Year 9 Curriculum

Subject	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Maths	Number The Big Questions: Where and how do we use standard Form?  Algebra The Big Question: What is the difference between expansion & factorization?  Estimate answers; check calculations using approximation and estimation. Write and order numbers in standard form A × 10n, where 1 ≤ A < 10 and n is an integer. Understand the different role of letter symbols in formulae and functions. Factorise expressions into one bracket.	HCF & LCM & Ratio Quadratics  The Big Question: Why do we always make quadratics equal to zero?  Recognize and use common factor, highest common factor and lowest common multiple.  Use a ratio to find one quantity when the difference between them is known. Factorise quadratic expressions of the form x² + bx + c. Generate points and plot graphs of simple quadratic functions, then more general functions.	Probability  The Big Question: Do the probabilities of events happening always sum to 1?  Angles  The Big Question: How do we find the angle sum of any polygon?  Estimate the number of times an event will occur, given the probability and the number of trials. Draw a frequency tree based on given information and use this to find probability and expected outcome.  Understand and use angle properties of parallel lines. Derive and use angle facts with irregular polygons.	Interpreting Data, Averages & Range  The Big Question: Why do different averages provide a different perspective on the same set of data?  Pythagoras & Trigonometry  The Big Question: How can I tell when to use Pythagoras or trig?  Design and use two-way tables for discrete data. Calculate averages and range from a frequency table. Find angles of elevation and angles of depression. Know and use Pythagoras' Theorem. Be able to use trigonometry to find missing sides and angles in triangles.	Graphs  The Big Question: Can the same data be represented in different ways?  Percentages  The Big Question: Are there any situations where percentages can exceed 100%?  Construct and use frequency polygons to compare sets of data. Analyse and compare different representations of data. Use percentages in real life situations. Use the equivalence of fractions, decimals and percentages to compare proportions (i.e. compare a fraction and a percentage)	Constructions & shape  The Big Question: What are the differences between constructions & loci?  Young money module  The Big Question: Will I be a saver or a spender?  Draw plans and elevations of 3-D shapes. Use straight edge and ruler to construct bisectors and perpendicular line segments  Your Money Matters has been designed for use with young people age 14 – 16 in England and covers topics including spending and saving, borrowing, debt, insurance, student finance & future planning.
English	Jane Eyre Bronte's life; setting; the Reed family; The Red Room; Lowood School; Helen; Mr Brocklehurst; Christianity Mastery Writing 4: Subordinating clauses; countable/uncountable nouns; relative clauses; verb forms Reading for Pleasure: Group Read Gothic Short Stories, A Writer's Cauldron The Big Question: How do writers create meaning?	Jane Eyre Bronte's life; setting; the Reed family; The Red Room; Lowood School; Helen; Mr Brocklehurst; Christianity Mastery Writing 4: Subordinating clauses; countable/uncountable nouns; relative clauses; verb forms Reading for Pleasure: Group Read Gothic Short Stories, A Writer's Cauldron  The Big Question: How do writers create meaning?	Romeo and Juliet Tragedy; Verona; Prologue; Montagues and Capulets; Romeo; Verona; sonnet; soliloquy Mastery Writing 4: Subordinating clauses; countable/uncountable nouns; relative clauses; verb forms Reading for Pleasure: Group Read Gothic Short Stories, A Writer's Cauldron  The Big Question: What is society?	Romeo and Juliet Tragedy; Verona; Prologue; Montagues and Capulets; Romeo; Verona; sonnet; soliloquy Mastery Writing 4: Subordinating clauses; countable/uncountable nouns; relative clauses; verb forms Reading for Pleasure: Group Read Gothic Short Stories, A Writer's Cauldron  The Big Question: Are we responsible for other people?	Poetry Anthology Journeys; imagery; dialect; metaphor; extended metaphor; comparison; physical/emotional/spiritual journeys. Mastery Writing 4: Comparing texts; thesis and antithesis; subordinating clauses; non- defining relative clauses; appositives; 2nd conditional; 3rd conditional Reading for Pleasure: Group Read Nought and Crosses (ab) Sawbones(cd) Divergent (ef) The Hunger Games (gi)  The Big Question: Is man or nature more powerful?	Poetry Anthology Journeys; imagery; dialect; metaphor; extended metaphor; comparison; physical/emotional/spiritual journeys. Mastery Writing 4: Comparing texts; thesis and antithesis; subordinating clauses; non- defining relative clauses; appositives; 2nd conditional; 3rd conditional Reading for Pleasure: Group Read Nought and Crosses (ab) Sawbones(cd) Divergent (ef) The Hunger Games (gi)  The Big Question: Is man or nature more powerful?
