

## Year 10 Autumn topics from the Big Pictures:

### English

<i>Autumn 01</i> <i>Weeks 1 – 7 (6 weeks)</i>	<i>Autumn 02</i> <i>Weeks 8 – 15 (8 weeks)</i>
<p><b>Literature Paper 1 Section A</b> <b>Content</b> Shakespeare’s Macbeth English Literature Paper 1 Students to read the play in its entirety in preparation for the English Literature exam. The exam asks two questions of the students. One question is based around an extract and the students’ language analysis skills and the other is a whole text question dealing with themes and characters.</p>	<p><b>Language Paper 1</b> <b>Content</b> 19<sup>th</sup> Century fiction and Imaginative writing. English Language Paper 1. Students to study extracts from 19<sup>th</sup> Century literature including extracts from Charles Dickens, Arthur Conan Doyle and Mark Twain. Questions around these extracts will focus on language and structure analysis and evaluation skills.</p>

### Maths:

<i>Higher Maths units</i>	
<i>Autumn 01</i> <i>Weeks 1 – 7 (7 weeks)</i>	<i>Autumn 02</i> <i>Weeks 8 – 15 (8 weeks)</i>
<p><b>Content</b> Year 9 Recap of Fractions – Four Operations 10.01 Rearrange formulae 10.02 Linear Graphs 10.03 <math>y = mx + c</math> 10.04 Compound Measures</p>	<p><b>Content</b>  10.05 Quadratic graphs, TP and roots 10.06 Further expanding &amp; factorising 10.07 Linear Simultaneous Equations 10.08 Further graphs</p>

<i>Math Foundation units</i>	
<i>Autumn 01</i> <i>Weeks 1 – 7 (7 weeks)</i>	<i>Autumn 02</i> <i>Weeks 8 – 15 (8 weeks)</i>
<p><b>Content</b> Year 9 Recap of Fractions – Four Operations 10.01 Rearrange formulae 10.02 Linear Graphs 10.03 <math>y = mx + c</math> 10.04 Compound Measures</p>	<p><b>Content</b>  10.05 Quadratic graphs, TP and roots 10.06 Linear Simultaneous Equations 10.07 Further graphs</p>

### Science:

Autumn 01		Autumn 02	
Topic B2: organisation Topic C2: bonding, structure and the properties of matter		Topic P2: electricity Topic B3: infection and response	
B2	In this section we will learn about the human digestive system which provides the body with nutrients and the respiratory system that provides it with oxygen and removes carbon dioxide. In each case they provide dissolved materials that need to be moved quickly around the body in the blood by the circulatory system. Damage to any of these systems can be debilitating if not fatal. Although there has been huge progress in surgical techniques, especially with regard to coronary heart disease, many interventions would not be necessary if individuals reduced their risks through improved diet and lifestyle. We will also learn how the plant’s transport system is dependent on environmental conditions to ensure that leaf cells are provided with the water and carbon dioxide that they need for photosynthesis.		
C2	Chemists use theories of structure and bonding to explain the physical and chemical properties of materials. Analysis of structures shows that atoms can be arranged in a variety of ways, some of which are molecular while others are giant structures. Theories of bonding explain how atoms are held together in these structures. Scientists use this knowledge of structure and bonding to engineer new materials with desirable properties. The properties of these materials may offer new applications in a range of different technologies.		

P2	Electric charge is a fundamental property of matter everywhere. Understanding the difference in the microstructure of conductors, semiconductors and insulators makes it possible to design components and build electric circuits. Many circuits are powered with mains electricity, but portable electrical devices must use batteries of some kind. Electrical power fills the modern world with artificial light and sound, information and entertainment, remote sensing and control. The fundamentals of electromagnetism were worked out by scientists of the 19th century. However, power stations, like all machines, have a limited lifetime. If we all continue to demand more electricity this means building new power stations in every generation – but what mix of power stations can promise a sustainable future?
B3	Pathogens are microorganisms such as viruses and bacteria that cause infectious diseases in animals and plants. They depend on their host to provide the conditions and nutrients that they need to grow and reproduce. They frequently produce toxins that damage tissues and make us feel ill. This section will explore how we can avoid diseases by reducing contact with them, as well as how the body uses barriers against pathogens. Once inside the body our immune system is triggered which is usually strong enough to destroy the pathogen and prevent disease. When at risk from unusual or dangerous diseases our body's natural system can be enhanced by the use of vaccination. Since the 1940s a range of antibiotics have been developed which have proved successful against a number of lethal diseases caused by bacteria. Unfortunately many groups of bacteria have now become resistant to these antibiotics. The race is now on to develop a new set of antibiotics.

