



Hele's School

Year 8 IA1 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 IA1:

1. Observing
2. Controlling media
3. Developing ideas

Emerging	Developing	Securing	Mastering
<p>Can copy some detailed 2D (two-dimensional) shapes.</p> <p>Can use a pencil, charcoal, crayons, chalk pastels and oil pastels to draw with some control.</p> <p>Can use different strengths and thicknesses of line.</p> <p>Can use a paintbrush with some control to make steady outlines and flat shapes.</p> <p>Can model simple shapes and forms in clay.</p> <p>Can also add texture to the surface of my clay by making different marks.</p> <p>Can follow instruction and show some personal elements</p> <p>Can see the connections the task and the related artist.</p>	<p>Can copy some detailed 2D (two-dimensional) shapes and some simple 3D (three-dimensional) forms.</p> <p>Can use different strengths of tonal shading to make the highlights, mid-tones and shadows that create the illusion of 3D form.</p> <p>Can use a paintbrush with control to paint different shapes without going over the outlines.</p> <p>Can model forms in clay that feature extra shapes added to the surface.</p> <p>Can also add textural effects by making different marks.</p> <p>Can follow instruction and show personal elements.</p> <p>Can include your own resources which are gathered independently.</p> <p>Can see the connections the task and the related artist.</p>	<p>Can copy 2D and 3D images from Primary and Secondary sources realistically</p> <p>Can use different strengths of tonal shading to make the highlights, mid-tones and shadows that create the illusion of 3D form.</p> <p>Can use a paintbrush with control to paint a range of different shapes and details without going over the outlines.</p> <p>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.</p> <p>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.</p> <p>Can follow instruction and show personal elements.</p> <p>Can include your own resources which are gathered independently.</p> <p>Can show an understanding of the work of the selected artists in the artwork.</p>	<p>Can copy 2D and 3D images from Primary and Secondary sources realistically to communicate the SHAPE, FORM and TEXTURE of the things I see.</p> <p>I can use a wide range of drawing materials with confidence to communicate what they are like.</p> <p>Can paint with confidence to communicate LINE, TONE, SHAPE, FORM, SPACE, COLOUR, PATTERN and TEXTURE.</p> <p>Can mix a wide range of colours and use highlights, mid-tones and shadows to successfully create 3D form,</p> <p>Can use a range of experimental modelling methods to successfully make complicated shapes and forms using clay. I have good control with tools</p> <p>Can use a range of experimental modelling methods to successfully make complicated shapes and forms using clay. I have good control with tools</p> <p>Can follow instruction and show personal elements.</p> <p>Can include your own resources which are gathered independently.</p> <p>Can show an understanding of the work of the selected artists in the artwork and appreciate why they worked in the manner they did</p>

Computing

Key Concepts taught and assessed in Year 8 at IA1:

1. Database skills
2. Introduction to SQL programming

Emerging	Developing	Securing	Mastering
<p>Use information from primary and secondary sources and know when to choose the different types.</p> <p>Create a sales PowerPoint.</p> <p>Begin to look at inputting of data.</p>	<p>Identify an audience.</p> <p>Create templates for Top Trumps Cards. Prioritise and categorize information appropriately. Recognise how the content and style of information can influence the message it gives, and that data can be distorted and misused.</p> <p>Understand the Database keywords and meanings.</p>	<p>Identify the essential data and ICT tools required to solve a problem. Justify the process they use in relation to the task.</p> <p>Create a database table in SQL. Insert data into a database table using SQL.</p> <p>Query the database table. Increase presentation and design skills appropriate to target audience. Evaluate your work. Present information in a variety of different forms.</p> <p>Use the sum function to query the database table.</p>	<p>Improve the quality of outcomes for specific audiences and purposes by using a range of ICT tools. Order the database records by price and show at least one statistic using an aggregate function.</p> <p>Evaluate different applications in terms of the structure and method of processing data. Look at a situation from someone else point of view.</p>

Drama

Key Concepts taught and assessed in Year 8 at IA1:

1. Characterisation
2. Vocal Control
3. Physicality

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

English - Reading

Key Concepts taught and assessed in Year 8 at IA1:

1. Utilising academic vocabulary to clearly signpost argument
2. Choosing relevant and more precise evidence
3. Making comments which consider the whole text.
4. Using technical language to anchor evidence.
5. Considering how evidence establishes genre
6. Independently considering one or more effects on the reader

Emerging	Developing	Securing	Mastering
<p>I can write my ideas clearly.</p> <p>I can explain words and phrases that usually link to the question.</p> <p>I may make some reference to other parts of the text but this is likely to be vague.</p> <p>I try to use some technical language, though not always accurately.</p> <p>I can begin to explain why I have chosen particular words or phrases from the text.</p> <p>I make simple comments about the text's genre.</p> <p>I can spell and punctuate with reasonable accuracy in order to communicate clearly.</p> <p>I use a range of vocabulary.</p> <p>My sentence structures generally allow me to communicate my ideas.</p>	<p>I am beginning to use language to make my writing professional.</p> <p>I can always choose relevant language examples to explain.</p> <p>I show some understanding of the whole text.</p> <p>I sometimes use technical language to explain the writer's methods.</p> <p>I can write explanations of language which clearly relate to the question.</p> <p>I show some awareness of the text's genre and time period.</p> <p>I can spell and punctuate with considerable accuracy.</p> <p>I use a considerable range of vocabulary.</p> <p>My sentence structures allow me to communicate my ideas clearly though perhaps with some error.</p>	<p>I can write in a professional sounding way.</p> <p>I can analyse less obvious examples of language.</p> <p>I show a clear understanding of the whole text in my response.</p> <p>I analyse the writer's methods and use technical language.</p> <p>I can provide several explanations of effects on the reader.</p> <p>I make some links between the writer, the genre, the time period, and the text.</p> <p>I can spell and punctuate with consistent accuracy.</p> <p>My vocabulary is varied and constantly interesting.</p> <p>I can write grammatically correct sentences to contribute to the clarity of my writing.</p>	<p>A critical response with a wide range of carefully chosen examples from the text.</p> <p>A range of the writer's techniques analysed using technical language and consideration of the effects on the reader.</p> <p>Detailed links to aspects of context – i.e. links to the Gothic genre, to the writer etc.</p> <p>Consistently accurate spelling and punctuation, with vocabulary and sentence structures making the writing clear.</p>

English - Writing

Key Concepts taught and assessed in Year 8 at IA1:

1. Integrating features and imagery appropriate to a specific genre (Gothic)
2. Varying vocabulary to create a specific effect (tension)
3. Varying discourse markers to enhance fluency
4. Considering sentence variation for effect.
5. Using a range of punctuation to achieve clarity and specific effects

Emerging	Developing	Securing	Mastering
<p>I show a simple awareness of my audience.</p> <p>My writing shows some simple Gothic features.</p> <p>I use simple vocabulary and imagery (i.e. similes).</p> <p>I use some simple structural features like connectives.</p> <p>I link together one or two simple ideas.</p> <p>My paragraphs are used in a random way.</p> <p>I try to use some punctuation, but with quite a few mistakes.</p> <p>I use some simple sentence constructions.</p> <p>I spell basic words accurately, but make mistakes with longer ones.</p>	<p>I try to match my writing to my audience all the way through.</p> <p>My writing attempts to use Gothic features throughout.</p> <p>I use vocabulary and imagery for effect on the reader.</p> <p>I use structural features effectively - i.e. links between sentences</p> <p>I link a variety of relevant ideas.</p> <p>I use paragraphs and discourse markers accurately.</p> <p>I show some control over a range of punctuation.</p> <p>I attempt a variety of sentence forms</p> <p>I spell some more complex words accurately.</p>	<p>My writing is well-matched to my audience throughout.</p> <p>My writing clearly uses elements of Gothic literature throughout.</p> <p>My vocabulary and imagery is effective and sophisticated.</p> <p>My links between sentences are effective.</p> <p>My writing is engaging due to my clearly connected ideas.</p> <p>My paragraphs are clear as they use discourse markers at the start and in the middle.</p> <p>I use a range of punctuation, mostly with success.</p> <p>I use a variety of sentence forms for deliberate effect.</p> <p>My spelling is mostly accurate. Including complex and irregular words.</p>	<p>A very wide range of vocabulary and well-crafted imagery (i.e. pathetic fallacy, extended metaphor, Epic simile etc.).</p> <p>There is a real desire to read on – the writing matches the task and is convincing.</p> <p>A range of sentence and paragraph structures with fluently linked paragraphs.</p> <p>High spelling accuracy, range of accurate punctuation, accurate complex sentence constructions.</p>