Science	Cells  The world of microscopes, animal and plant cells Eukaryotic and	The chemistry of food, catalysts and enzymes and factors affecting enzyme action	Aerobic respiration, response to exercise, anaerobic respiration, metabolism and the liver,	How plants use glucose, making the most of photosynthesis	Materials cycling, the carbon cycle, rates of decomposition	Adaptations in animals, feeding relationships.

	prokaryotic cells, DNA and the Genome, The Structure of DNA, specialisation in animal cells  The Big Question: What does life look like under a microscope?  Tissues and organs, the Human Digestive system,  The Big Question: Can you win Olympic Gold eating chicken nuggets?	Diffusion, How the digestive system works, making digestion efficient, the blood, the blood vessels, the heart, helping the heart, breathing and gas exchange  The Big Question: Can you win Olympic Gold eating chicken nuggets?	The Big Question: Can you win Olympic Gold eating chicken nuggets?  Plants  Specialisation in plant cells, Photosynthesis, rate of photosynthesis,  The Big Question: How does a plant gain mass?	The Big Question: How does a plant gain mass?  Then Impact of Change  The human population explosion, land and water pollution, air pollution, deforestation and peat destruction, Global warming, The impact of change,  The Big Question: What could Hull and Venice have in	The Big Question: What could Hull and Venice have in common?  Communities  the importance of communities, organisms and their environment, distribution and abundance, Competition in animals, competition in plants, Adapt and survive.  The Big Question: Are all	The Big Question: Are all plants and animals important?  Diseases  Non-communicable disease, Cancer, smoking and the risk of disease Diet, exercise and disease, alcohol and other carcinogens.  The Big Question: How can lifestyle choices cause disease?
Art	Natural Forms  Baseline test - Pine Cone Applying formal elements to drawings from primary & secondary sources Working on A3 paper for all work Introduction to artist research at GCSE pathway standard - Andy Goldsworthy Land Art - Using natural materials, Autumn Leaves Photography basics of land art arrangements and colour enhancement/contrast of colour edits  The Big Question: How long should Art last?	Natural Forms Introduction to artist research at GCSE pathway standard - Andy Goldsworthy Land Art - Using natural materials, Autumn Leaves  Photography basics of land art arrangements and colour enhancement/contrast of colour edits  The Big Question: How long should Art last?	Georgia O'Keeffe Developing photography techniques - using more advanced camera settings and macro lenses Using viewfinders Large scale, acrylic painting based on O'Keeffe Experimenting with clay Using clay to create vessels Blossfeldt photography research The Big Question: How long should Art last?	common?  Art History Movement Timeline Introduction to Art history/ Art movements - link to historical events in society. A3 Illustrated timeline of Art movements and historical events. Links to Art that changed the world - discussions and analyse key artworks. Historical - Michelangelo Last Judgement Contemporary - Pablo Picasso Guerinca Banksy Girl with Balloon artwork A written analysis for each and a reproduction of detail of each.  The Blg Question: Do you think Contemporary Art is less important than Historical Art?	plants and animals important?  Political Propaganda Singh Twins - looking at fusion between their dual cultural identity British/Indian. Create a picture that represents their cultural identity. Robert and Roberta Smith Analyse work and reproduce A3 painting. Mind Map positive political messages. Create an A3 mixed media image inspired by Robert and Roberta Smith's work and their own positive political message. Annotate and evaluate their work. Singh Twins - looking at fusion between their dual cultural identity British/Indian.  The Big Question: Is Art in a gallery more important than Art in the street?	Political Propaganda Introduction to developing a final piece idea Final piece planning Final piece experimentation with media and techniques  As the year is workshop based, the final piece does not have to be a full final piece, but more about introducing students to the idea of planning their own final ideas based on their experiments so far  Students can reflect back on their research into the various artist from this project in order to support their final piece. The Big Question: Is Art in a gallery more important than Art in the street?