## NCFE Business & Enterprise:

<b>Y10 Autumn 01</b> <b>Weeks 1 – 7 (7 weeks)</b>	<b>Y10 Autumn 02</b> <b>Weeks 8 – 15 (8 weeks)</b>
<p><b>Learning Outcome 1</b></p> <p><b>Learning objective 1.1.1-</b> understand what it means to be an entrepreneur and what motivated them.</p> <p><b>Learning objective 1.1.2-</b> understand the characteristics and skills of an entrepreneur and their application to business.</p> <p><b>Learning objective 1.2.1-</b> understand financial and non-financial business aims and objectives and how to apply these in business.</p> <p><b>Learning objective 1.2.2-</b> To understand the financial aims and objectives that a business might have and be able to apply these in business.</p> <p><b>Learning objective 1.2.3-</b> To understand the non-financial aims and objectives that a business might have and be able to apply these in business.</p> <p><b>Learning objective 1.3.1-</b> To understand the features, liability, and sources of finance available to the various legal structures, understanding advantages &amp; disadvantages to each.</p> <p><b>Learning objective 1.3.2-</b> To understand the features of organisational structures, linked to span of control and chain of command.</p> <p><b>Learning objective 1.3.3-</b> To understand how and why a business may restructure its organisation.</p> <p><b>Learning objective 1.4.1-</b> To understand the internal stakeholders of a business and their needs.</p> <p><b>Learning objective 1.4.2-</b> To understand the external stakeholders of a business and their needs.</p> <p><b>Learning objective 1.4.3-</b> To understand the advantages of stakeholder engagement.</p>	<p><b>Learning outcome 2</b></p> <p><b>Learning objective 2.1-</b> To understand the marketing mix covering each of the four elements.</p> <p><b>Learning objective 2.1.1-</b> To understand that products can be categorised in different ways</p> <p><b>Learning objective 2.1.2-</b> To understand the product lifecycle and its stages. In addition, purpose of extension strategies &amp; why product development and innovation is important.</p> <p><b>Learning objective 2.1.3-</b>To understand the Boston Matrix and how it applies to business &amp; enterprise.</p> <p><b>Learning objective 2.1.4-</b>To understand the factors that a business should consider when deciding on a location &amp; be able to apply these to business decisions.</p> <p><b>Learning objective 2.1.5-</b> To understand the concept of equilibrium price and various pricing strategies, being able to apply advantages and limitations of each.</p> <p><b>Learning objective 2.1.6-</b> To understand the promotion methods available to business and promotional objectives.</p> <p><b>Learning objective 2.2.1-</b> To understand different types of data, collected from market research activities &amp; the advantages and disadvantages of both.</p> <p><b>Learning objective 2.2.2-</b> To understand the term primary research &amp; give examples of primary research methods.</p> <p><b>Learning objective 2.2.3-</b> To understand the term secondary research &amp; give examples of secondary research methods.</p> <p><b>Learning objective 2.2.4-</b> To understand the different market types and their characteristics.</p> <p><b>Learning objective 2.2.5-</b> To understand orientation types and their characteristics.</p>

## GCSE Business:

Y10 Autumn 01 Weeks 1 – 7 (7 weeks)	Y10 Autumn 02 Weeks 8 – 15 (8 weeks)
<p><b>Content</b></p> <ol style="list-style-type: none"> <li>Enterprise and Entrepreneurship The Dynamic Nature of Business Risk and Reward Role of the Business Enterprise</li> <li>Spotting a Business Opportunity Customer Needs Market Research Market Segmentation</li> </ol> <p>The competitive Environment</p>	<p><b>Content</b></p> <ol style="list-style-type: none"> <li>Putting a Business Idea into practice Business aims and Objectives Business Revenue Business Costs Business Profits Sources of Business Finance</li> </ol>

