with little thought given to meaning. Errors are common & this prevents clear communication.	• Consolidating their knowledge of present tense regular verb endings & key irregular verbs adapting this knowledge to both question & answer formats. Able to apply rules to unfamiliar verbs, although not always successfully. • Can conjugate 1st, 3rd & plural forms of modal verbs & use in sentences with infinitives. Time phrases sometimes pose problems with word order. • Able to compare places then & now, although there may be some confusion with 'es gab' & 'es war'. • Able to form the 1st & 3rd person perfect tense + 'haben' using different past participles. Although verbs may not always be well-formed, the meaning is always clear. Can rectify errors when questioned. • Able to form the 1st & 3rd person perfect tense + 'sein' using different past participles. Although verbs may not always be well-formed, the meaning is always clear. Can rectify errors when questioned. • Able to communicate coherently in at least 2 tenses, following a model. Phrasing questions in different tenses poses great challenge.	• Secure in their knowledge of present tense regular verb endings & key irregular verbs, adapting this knowledge to both question & answer formats. Able to apply rules to unfamiliar verbs. • Conjugate modal verbs in all forms with time phrases, using correct word order. Translate these confidently from English to German & vice-versa. • Compares places then & now using imperfect verbs such as war/hatte/gab, as well as present tense verbs. • Confident in forming the perfect tense + 'haben' using both regular & irregular past participles, as well as different pronouns. Explain formation clearly, using grammatical terminology. • Confident in forming the perfect tense + 'sein' using both regular & irregular past participles, as well as different pronouns. Explain formation clearly, using grammatical terminology. • Communicates using extended sentences in the present, perfect & imperfect tenses (& sometimes even the future tense as well). Evidence of being able to form questions in different tenses.

History

Key Concepts taught and assessed in Year 8 at IA2:

1. Explain knowledge of past events in some detail.
2. Develop understanding of cultural, ethnic and religious diversity.
3. Analyse and evaluate different aspects of past events, judging relative significance.
4. Communicate ideas effectively.

Emerging	Developing	Securing	Mastering
Describes the main features of the Industrial Revolution and whether it improved people's lives. begins to produce structured work using appropriate dates and terms, paragraphs and good spelling of historical words.	Explains the main changes the Industrial Revolution brought to people's lives and gives evidence in more detail to explain whether lives were improved. Selects and uses information to support structured work, using paragraphs, and introduction and conclusion and relevant knowledge to support ideas. Spelling and grammar are often accurate.	Analyses and begins to judge the impact of change on people's lives brought about by the Industrial Revolution. Reasons begin to be prioritised and a clear judgement is made, supported by the evidence. Selects, organises and deploys relevant information to produce effectively structured work **w**ith an introduction and conclusion. Each paragraph has a clear point and ideas are supported by historical knowledge and terminology. Spelling and grammar are mainly accurate.	Evaluates in depth the impact of change on people's lives brought about by the Industrial Revolution. Fully evaluates the evidence to reach well substantiated and nuanced conclusions. There is evidence of own research and critical, original thinking. Produces precise and coherent work, using historical terminology and deploying knowledge with confidence. Writing is well structured, accurate and ideas are deployed with confidence and control.

Maths

Key Concepts taught and assessed in Year 8 at IA2:

1. Mathematical fluency
2. Problem solving
3. Reasoning
4. Modelling
5. Explaining and investigating
6. Apply knowledge in unfamiliar situations