Music	Exploring the origins and history of Britpop Analyse pieces of Britpop music looking into and learning about the key stylistic techniques Research iconic artists Perform some of the stylistic techniques of Britpop.  - Song structure - Chords - Lyrics - Singing - The Big Question: Blur vs Oasis?	Britpop Exploring the origins and history of Britpop Analyse pieces of Britpop music looking into and learning about the key stylistic techniques Research iconic artists Perform some of the stylistic techniques of Britpop.  - Song structure - Chords - Lyrics - Singing - The Big Question: Blur vs Oasis?	Synthpop Exploring the origins and history of synthpop Analyse pieces of music from the synth pop genre looking into and learning about the key stylistic techniques Research iconic artists Perform some of the stylistic techniques of synthpop  - Hooks and Riffs - Melody - Instruments - Structure Create version of a Synthpop song using DAW software.  The Big Question: Is a synthesizer a real instrument?	Synthpop Exploring the origins and history of synthpop Analyse pieces of music from the synth pop genre looking into and learning about the key stylistic techniques Research iconic artists Perform some of the stylistic techniques of synthpop  - Hooks and Riffs - Melody - Instruments - Structure Create version of a Synthpop song using DAW software.  The Big Question: Is a synthesizer a real instrument?	Reggae Exploring the origins and history of Reggae Analyse pieces of music from the reggae genre looking into and learning about the key stylistic techniques Research iconic artists Perform some of the stylistic techniques of reggae - Chords - Hooks and Riffs - Bass line - Drum Patterns - Lyrics - Singing -	Reggae Exploring the origins and history of Reggae Analyse pieces of music from the reggae genre looking into and learning about the key stylistic techniques Research iconic artists Perform some of the stylistic techniques of reggae - Chords - Hooks and Riffs - Bass line - Drum Patterns - Lyrics - Singing -

					The Big Question: Would reggae exist without Bob Marley?	The Big Question: Would reggae exist without Bob Marley?
Drama	Revisit the fundamentals of acting skills and creating narrative. Continuation of building confidence in performing in front of peers through group exercises. Developing knowledge of how to use physical skills and how these can be used to communicate to an audience. Development of vocal skills and performance. Development of drama conventions and key terms.  The Big Question: How can you express a character through vocal and physical skills?	Dance - Exploring the professional work 'Swansong' by Christopher Bruce Developing choreography, interpretive and analysis skills through professional work. Students will explore their own interpretations of specific sections of the work, incorporating a chair and a range of choreographic devices.  The Big Question: How can we accurately portray historical events through dance?	Practitioner - Stanislavski  Using knowledge and understanding to write and perform a realistic monologue performance  Introduction of specific Practitioners in theatre and enhancing student understanding of different acting styles - preparation to advance on to KS4.  The Big Question: What is the purpose of theatre and why does it exist?	Docudrama - Devised Thematic performance based on the events surrounding the Hillsborough Disaster More in-depth exploration of a range of drama conventions through individual and collaborative response to a stimulus. Students will work towards writing and performing their own piece of Docudrama.  The Big Question: How can we accurately portray historical events through theatre?	Scripted Bouncers/Shakers  Further, in depth exploration of John Godber's plays with a focus on vocal and physical skills in his directorial style.  Application of prior knowledge of Godber's style to a new play.  The Big Question: Who are the different characters we live amongst and how are they physically and vocally different?	Scripted Bouncers/Shakers  Performance of a scripted extract with costumes, props and setting.  More lesson time devoted to end of KS3 showcase and ample time to complete a written evaluation.  Workshops in the last few weeks of term to prepare students for KS4.  The Big Question: Who are the different characters we live amongst and how are they physically and vocally