## Computing:

Y10 Autumn 01 Weeks 1 – 7 (7 weeks)	Y10 Autumn 02 Weeks 8 – 15 (8 weeks)
<p><b>Component 1 – Computer Systems</b></p> <p><b>1.1 – Systems architecture</b></p> <p>1.1.1 Architecture of the CPU - Purpose of CPU &amp; fetch-execute cycle</p> <p>1.1.1 Architecture of the CPU - Common CPU components and their functions: ALU CU cache registers</p> <p>1.1.1 Architecture of the CPU - Von Neumann Architecture, MAR, MDR, Program Counter and Accumulator</p> <p>1.1.2 <b>CPU performance</b> - How common characteristics of CPUs affect their performance: clock speed, cache size and number of cores</p> <p>1.1.3 <b>Embedded Systems</b> - The purpose and characteristics of embedded systems</p> <p><b>1.2 Memory and Storage</b></p> <p>1.2.1 Primary Memory (storage) – The need for primary storage</p> <p>1.2.1 Primary Memory – The difference of RAM and ROM</p> <p>1.2.1 Primary Memory – The purpose of ROM and RAM.</p> <p>1.2.1 Primary Memory – The virtual memory</p> <p>1.2.2 <b>Secondary Storage</b> – The need for secondary storage</p> <p>1.2.2 Secondary Storage - Common types of storage: optical, magnetic and solid state</p> <p>1.2.2 Secondary Storage - advantages and disadvantages of different storage media relating to these characteristics: capacity, speed, portability, durability, reliability, cost.</p>	<p>1.2.3 Units of data storage - Data representation</p> <p>Units Bit Byte KB to TB</p> <p>1.2.4 Data storage - How to convert positive denary whole numbers and vice versa &amp; Why Binary</p> <p>Binary representation of ASCII in the exam will use 8 bits</p> <p>Binary Addition &amp; Shifts Hexadecimal &amp; Check Digits Character sets Images Sound Data Calculations</p> <p>1.2.5 Compression - The need for compression</p> <p>1.2.5 Compression - Types of compression: Lossy and lossless.</p> <p><b>Computer networks, connections and protocols</b></p> <p><b>1 Networks and Topologies</b> - the LAN and WAN</p> <p>1.3.1 Factors that affect the performance of networks</p> <p>1.3.1 Different roles of computers in a client-server and a peer-to-peer network.</p> <p>1.3.1 Hardware needed to connect stand-alone computers into a LAN, includes: wireless access points, routers, switches, NIC and Transmedia media.</p> <p>1.3.1 Internet as a worldwide collection of computer networks: DNS, Hosting, the cloud and web server and clients</p> <p>1.3.1 Star and Mesh network technologies</p> <p>1.3.2 Wired and wireless networks, protocols and layers.</p> <p>1.3.2 Modes of connections: wired ethernet, wireless wi-fi and Bluetooth ; Encryption</p> <p>1.3.2 IP Addressing and MAC addressing; (IPv4 and IPv6)</p> <p>1.3.2 Network Standards</p> <p>1.3.2 Common protocols including: TCP/IP, HTTP.HTTPS, FTP, POP, IMAP, SMTP.</p> <p>1.3.2 Concept of layers; How and Benefits</p>

## NCFE:

Y10 Autumn 01 Weeks 1 – 7 (7 weeks)	Y10 Autumn 02 Weeks 8 – 15 (8 weeks)
<p><b>Content</b> Unit 01 Introduction to graphic design (LO1) Understand the components of graphic design The learner must know about:</p> <ul style="list-style-type: none"> <li>• Colour</li> <li>• Tone</li> <li>• Line</li> <li>• Composition</li> <li>• Typography</li> <li>• Imagery</li> </ul>	<p><b>Content</b> Unit 01 Introduction to graphic design (LO2) Experiment with the graphic design components The learner must demonstrate use of:</p> <ul style="list-style-type: none"> <li>• Colour</li> <li>• Tone</li> <li>• Line</li> <li>• Composition</li> <li>• Typography</li> <li>• Imagery</li> <li>•</li> </ul>