Emerging	Developing	Securing	Mastering
• Solve simple problems using ideas of ratio and proportion ('one for every…' and 'one in every…') • Reduce a ratio to its simplest form. • Use the unitary method to solve simple word problems involving ratio and direct proportion. • Construct an appropriate diagram that displays your data. • Summarise the information shown in a data diagram • Read and plot coordinates in all 4 quadrants. • Generate coordinate pairs that satisfy a simple linear rule; recognise straight-line graphs parallel to the x-axis or y-axis • Understand what gradient means	• Use direct proportion in simple contexts, use ratio notation. • Reduce a ratio to its simplest form and divide a quantity into two parts in a given ratio. • Solve simple problems about ratio and proportion using informal strategies. • Compare two ratios; interpret and use ratio in a range of contexts, including solving word problems. • Construct a pie chart with given information and a frequency with a factor of 360. • Interpret diagrams and graphs and draw conclusions • Generate coordinate pairs that satisfy a simple linear rule. • Plot the graphs of simple linear functions using a table of values • Express simple functions in symbols; represent mappings expressed algebraically • Work out the gradient of a line segment	• Understand and use proportionality and calculate the result of any proportional change using only multiplicative methods. • Use proportional reasoning to solve a problem; interpret and use ratio in a range of contexts. • Divide a quantity into two or more parts in a given ratio. • Use the unitary method to solve word problems involving ratio and direct proportion. • Construct a pie chart with any frequency of data. • Analyse the data in a diagram and use it to draw conclusions. • Plot the graphs of linear functions using a table of values. Recognise that y = mx + c equations are straight line graphs. • Identify if points are on a linear graph • Solve problems involving direct proportion using algebraic methods, relating algebraic solutions to graphical representations of the equations. • Given values for m and c, find the gradient of lines given by equations of the form y = mx + c.	• Change between ratio, fractions and percentages. • Solve problems involving ratio (changing ratios –divided in ratio a:b:c, some given away now in ratio d:e:f, how much was given away etc.) • Solve problems involving indirect proportion. • Compare different pie charts. Discuss problems interpreting data • Understand how to present information concisely. Can suggest design improvements • Plot graphs of linear functions without table of values. • Work out the equation of a line given two points on the line

Music

Key Concepts taught and assessed in Year 8 at IA2:

1. Performance as a group
2. Composition

Emerging	Developing	Securing	Mastering
Can describe how different sounds have been used to give the music expression Have experimented with sounds to make your own music expressive Can perform simple parts with the correct rhythm Can describe how the Elements of Music have been used to make music expressive Think of ways to improve your Work.	Can perform a tune by ear or from simple notation Can perform as part of a group, showing that you are listening to others and know how your part fits Can improvise (make up on the spot) rhythms and tunes as part of a group	Can perform longer tunes from memory, Play music that is written down in differently. Perform in a group and understand your role. Make up tunes or rhythms on the spot that fit within a given structure. Compose music a variety of music and can write your music down.	Use tempo, dynamics, phrasing and timbre to make your performance successful. Make changes to your performance Improvise and compose in different musical styles. Change musical ideas to make them interesting. Write music down in the correct way to plan and improve your work.

PE

Key Concepts taught and assessed in Year 8 at IA2:

1. Outwitting Opponents
2. Accurate replication
3. Health and fitness
4. Performance at maximum levels

Emerging	**Developing**	**Securing**	**Mastering**
Apply skills correctly in isolation. Can apply some decision making and tactics. Pupils can link movements together but lack fluency and control. Pupils can use fitness suite safely but are lacking the effective use of the equipment when training to improve fitness. Pupils can complete most track events and start to perform some of the field events but lack fluency and control.	Apply skills to game situations with some success. Can apply decision making and tactics with some success. Pupils can replicate different key skills with control and begin to develop sequences that flow. Can carry out their own warm up and cool down effectively and can plan an exercise session and carry out fitness tests successfully. Pupils can demonstrate the correct technique in most field events and demonstrate good levels of competency in track events.	Applies skills and advanced with high levels of success in games. Can apply decision making and tactics with high levels of success. Usually the correct decision or tactic is used. Pupils can accurately replicate key skills in different activities demonstrating fluency. They begin to create their own sequence/routine. They can plan and carry out exercise sessions based on fitness test results that include appropriate warm ups and cool downs safely and effectively. Pupils can perform the field events with good levels of success and are able to demonstrate the use of key points to refine their technique. Performance looks fluent and controlled.	Applies advanced skills with high levels of consistency and very few errors in games. Can evaluate the correct decision and tactic in a wide range of situations with high levels of success. Will use advanced tactics. Pupils can replicate key skills in different activities creating their own sequences/routines demonstrating originality in their movements. They can identify areas of strength and weakness based on fitness test results and can plan and carry out exercise sessions linked to specific training methods and needs. Pupils can perform all the field events using the correct technique. Pupils can evaluate performance and identify key points to modify technique. Performance on the track is well paced and they demonstrate a clear understanding of the different events and how to tactically approach each one.