ICT	Python programming with sequences of data Use an IDE to write and execute Python program, use variables to keep track of information, describes what lists are, trace through programs that are manipulate lists, use iteration, access strings, combine features to develop solutions to meaningful problems  The Big Question: How to get a computer to follow human instructions?	Media animations Add, delete and move objects, make basic animations, use ethic mode and loop out and face editing, add and edit sub lighting, create a 3 – 10 second animation  The Big Question: How to make a picture a move?	Data Science Using data manipulation tools to manipulate data in a spreadsheet, using data manipulation tools to draw conclusions and make recommendations. Define data structures, use software to visualise data sets and look for patterns or trends, use the investigate cycle to complete a series or tasks, describe the use for data cleansing, and apply data cleansing to a given set of data  The Big Question: How to spot and utilise patterns and trends in data?	Representations: going audiovisual Describe how digital images are composed out of individual elements, describe how images can be represented as sequence of bits, calculate the representation size of a digital image and digital sound, define compression and describe why it is necessary  The Big Question: How are audio and image files stored digitally on a computer?	Cybersecurity Explain the difference between data and information, identify what happens to data when entered online, explain the need for the DPA, recognise how human errors pose security risks to data, define hacking, explain the need for the Computer Misuse act, identify common malware threats, compare security threats and explain how networks can be protected from common security threats The Big Question: What are the threats to data and systems?	Dhysical computing Use variables and data structures to keep track of information, use selection and interaction to control program execution flow, locate and correct common syntax errors, describe what a micro bit is, write programs that use the micro bits, test and review the program  The Big Question: How to code a physical object?
MFL	Family and Friends (14 lessons) Catalina What type of person you are; describe others (family vocab); describe best friend; traits of a good friend.  Grammar focus: Adjectival agreement  The Big Questions: How would I describe a Catalan family?	Family and friends (3 lessons) Cataluna Physical traits of self and others Grammar focus: Adjectival agreement The Big Questions: How would I describe a Catalan family?  TV, Cinema and Music (10 Lessons) - Colombia Types of programmes; opinions on these to include favourite; types of films with opinions; what you watched recently	TV, Cinema and Music (4 lessons) - Colombia music genres and preferences; instruments/choir; cultural appreciation of artists  What progress am I making? (4 lessons) Assessment lessons covering the 4 skills (listening, speaking, reading, writing) covering content since September  Grammar focus: Advanced opinions	Feedback & improvement lesson from assessment (1 lesson)  Technology and social media - (9 Lessons) Chile What you did yesterday; opinion on social media and justifications; use of social media; sending texts  Grammar focus: 2 tenses  The Big Questions: Is technology used much in Chile?	Food, eating out (6 lessons) The Hispanic World  Retrieval of vocab - What you eat/drink normally; mealtimes; preferences on food Ordering food (role plays)  Grammar focus: Using intensifiers  The Big Question: What food originates from The Hispanic World?	Shopping (10 lessons) Peru Clothes and opinions on style; what you wear at different times; shopping dialogues; problems when shopping  End of year exam - (5 lessons) 4 skills (listening, speaking, reading and writing)  Grammar focus: Asking questions  The Big Questions: What is shopping like in Peru?

		Grammar focus: Advanced opinions  The Big Questions: Is Colombia known for its TV, cinema or music?  How do other countries celebrate Christmas?  Navidad por el mundo (1 lesson)  Cultural awareness of Christmas in Francophone countries	The Big Questions: Is Colombia known for its TV, cinema or music?  Technology and social media (4 Lessons) Chile Use of daily technology/ with time frames and frequency; activities on computers; what you did yesterday  Grammar focus: 2 tenses  The Big Questions: Is technology used much in Chile?	Food, eating out (2 lessons) The Hispanic World  Retrieval of vocab - What you eat/drink normally; mealtimes; preferences on food Ordering food (role plays)  Grammar focus: Using intensifiers  The Big Question: What food originates from The Hispanic World?	Sport and hobbies (6 Lessons) Puerto Rico Retrieval of vocab to cover sports; retrieval what you normally play/do; when; preferences; sports to try in the future/extreme sports  Grammar focus: expressing wishes  The Big Questions: What sports are popular in Puerto Rico?	