## PE:

Autumn 01 Weeks 1 – 7 (6 weeks)	
<p><b>Week 1: LO1 Understand the issues which affect participation in sport</b> Identifying user groups Barriers to participation Reducing the barriers to participation</p> <p><b>Week 2:</b> Sports promotion Sporting initiatives</p> <p><b>Week 3:</b> growth of new/emerging sports and activities in the UK</p> <p><b>Week 4: LO2 Know about the role of sport in promoting values</b> Sporting Values Olympic and Paralympic Values Sporting initiatives which promote values through sport</p>	<p><b>Week 5:</b> Etiquette and sporting behaviour Cheating in sport</p> <p><b>Week 6: LO3 Understand the importance of hosting major sporting events</b> Major Sporting events Benefits of hosting a major sporting event Drawbacks of hosting a major sporting event Legacy</p> <p><b>Week 7: LO4 Know about the role of national governing bodies in sport</b> What are national governing bodies of sport? What do NGBs do? Promotion and participation</p>

## Drama:

Autumn 01 Weeks 1 – 7 (6 weeks)	Autumn 02 Weeks 8 – 15 (8 weeks)
<p>Unit Code: CAPA201E Unit Title: Live Performance – Core Unit, External</p> <p>Students will learn revise the different conventions taught at KS3. They will explore the different stimuli and be guided to use conventions. They will complete a key word glossary and performance.</p> <p>This term will also concentrate on building confidence and trust to ensure all students feel at ease to perform according to their ability and above.</p> <p><b><u>Stimulus: Urban fairy tales to build context and knowledge for Autumn 2</u></b></p>	<p>Unit Code: CAPA201E Unit Title: Live Performance – Core Unit, External</p> <p>Students given a stimulus to discuss and develop their ability to select and perform.</p> <p>Students will be expected to complete the Live performance unit as a mock.</p> <p>Students will be introduced to theatre practitioners to consolidate the learning from Autumn term.</p> <p>Students will be expected to devise a 5 minute scene based upon chosen stimulus.</p>

## Geography:

Autumn 01 Weeks 1 – 7(6 weeks)				Autumn 02 Weeks 8 – 15 (8 weeks)			
Content				Content			
3 <sup>rd</sup> S	Features of a drainage basin	Long profile and cross profile of a river	Types of erosion	29/10	Buffer	Revision	Test
10 <sup>th</sup> S	The formation of V shaped valleys and interlocking spurs	Waterfalls and gorges		5/11	Feedback	Coasts – Wave types and characteristics	
17 <sup>th</sup> S	Types of transportation and deposition	Formation of meanders and oxbow lakes	Buffer	12/11	Weathering and mass movement – sliding, slumping and rockfalls	Types of erosion	Headlands and bays
24 <sup>th</sup> S	Formation of flood plains and levees	Formation of an estuary		19/11	Wave cut platforms	CASS	
1 <sup>st</sup> O	Example of a river valley to show landforms of erosion and deposition – river Tee's	Drainage basin system – throughflow, infiltration and surface run off	Causes of floods (human and physical) To what extent are physical factors that main cause of floods (6 marks)	26/11	Buffer	Transportation and longshore drift (The formation of beaches)	The formation of
8 <sup>th</sup> O	Flood hydroflow graphs	Flood hydroflow graphs pt 2. Assess the factors which influence the shape of hydroflow graphs		3/12	The formation of bars (Buffer)	The formation and features of sand dunes	
15 <sup>th</sup> O	Hard and soft engineering	Extended writing: 'Hard engineering is the most effective way of managing flooding' how far do you agree?	Flood management scheme – CGP guide example	10/12	An example of a stretch of coastline to show landforms of erosion and deposition – CGP guide example	Hard and soft engineering strategies Sea wall, rock armour, gabions, groynes Beach nourishment and re-profiling, dune regeneration, managed retreat	'Hard engineering the most effective to defend the coastline' how far do you agree?
				17/12	Example of coastal management scheme –CGP guide example/Holderness Using an example evaluate the effectiveness of a coastal management strategy	Revision	