French

Key Concepts taught and assessed in Year 8 at IA1:

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
<p>Able to form simple reflexive verbs in the 1st person but needs prompting to remember the reflexive pronoun. The word order of negative reflexive verb sentences poses problems. Simple writing frame needed to allow for creative writing including some simple connectives & possibly time phrases. Form simple present tense sentences using 'aller' in 1st person. Unable to ask questions using 'tu' at this stage.</p> <p>Unsure how to form the near future tense with common verbs & spelling often affects effective communication.</p> <p>Unable to ask questions using the near future.</p> <p>Uses a few common present tense verbs to communicate in the 'nous' form to talk about holidays with friends/family.</p> <p>Recognise some numbers although support is needed in identifying these.</p> <p>Understand the meaning of 'je voudrais' but unsure how to form simple phrases.</p> <p>Translation into English causes difficulty.</p> <p>Some prior phonics knowledge evident, although pronunciation and intonation need to be addressed.</p>	<p>Able to form reflexive verbs mainly in 1st person & able to recognise 3rd person reflexive verbs. Can form simple negative reflexive verb sentences with support, although word order may not always be perfect. Writing frame needed to support description of getting ready to go out, with simple time phrases.</p> <p>Form simple present tense sentences using 'aller' mainly in 1st & 3rd person. Is beginning to form simple questions using 'tu'.</p> <p>Demonstrates the ability to form the near future tense with common verbs although needs support in communicating accurately. Confidence lacking in asking questions using the near future.</p> <p>With support, can use the present tense 'nous' form to talk about holidays with friends/family.</p> <p>Recognise & communicate a few higher numbers & prices.</p> <p>'Je voudrais' used in sentences, yet not necessarily coherent as infinitive often forgotten – Simple role-play sentences to order drinks & snacks, talk about a dream holiday using a small number of infinitives, translate conditional sentences into English.</p> <p>Prior phonics knowledge usually ensures inconsistent pronunciation and intonation, although recognisable.</p>	<p>Confident in using reflexive verbs in 1st & 3rd person & explain which words are reflexive pronouns. Able to form negatives using reflexive verbs. Can describe routine for getting ready to go out with some expressions of time & frequency.</p> <p>Form sentences using the present tense of 'aller' & ask simple questions.</p> <p>Demonstrate the ability to form the near future tense accurately with common verbs.</p> <p>Use the near future tense to ask simple questions using 'tu'.</p> <p>Apply present tense regular verb ending rules of key verbs using the 'nous' form to talk about holidays with friends/family.</p> <p>Recognise & communicate some higher numbers & prices.</p> <p>'Je voudrais' applied to a variety of different contexts, although may need some support in order to be accurate – Create a role-play to order drinks & snacks, talk about a dream holiday using common infinitives, translate conditional sentences into English.</p> <p>Prior phonics knowledge usually ensures accurate pronunciation and intonation.</p>	<p>Confident in using reflexive verbs in all forms & can form negatives using reflexive verbs. Explain which words are reflexive pronouns. Can describe routine for getting ready to go out & include expressions of time & frequency.</p> <p>Secure in their knowledge of how to form the present tense of 'aller' to form both questions & sentences.</p> <p>Able to use different forms of the near future tense, using a variety of infinitives to communicate future holiday plans with creativity. Confident in asking questions using the near future.</p> <p>Able to manipulate present tense regular verb endings of key verbs using the 'nous' form to talk spontaneously about holidays with friends/family.</p> <p>Recognise & communicate higher numbers & prices with ease.</p> <p>'Je voudrais' applied to a variety of different contexts with confidence – Create a role-play to order drinks & snacks with spontaneity, talk about a dream holiday using a variety of infinitives, translate conditional sentences into English with a high degree of accuracy.</p> <p>Use phonics knowledge to ensure highly accurate and fluent pronunciation and intonation.</p>