Theology	Issues of Relationships Introduction lesson Love Diversity  Big question: Is there such a thing as a typical family?  Cohabitation contraception Marriage  Big Question: Is cohabitation more popular than marriage?	Issues of Relationships Big Quiz and assessment feedback Full course taster session Adultery Divorce Christian views of divorce  Big Question: Should divorced individuals be allowed to remarry in places of worship?	Issues of Relationships Homosexuality Christian views of homosexuality  Big Question: Should same sex marriage be allowed in a place of worship?  Gender Big Quiz and assessment Feedback  Big Question: Are men and women equal?	Issues of Life and Death Full course taster session Quality of life Sanctity of life Abortion Christian views  Big Question: Are there different ways of understanding religious scripture?  Animal rights  Big Question; Are the lives of people more valuable than those of animals?	Issues of Life and Death Big Quiz and assessment Feedback Who is Chico Mendes? Creation, literal and nonliteral Do science and religion oppose each other? Euthanasia  Big Question: What is Environmental Stewardship? Could life have developed by itself? Should we be able to ask someone to help us die?	Issues of Life and Death Christian views The soul and life after death Judgement, Heaven and Hell Humanist's attitudes to judgement, heaven and hell. Symbolism in Funerals End of year assessment feedback  Big Question: Do humans have an immortal soul?
PE	Football, Netball, Basketball and Handball  Boys: Football x 5 weeks Girls: Netball x 5 weeks Boys: Basketball x 1 week Girls: Handball x 1 week  The Big Question: Are there any transferable tactics and strategies across the invasion games?  The Big Question: Is it better to play to win a point or play to make your opponent make a mistake? Why?  Contrasting world regions	Basketball and Handball  Boys: Basketball x 4 weeks Girls: Handball x 3 weeks Boys: Handball x 3 weeks Girls: Basketball x 3 weeks  The Big Question: Is it better to play to win a point or play to make your opponent make a mistake? Why?  The Big Question: Are there any transferable tactics and strategies across the invasion games?  Contrasting world regions	Basketball, Fitness, Badminton  Boys: Handball x 2 weeks Girls: Basketball x 2 weeks Boys: Fitness x 5 weeks Girls: Badminton x 5 weeks  The Big Question: What are the fitness requirements to be a successful multi-disciplined athlete such as a heptathlete?  The Big Question: Is it better to play to win a point or play to make your opponent make a mistake? Why?  The Big Question: Is it better to play to win a point or play to make your opponent make a mistake? Why?  South America	Badminton, Fitness, Athletics  Boys: Badminton x 5 weeks Girls: Fitness x 5 weeks Boys: Athletics x 1 week Girls: Striking and Fielding x 1 week  The Big Question: Is it better to play to win a point or play to make your opponent make a mistake? Why?  The Big Question: Athletics: What are the fitness requirements to be a successful multi-disciplined athlete such as a heptathlete?  The Big Question: What tactics would you use for different innings?	Athletics, Striking and Fielding  Boys: Athletics x 5 weeks Girls: Striking and Fielding x 5 weeks  The Big Question: Athletics: What are the fitness requirements to be a successful multi-disciplined athlete such as a heptathlete?  The Big Question: What tactics would you use for different innings?	Athletics, Striking and Fielding  Boys: Striking and Fielding x 6 weeks Girls: Athletics x 6 weeks  2 x weeks invasion CTF - Tactics and strategies.  The Big Question: Athletics: What are the fitness requirements to be a successful multi-disciplined athlete such as a heptathlete?  The Big Question: What tactics would you use for different innings?