## RE:

<b>Autumn 01</b> <b>Week 2 – 8. 14 Lessons- 7 Weeks</b>	
Beliefs 1. Nature of God/Qualities/Gods will 2. Beliefs of Sunni and Shiah 3. Angels 4. Predestination 5. Life after Death 6. Prophethood and Adam 7. Ibrahim/Hajj	8. Muhammad/Imamate 9. Holy Books in Islam 10. 12-mark essay question skills lesson <u>Practices</u> 11. The five Pillars/10acts 12. Salah 13. Salah – Jumm’ah 14. Fasting

## History:

<b>Autumn 01</b> <b>Weeks 1 – 7 (7 weeks)</b>	<b>Autumn 02</b> <b>Weeks 8 – 15 (8 weeks)</b>
<p><b>Content : Crime and Punishment</b></p> <p>1. Re-cap: 2 lessons: Medieval Crime and Punishment. Study changes in society that impacted on crime and punishment. Look at difference between Anglo Saxon and Norman law and order.</p> <p>2. Early Modern Crime and Punishment</p> <p>Study social factors and their impact on crime and punishment. Witchcraft, vagabondage, treason and heresy.</p> <p>3. 19<sup>th</sup> century crime and punishment. Studying the impact of the industrial revolution and modern technology on crime and punishment. Prison and prison reformers. Changing nature of crime and its definitions and how it is punished.</p> <p>Skills: cause, consequence, change and continuity.</p> <p>Cultural capital: Medieval Britain and its affect on crime and punishment. Changing definition of crime and punishment as society changes throughout time.</p>	<p><b>Content: Crime and Punishment</b></p> <p>1. Modern day crime and punishment. Studying the impact of modern technology and key events on crime and punishment. Development of modern medicine.</p> <p>2. The Historic environment Whitechapel. Using Whitechapel as a case study. Students will investigate how poverty, immigrations, resources and technology had an impact on crime and punishment in 19th Century England.</p> <p>Skills: cause, consequence, change and continuity. Judgement and argument.</p> <p>Cultural capital: Industrial England and the advancement of technology.</p> <p>Skills: Source analysis and application. Inference. Providence.</p> <p>Cultural capital: Use of case study to investigate the problems of crime and punishment in industrial England.</p>

## Art:

<b>Autumn 01</b> <b>Weeks 1 – 6 (6 weeks)</b>	<b>Autumn 02</b> <b>Weeks 8 – 15 (8 weeks)</b>
<p><b>Content Unit 1 : Investigating the Theme of City PRIMARY AND SECONDARY RESEARCH</b></p> <ul style="list-style-type: none"> <li>Mind Map/word List</li> <li>Observational Drawings of Architectural features</li> <li>Samples of techniques.</li> </ul> <p>Artist Research pages</p>	<p><b>Content Unit 1 : Investigating the Theme of City (Drawing from Observation)</b></p> <p><b>PRIMARY AND SECONDARY RESEARCH</b></p> <ul style="list-style-type: none"> <li>Observational Drawings of Architectural features</li> <li></li> <li>Artist research pages</li> <li>Stick and Ink Practical</li> </ul>

## Arabic:

<b>Y10 Autumn 01</b> <b>Weeks 1 – 7 (7 weeks)</b>	<b>Y10 Autumn 02</b> <b>Weeks 8 – 15 (8 weeks)</b>
<p><b>Content – basics revision</b></p> <ul style="list-style-type: none"> <li>• Greetings/Talk about family relationships.</li> <li>• Use description (Physical - character)</li>   <li>• Talk about friends and what makes a good friend               <ul style="list-style-type: none"> <li>• Use adjectives &amp; nouns</li> </ul> </li>   <li>• Make arrangements to go out</li> <li>• Use the future tense</li>   <li>• Talk about role models               <ul style="list-style-type: none"> <li>• Use the past tense</li> </ul> </li> </ul>	<p><b>Content – Identity and culture</b></p> <ul style="list-style-type: none"> <li>• Revise hobbies &amp; interests</li> <li>• Use verbs</li> <li>• Use adverbs of frequency               <ul style="list-style-type: none"> <li>• Talk about the sport</li> <li>• Use the present perfect in Arabic</li> </ul> </li>   <li>• Talk about online activities, the media</li> <li>• Use the comparative</li>   <li>• Talk about my favourite type of Music               <ul style="list-style-type: none"> <li>• Express preference</li> </ul> </li> <li>• Give opinions and reasons</li> </ul>