Geography

Key Concepts taught and assessed in Year 8 at IA1:

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

Emerging	Developing	Securing	Mastering
<p>Can identify relevant features of the rainforest and its climate. Begins to describe and possibly explain these features. Identifies causes and effects of deforestation.</p>	<p>Can describe and explain the key features of rainforest. Accurately describes the rainforest climate. Starting to make links between different features and geographical processes. Describes and explains causes and effects of deforestation.</p>	<p>Can explain a range of features of the rainforest and links ideas clearly. Starting to evaluate significance of different factors. Accurately explains the rainforest climate and makes links between different features and geographical processes. Starts to evaluate the significance of different causes and effects of deforestation.</p>	<p>Can analyse information and evaluate the significance of different factors and processes that influence the rainforest. Accurately evaluates the scale and significance of causes and effects of deforestation.</p>

German

Key Concepts taught and assessed in Year 8 at IA1:

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

Emerging	Developing	Securing	Mastering
<p>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.</p> <p>Able to use 1st person form of 'werden', to form simple future tense sentences to talk about future holiday plans. Support is needed using Home Learning booklet for vocabulary.</p> <p>Understand the meanings of 'ich möchte', some time indicators, 'gern'/'nicht gern' & 'man kann', yet do not understand word order rules. All language is translated literally from English to German.</p> <p>Adapt models of simple souvenir shop & snack bar role-plays, using familiar language. Unable to conduct any part of the role-plays without reading their script for support.</p> <p>Unable to form questions using 'du' or 'Sie', yet can explain when appropriate to use each.</p> <p>Prior phonics knowledge usually ensures more accurate pronunciation & intonation, although not always secure.</p>	<p>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.</p> <p>Able to use 1st & 3rd person forms of 'werden', albeit with some support, to form both future tense sentences when talking about future holiday plans.</p> <p>Evidence of literal translation from English to German, which affects word order when trying to use 'ich möchte', time indicators, 'gern'/'nicht gern' & 'man kann'.</p> <p>Using resources for support, can create simple souvenir shop & snack bar role-plays, using familiar language. Able to conduct role-plays, relying heavily upon resources for support.</p> <p>Can use 'du' or 'Sie' in questions, yet consequent verb formation is rarely accurate.</p> <p>Prior phonics knowledge usually ensures accurate pronunciation & intonation, although not always secure.</p>	<p>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.</p> <p>Able to use different forms of 'werden', albeit with some support, to form both future tense questions & sentences when talking about future holiday plans.</p> <p>Demonstrates some understanding of word order with 'ich möchte', time indicators, 'gern'/'nicht gern' & 'man kann', although not consistently applied accurately.</p> <p>Can create their own simple souvenir shop & snack bar role-plays, using familiar language.</p> <p>Able to conduct role-plays, relying occasionally upon resources for support.</p> <p>Can use 'du' or 'Sie' in both sentences & questions, although not always accurate.</p> <p>Prior phonics knowledge usually ensures accurate pronunciation & intonation.</p>	<p>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.</p> <p>Confident in using different forms of 'werden' to form both future tense questions & sentences when talking about future holiday plans.</p> <p>Correct use of word order with 'ich möchte', time indicators, 'gern'/'nicht gern' & 'man kann'.</p> <p>Manipulate language for their own purposes, by creating souvenir shop & snack bar role-plays of their own. Able to conduct role-plays without support.</p> <p>Demonstrate when to use 'du' or 'Sie' & form both sentences & questions containing these with a high degree of accuracy.</p> <p>Use phonics knowledge to ensure accurate & more fluent pronunciation and intonation.</p>

History

Key Concepts taught and assessed in Year 8 at IA1:

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
<p>Describe what it was like to be a slave in 18th / 19th century America, referring to simple knowledge of different aspects of slavery.</p> <p>Clear attempt is made to answer the question in extended writing and to produce accurate written work.</p>	<p>Explain the worst aspects of slavery in 18th / 19th century America, referring to specific evidence to support ideas.</p> <p>Extended writing is accurate and structured, using paragraphs including an introduction and conclusion. Spelling and grammar are usually accurate.</p>	<p>Compare in detail the worst aspects of slavery in 18th / 19th century America, reaching conclusions that begin to judge the relative significance of different aspects.</p> <p>Extended answers are well structured using accurate PEEL paragraphs and including an introduction and conclusion. Ideas are supported with well-chosen historical knowledge sources. Spelling and grammar are accurate.</p>	<p>Analyse and evaluate the worst aspects of slavery in 18th / 19th century America, making links between the different aspects and giving a complex explanation of relative significance.</p> <p>Confident, controlled and accurate communication of ideas, using accurate paragraphing including an appropriate introduction and well-judged conclusion.</p>

Maths

Key Concepts taught and assessed in Year 8 at IA1:

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

Emerging	Developing	Securing	Mastering
Name common 3D shapes Find the volume of a cuboid	Convert between cm^3 and m^3 Know and use the fact that 1 litre = 1000cm^3 Use the properties of faces, surfaces, edges and vertices of 3D shapes to solve problems in 3D. Identify different nets for a cube Make nets of cubes and cuboids	Construct and interpret plans and elevations of 3D shapes Make nets of cubes in different ways Identify the nets of other 3D shapes	Derive and apply formulae to calculate and solve problems involving volume and surface area of cuboids and other prisms (including cylinders) Name and define a range of 3D shapes Draw a 3D shape given information about its plan and elevations

Music

Key Concepts taught and assessed in Year 8 at IA1:

1. Performance as a group
2. Composition

Emerging	Developing	Securing	Mastering
<p>Experiment with sounds to make your own music expressive. Perform simple parts with the correct rhythm. Improvise (make up on the spot) a simple tune. Think of ways to improve your Work.</p>	<p>Compose music that matches a specific brief (say whether you met the brief and can think of ways to improve your work). Perform a tune by ear or from simple notation. Perform as part of a group, showing that you are listening to others and know how your part fits. Improvise (make up on the spot) rhythms and tunes as part of a group</p>	<p>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 for different occasions and can write your music down.</p>	<p>Use tempo, dynamics, phrasing and timbre to make your performance successful. Make changes to your performance so that it fits with what the group is doing. 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.</p>

PE

Key Concepts taught and assessed in Year 8 at IA1:

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

Emerging	Developing	Securing	Mastering
<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>

Religious Studies

Key Concepts taught and assessed in Year 8 at IA1:

1. Discrimination in the modern world
2. Issues revolving around Islamophobia
3. The importance of dialogue

Emerging	Developing	Securing	Mastering
Can explain what prejudice and discrimination are.	Can give reasons why people might discriminate	Can select appropriate religious teachings that could support and/or disagree with this statement.	Use developed reasons for & against supported by good examples, evidence, religious teachings or quotations

Science – Biology

Key Concepts taught and assessed in Year 8 at IA1:

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
<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>

Science – Chemistry

Key Concepts taught and assessed in Year 8 at IA1:

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
<p>State some everyday acids and alkalis. Describe some of the hazards of handling acids in the laboratory. Describe the pH scale and different indicators.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>

Science - Physics

Key Concepts taught and assessed in Year 8 at IA1:

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
<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>

Technology – Food Modules

Key Concepts taught and assessed in Year 8 at IA1:

1. Developing cooking skills
2. The importance of nutrition

Emerging	Developing	Securing	Mastering
<p>Students work with some supervision and guidance. Food is cooked but needs some improvements.</p> <p>Students can explain some of the nutrients that are "high-profile" on the Eat Well Guide.</p>	<p>Students work with a level of independence and produce food to a reasonable standard.</p> <p>Students are able to make links about the Eat Well Guide using knowledge about nutrients and healthy eating.</p>	<p>Students work totally independently, able to solve simple problems and produce food consistently to a good standard.</p> <p>Students are able to apply their knowledge about the Eat Well Guide and with some support identify different dietary groups and their needs.</p>	<p>Students are able to solve all problems they encounter independently and consistently achieves a high standard of finish on cooked dishes.</p> <p>Students are able to apply their knowledge about the Eat Well Guide and independently identify different dietary groups and their needs.</p>

Technology – Resistant Materials Modules

Key Concepts taught and assessed in Year 8 at IA1:

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

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