	Physical geography of Russia (landscape, climate, biomes) Human geography of Russia (population, urbanization, economy) Investigating Russia using GIS Chernobyl in Russia Geographical enquiry – Why did Russia plant their flag on the seabed of the North Pole?  The Big Question: Is the geography of Russia a curse or a benefit?	Physical geography of the region What problems does the climate create for the region? Human geography of the region (population, economy) Economic development of the region Migration and conflict in the Middle East  The Big Question: Why is the Middle East an important world region?	Location of South America Physical geography of the region Human Geography of the region Life in a South American City: Opportunities Challenges – Favelas Improving the quality of life in a favela  The Big Question: Why does the environment change so much?	Features of the rainforest Tribes and life in the rainforest Deforestation in the rainforest – causes, impacts and solutions Study of the rainforest – decision making activity of whether the road should be built through the forest.  The Big Question: Why does the environment change so much?	Location of Antarctica Animal survival in Antarctica Climate – why is it cold and dry? Tourism in Antarctica Climate Change in Antarctica Antarctic Treaty Future for Antarctica  The Big Question: Is Antarctica the last known wilderness?	Introduction to Asia Monsoon climate in Asia Flooding in Asia Mountain biome in Asia Why is the population of Asia diverse? How is urbanization changing lives in Asia?  The Big Question: How is Asia being transformed?
PSHE	Money and Me: How do I save and how do I budget? What influences our spending? How enterprising am I? The Big Question: Does money matter?	Sex, sexuality and sexual health: Choices around sex. Pornography and sexting. Sex and the law. Conception, pregnancy and birth. The Big Question: How can I protect myself and others?	Sex, sexuality and sexual health: What is contraception? What are STI's?  The Big Question: How can I protect myself and others?  Communities: Understanding our communities.	Communities: How do I feel about 'difference'? How can we value each other? What makes a successful community?  The Big Question: Why should I care about my community?	Communities: What can cause problems in our community? Hate crime and radicalization. How can I contribute to my community? What do voluntary agencies do? The Big Question: Why should I care about my community?	Planning for the Future: What are my aspirations? How do I plan for my future? Skills for working with others.  The Big Question: How do I plan for my future?
History	Russia in the Twentieth Century  1. What was life like in Tsarist Russia before 1905? 2. Why was there an attempted revolution in 1905? 3. Why did Russia go to war in 1914? 4. What was the impact of WW1 on Russia? 5. Why was there a revolution in Russia in 1917? 6. Why did the provisional government fail? 7. Why did the Bolsheviks win the Civil War, 1918-1921? 8. What was the power struggle after Lenin's death? 9. Why was terror important in the 1930s? 10. Why was propaganda and censorship so important to Stalin? 11. What was it like to live in the Soviet Union?  The Big Question: How was Russia turned upside down in the C20th?	1. Treaty of Versailles 2. Life in Weimar Germany 3. Who was Hitler? 4. Early years of the Nazis and how they rose to power 5-6. Life in Nazi Germany – including for women and children. 7. Initial reaction to WW2 in Britain 8. Why was evacuation important? Hull Evaucuees 9. What was life like as an Evacuee? 10. Life on the Home Front 11. The London Blitz  The Big Question: Why was the Great War not actually the 'war to end all wars?'	12. Impact of the war in Hull 13. Women and the War 14. German reaction to war in 1939 15. Opposition to war in Germany 16. Stalingrad 17. Dunkirk 18. Battle of Britain 19. D-Day 20. Hiroshima  The Big Question: Why was the Great War not actually the 'war to end all wars?'	21. Why did Germany lose WW2? 22. Which of the TP of WW2 was most significant? 23. What happened to Germany after WW2?  The Big Question: Why was the Great War not actually the 'war to end all wars?'  The Holocaust  1. Medieval origins of Jewish persecution 2. What was life like for Jews before 1933? 3. Nazi racial beliefs 4. Anti Jewish Laws 5. Kristallnacht 6. The Final solution 7. Liberation  The Big Question: How and why could the Holocaust happen?	Migration in Britain since 1945  1. Attitudes towards Homosexuality in 1945 2. Why was there a Windrush generation? 3. Attitudes towards Immigration and the LGBTQ+ community in the 1950 and 1960s in. Stonewall/Nottinghill – round the room lesson 4. Why was there a growth in immigration in the 1960s and 1970s? 5. What obstacles did the LGBTQ+ community face in the 1980s and 1990s? 6. what are the attitudes of contemporary movements to minority issues and cancel culture? 7. Why does Hull celebrate Pride in June?  The Big Question: How have minorities been treated in the UK since 1945?	1. How did the Cold war start? 2-3. How did the Grand Alliance unravel? 4. What was the impact of the Truman Doctrine and Marshall Aid? 5-6. What was the Berlin Crisis in 1948? 7. What was the significance of the arms race? 8. What happened in Hungary in 1956? 9. Skills – narrative accounts and consequence question 10-11. Assessment and Feedback. The Big Question: Why was there a Cold War?