Religious Studies

Key Concepts taught and assessed in Year 8 at IA2:

1. 'Words are more powerful than actions,'

Emerging	**Developing**	**Securing**	**Mastering**
I can describe examples from Anne Frank and the Holocaust and any other relevant people that agree and disagree with the statement	I can explain how these examples agree and disagree with the statement.	I can evaluate how these examples agree or disagree with the statement	I can use and evaluate a range of different examples and draw a comprehensive conclusion.

Science – Biology

Key Concepts taught and assessed in Year 8 at IA2:

1. Analyse: Analyse patterns, discuss limitations, draw conclusions, present data
2. Communicate: Communicate ideas, construct explanations, critique claims, justify opinions
3. Enquire: Collect data, devise questions, plan variables, test hypothesis
4. Solve: Estimate risks, examine consequences, review theories, interrogate sources

Emerging	**Developing**	**Securing**	**Mastering**
Recall the what is need for and products of photosynthesis and photosynthesis. Recall where plants get minerals from. Recall the three main types of blood vessel. Recall the effects of smoking.	Recall the functions of leaves and stomata. State one use of minerals in a plant. Recall the stages of breathing. Recall the effects of exercise on breathing and the lungs. Recall the word equations for aerobic respiration and anaerobic respiration (including fermentation). State some functions of the blood.	Recall the word equation for photosynthesis and describe how leaves are adapted to enhance the process. Describe how breathing in and out and gas exchange occur. Describe what happens during an asthma attack and what effects smoking can have on the lungs and breathing. Describe the processes of aerobic and anaerobic respiration, and explain their functions in organisms. Explain what a heartbeat is.	Explain how to use the starch test to investigate what is needed for photosynthesis to take place. Explain how the different parts of the leaf enable the plant to carry out photosynthesis efficiently. Explain why there is more carbon dioxide in exhaled breath compared to inhaled air. Explain why breathing rate increases during exercise. Explain why smoking decreases the efficiency of the lungs. Explain how to measure the rate of fermentation. Link the structure of blood vessels to their function. Describe the path blood takes through the heart.

Science – Chemistry

Key Concepts taught and assessed in Year 8 at IA2:

1. Analyse: Analyse patterns, discuss limitations, draw conclusions, present data
2. Communicate: Communicate ideas, construct explanations, critique claims, justify opinions
3. Enquire: Collect data, devise questions, plan variables, test hypothesis
4. Solve: Estimate risks, examine consequences, review theories, interrogate sources

Emerging	**Developing**	**Securing**	**Mastering**
State some everyday acids and alkalis. Describe some of the hazards of handling acids in the laboratory. Describe the pH scale and different indicators.	Describe how an acid and alkali react to form a neutral solution and write a word equation. Recall that indigestion is caused by excess stomach acid that can be treated with antacids. Identify some of the consequences of acid rain. Describe the products of acid and metals.	Explain why all acids are not dangerous, and some alkalis are. Explain how acids can be used safely, and explain the precautions taken when using them. Identify the salts produced by different acids and be able to write different word equations. Plan and perform a practical into the neutralisation of stomach acid. Classify acidity according to indicator colours and the pH scale. Outline the effect of acid rains on lakes, rivers, rocks and buildings. Write word equations for the reactants and products in metal-acid reactions.	Classify acid and alkali materials in terms of risk, and relate this to their uses. Compare different acids and conclude which is the most dangerous. Predict the salts made or acids/alkalis required and write balanced symbol equations for neutralisation. Evaluate an investigation into antacids. Explain how values on the pH scale relate to indicator colour and acidity. Evaluate the different methods of determining pH. Evaluate the impact of natural causes compared to man-made causes of acid rain. Write symbol equations for the reactants and products in metal–acid reactions.

Science - Physics

Key Concepts taught and assessed in Year 8 at IA2:

1. Analyse: Analyse patterns, discuss limitations, draw conclusions, present data
2. Communicate: Communicate ideas, construct explanations, critique claims, justify opinions
3. Enquire: Collect data, devise questions, plan variables, test hypothesis
4. Solve: Estimate risks, examine consequences, review theories, interrogate sources

Emerging	**Developing**	**Securing**	**Mastering**
Describe the process of energy transfer by heating and cooling in simple terms. Describe different energy resources as renewable or non-renewable. State that darker surfaces cool down and heat up faster than lighter surfaces. State that a material requires energy to change state from a solid to a liquid and from a liquid to a gas.	State that as the temperature of an object changes, so does the energy contained within that object. Identify advantages and disadvantages of different energy resources. State the Principle of Conservation of Energy and identify simple energy transfers. State that the processes of conduction and convection can transfer energy and describe these processes in simple terms. Describe evaporation as a cooling process in simple terms. Calculate the work done by a force and the power of a device or energy transfer. Describe simple chemical reactions as giving out energy or taking in energy. Calculate the energy use of a single mains device in kilowatt hours.	Describe the changes in particle arrangement due to increases in internal energy. Compare energy resources, suggesting which would be appropriate to use in a variety of situations. Describe energy transfers in a range of situations using the appropriate descriptions of energy. Compare the energy content of food in terms of energy per 100 g and energy per portion, explaining why both measures are useful. Describe the processes of conduction and convection in terms of particle behaviour or movement. Identify the forces and distances in a range of situations to calculate the work done by the force. Describe the changes of state in terms of particle behaviour and bonding, relating this to changes in internal energy. Calculate the energy use and costs of operating a device or a range of appliances.	Describe the factors that affect change in temperature of a material. Describe energy transfers accounting for energy 'losses' to the environment. Link energy transfer to the process that causes that transfer (e.g. heating or forces). Use advanced concepts from the particle model, such as the role of electrons in conduction and convection currents in terms of changes in density. Describe cooling by radiation in terms of infra-red radiation. Identify changes in bonds as responsible for energy changes in chemical reactions. Rearrange key equations to calculate energy transfer and sizes of forces. Calculate energy use in joule and in kilowatt hours converting between the units when required.

Technology – Food Modules

Key Concepts taught and assessed in Year 8 at IA2:

1. Developing cooking skills
2. The importance of nutrition

Emerging	**Developing**	**Securing**	**Mastering**
Students work with some supervision and guidance. Food is cooked but needs some improvements. Students can use nutritional information to answer some questions.	Students work with a level of independence and produce food to a reasonable standard. Students are able to select appropriate information from research and present in their own words.	Students work totally independently, able to solve simple problems and produce food consistently to a good standard. Students are able to research from a number of sources to present new ideas in one piece of work.	Students are able to solve all problems they encounter independently and consistently achieves a high standard of finish on cooked dishes. Students are able to write a structured and detailed piece of writing from a different perspective.

Technology – Resistant Materials Modules

Key Concepts taught and assessed in Year 8 at IA2:

1. Developing tool skills
2. Accuracy and precision
3. Awareness of end user needs
4. Evaluating product situations and outcomes

Emerging	**Developing**	**Securing**	**Mastering**
I can recognise some of the tools that I have used. I can recognise some of the materials that I have been using. I can recognise when prompted a process that I have used in my practical work like, soldering, drilling. My work is sometimes accurate but needs improving. I sometimes forget about safety and need to be reminded.	I can recognise and name some of the tools that I use. I can correctly name some of the materials that I use. I can recognise and name some of the processes that I use when making my product: Soldering, Drilling, Finishing. My work is mostly accurate. I work safely wearing googles when using machine tools and soldering, obeying Health & Safety rules in the workshop.	I can select the correct tools and equipment that I use in my practical work and can explain their function. I make good choices when I select the materials for my practical work. I can explain the best process to use when making my products and justify why I have chosen them for that job. I am accurate in my work. I always work safely wearing googles when using machine tools, obeying Health & Safety rules in the workshop.	I can select the correct tools for working with different materials and I can justify my choice tools and the materials I am using them on. I justify the reasons for my choice of materials. Taking into consideration their properties. I can correctly choose from a variety of manufacturing processes and I can justify why I have chosen it. I can use CAD/CAM to expand my work. I am accurate and precise and pay attention to detail when I work. Making corrections to ensure quality. I always work safely when in a workshop and can demonstrate this to others.