Technology Textiles	Introduction to new and emerging technologies Energy generation and storage, developments in new materials and materials and their working properties. Recap on Fibres/Fabrics with basic overview of processing, construction and environmental impact, stock forms and production. Environmental impact of fibre processing and sourcing.  The Big Question: "How can we make a difference?"	Further exploration into the material categories Sources and origins of materials, Theory environmental impact of fabric and fashion industry including some designers.  Decorative processes - (Social/moral and environmental links and further depth into designers) - Technical Designing.  NEA – Section A and E - NEA – Section D – process/techniques and skill swatches  The Big Question: "How can we make a difference?"	Materials (textiles-based) and further investigation of material properties Continuation of the use/joining of materials/components. Industrial and commercial practices, Technical drawing, anthropometrics & ergonomics in relation to the user. Inclusive & adaptive design. Design and making principles (specialist tools and equipment) NEA – Section A and E - Fibre Testing Task Section D – process/techniques and skill swatches  The Big Question: "How can we make a difference?"	Technical drawing, anthropometrics & ergonomics in relation to the user. Inclusive & adaptive design. Exploration into shaping and forming in the form of design development and sampling, introduction and exploration of the enhancement or materials/garments, finishes and fabric modification. Design and making principles. NEA – Section A and D- Fibre Small Scale/Diluted NEA – Section D – process/techniques and skill swatches - Begin Section E Construction.  The Big Question: "What are our biggest challenges?"	Design and making principles Quality control and assurance production methods, including sustainable methods, energy generation.  NEA – Section A and D- Fibre Small Scale/Diluted NEA – Section D – process/techniques and skill swatches - Continue with Section E Construction.  The Big Question: "What are our biggest challenges?"	Core technical principles (Raw materials, processing of fibres, stock forms and manufacturing/production factors) Design and making principles -Specialist technical principles review, NEA Content: Realising design ideas, use of a range of appropriate materials/components to produce a basic prototype, analysis, evaluation and testing. Continuation of Section E, interlinking with analysis and reference to Section A. Elements of Section F also embedded.  The Big Question: "What are our biggest challenges?"
Technology Food	Food safety Microorganisms and enzymes. The signs of food spoilage and bacterial contamination  PRACTICAL COOK 1: Savoury Mince  Alternate between practical & theory each lesson (1 Practical & 1 Theoretical Lesson every month)  The Big Question: "Is functionality the only consideration?"	Enzymes Introduction to enzymes & their role, function and properties within food. Factors which influence food choice British and international cuisines How food labelling and marketing influences, in addition to nutritional age and health - Food choices.  PRACTICAL COOK 2: Mac'n Cheese Alternate between practical & theory each lesson (1 Practical & 1 Theoretical Lesson every month)  The Big Question: "Is functionality the only consideration?"	Macronutrients What is Low and high biological value proteins protein complementation, protein alternatives Saturated fats and unsaturated fats Carbohydrates starch and sugars (monosaccharides/ disaccharides) and dietary fibre.  Micronutrients What are the functions of Minerals and fat soluble and water soluble vitamins? The relationship and health risks between diet, nutrition and age.  Alternate between practical & theory each lesson (1 Practical & 1 Theoretical Lesson every month)  The Big Question: "Is functionality the only	Food Science Chemical properties of food.  PRACTICAL COOK 3: Carrot Cakes  PRACTICAL COOK 4: Shortcrust pastry - Sausage Rolls  Alternate between practical & theory each lesson (1 Practical & 1 Theoretical Lesson every month)  The Big Question: "Is functionality the only consideration?"	Food provenance Environmental impact and sustainability of food. Where and how ingredients are grown, reared and caught. Environmental issues associated with food plus looking into sustainability of food. Exploring and investigating the different function and chemical properties of carbohydrates and fats (specifically in pastry)  PRACTICAL COOK 5: Filo Top chicken or ham pie. Alternate between practical & theory each lesson (1 Practical & 1 Theoretical Lesson every month)  The Big Question: "Does cost reduce the quality?"	Food provenance Primary and secondary stages of processing and production. Technological developments to support better health and food production including fortification and modified foods with health benefits and the efficacy of these.  Introduction to Section D/E on NEA 2 -FOOD4PC - Sensory analysis, costing and economic feasibility.  PRACTICAL 6: Jammy Biscuits - Development Trial Alternate between practical & theory each lesson (1 Practical & 1 Theoretical Lesson every month)  The Big Question: "Does cost reduce the quality?"
Engineering	Phone Holder prototype Working with polymers Project 1  Continuation of health and safety throughout different technical skills and introduction into new processes.	Phone Holder prototype Working with polymers Project 1  Study of relevant structures, material suitability and history of construction.	consideration?"  Phone Holder prototype Working with polymers Project 1  Health and safety throughout different technical skills and introduction into new	Wooden Pull along mechanism prototype Working with Timbers/Metals and Alloys - Project 2  Development into new processes - Students explore	Wooden Pull along mechanism prototype Working with Timbers/Metals and Alloys - Project 2  Continuation of the development into new	Wooden Pull along mechanism prototype Working with Timbers/Metals and Alloys - Project 2  Continuation of the development into new

Design and making principles Exploring and demonstrating processes, engineering and demonstrate a wider processes - Students explore processes - Students explore Selection of materials, tools and processes, techniques and skills. and demonstrate a wider and demonstrate a wider range materials, range of timber cutting, shaping, shearing and filing processes. Skill swatches. Polymers, thermosetting, range of timber cutting, of timber cutting, shaping, thermoforming polymers, skills, timber shaping skills shaping, shearing and filing shearing and filing skills, timber Using and working with materials Development of design strategies processes and manufacturing and -Exploring and skills, timber shaping skills shaping skills and -Exploring Prototype development. - Realising design ideas (prototype of different material and demonstrating processes, and communication skills. demonstrating processes, and -Exploring and construction diary, final prototype techniques and skills. demonstrating processes, techniques and skills. categories. Materials and their working fit for purpose) techniques and skills. properties -- Students explore and **Energy Production methods** Problem solving. The Big Question: "Do properties demonstrate a wider range of and their environmental Alternate and interlink with Material Categories and Material **Energy Production methods** Properties – Students further dictate functionality?" plastic cutting, shaping, impact, Designing and its and their environmental Theory every week investigate and embed shearing and filing skills, impact, Designing and its considerations. Systems and approaches: understanding of sources of origins, polymer shaping skills and --Exploring and demonstrating considerations. mechanical devices, Cams and conversion of polymers, Exploring and demonstrating processes, techniques and -Exploring and demonstrating followers, pulleys, rotary metals/alloys and timbers and processes, techniques and skills. Relative costing of processes, techniques and systems. materials from original source to skills. engineering materials. skills. Relative costing of stock forms, materials properties of Skill swatches The Big Question: "Is there engineering materials. natural, regenerated and synthetic Prototype development. Systems and approaches: always a solution?" materials Realising design ideas Systems and approaches: mechanical devices, Cams (prototype construction diary, mechanical devices, Cams and and followers, pulleys, rotary The Big Question: "Do properties final prototype fit for purpose) followers, pulleys, rotary systems. dictate functionality?" systems. The Big Question: "Do The Big Question: "Is there properties dictate The Big Question: "Is there always a solution?" functionality?" always a solution?"