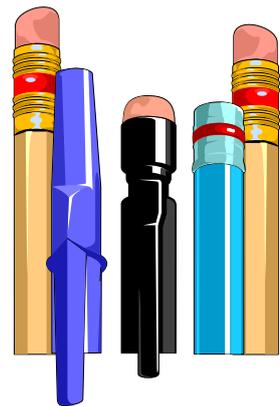


BRANSTON
COMMUNITY
ACADEMY

YEAR 8
2014/15

CURRICULUM AND
ASSESSMENT GUIDE



INTRODUCTION

Welcome to the Branston Community Academy Year 8 Curriculum Guide. This is intended to have two main purposes.

- To help students understand how your courses will develop over the year so that you can be “ahead of the game” by learning how to spell and use the Key Words that are a vital part of every subject.
- To help parents understand more about what your children will be learning and how it will be assessed. Parents can make a major contribution to successful secondary education by helping to organise library books and supporting the learning of Key Words:- both the meanings and the spellings.

Using the Guide

You will see that the Curriculum Guide is divided up into Subjects. This reflects the way the secondary school curriculum is organised and assessed. In each subject section you will be given an outline of the course for the school year – in some cases this is actually broken down into what will be covered each term. This allows parents and students to plan for the type of work that they will be doing by organising books from the library and discussing what they already know about particular topics.

In particular, students will benefit from being familiar with key words in advance. Certainly it helps significantly if all students can spell the words and terms given in this booklet, and there will be times in the year when teachers will test knowledge of them parents can help here by checking on spelling and understanding at regular intervals as the courses progress.

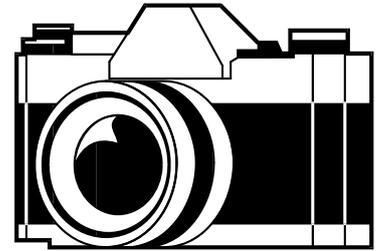
Each subject has also detailed how it assesses the students during the year. At Key Stage 3 National Curriculum subjects are assessed using sub-divided National Curriculum levels and are reported to parents three times a year.

We also hope that the Curriculum Guide will give parents the opportunity of discussing with their children what has been learnt. By talking about school work with your son or daughter, you can help them to review what they have understood and to identify any weaknesses in their progress.

Please let me know if you find it helpful or have any comments that would help us to improve on the Curriculum Guide in the future.

J TURNER
Vice-Principal

ART



Throughout Year 8 the pupils will cover a wide range of subject areas, drawings, paintings etc. and all pupils will be taught in all these areas by the end of the year.

Pupils look at the work of other Artists and Craftspeople and will develop ideas through to a conclusion in the area they are working in. Another area we included in the curriculum is Globalisation where we focus on the culture and Artefacts of other Countries.

NB: The key words and phrases will become part of the pupils vocabulary and they will be expected to use them in their lessons.

PRINT MAKING TEXTILES

Students will look at observational drawing, line linked to shape and pattern, negative/positive pattern and simple tessellation and develop their ideas towards a conclusion.

The outcome could be; one or a combination of the following:- String print on paper or fabric which is hand dyed.

KEY WORDS	DEFINITION
LINE	Mark made by an instrument when drawn across a surface
PATTERN	A shape which is repeated in an equal way
ROTATION	Turning the shape around while creating pattern
ENLARGEMENT	Making image or shape bigger
STRING PRINT	Print made by inking up string glued to card then printed

PHOTOGRAPHY

Pupils continue to look at classroom photography and will produce a number of experimental pieces. The techniques looked at include Batik and Photogram. This work is either linked to another area or as a one off lesson

KEY WORDS	DEFINITION
LIGHT SENSITIVE	Sensitive to white light
DEVELOP	Chemical used to make image appear on paper
FIX	Stops the paper being sensitive to light
POSITIVE IMAGE	Image drawn or appears on paper
NEGATIVE IMAGE	Area surrounding positive
PHOTO-BATIK	Technique using resist (vaseline) as a stencil

DRAWING AND PAINTING

Drawing is evident in all areas throughout the development of work and ideas. In this instance pupils' knowledge is developed through to painting, via observational drawing and expressive work using a wide range of media.

KEY WORDS	DEFINITION
OBSERVED DRAWING	Drawn from actual subject
COLLAGE	Image created using different materials in same picture
MONOCHROMATIC COLOUR	Black and white image
COMPOSITION	Arrangement of subjects within the picture
COMPLIMENTARY COLOURS	Colours opposite each other on colour wheel

THREE DIMENSIONAL WORK

There are a number of areas to cover and pupils usually cover one or two. Pupils look at simple structure, creation of textures, drawing and 3D form. Pupils will show understanding of texture, volume, line and form. The outcome could be in clay (double thumb pot or tile) plaster casting, wire structures or the use of found objects

KEY WORDS	DEFINITION
PROPORTION	Correct size of subject or part of subject
VOLUME	Mass or weight of subject
IMAGINATIVE	Work produced from the mind rather than reality – only
PAPER MACHÉ	Use of paper and glue torn to create shapes
DOUBLE THUMB POT	Pot or sculpture made by joining two single thumb pots together
BISCUIT FIRING	Baking of dried out claywork to 1000°c
SCULPTURE	Work created in three dimensions using materials suitable for making shapes
GLAZE FIRING	Thin layer of liquid applied to decorate claywork when baked to 1100°c

GRAPHIC COMMUNICATION

In graphics pupils look at typography and elementary design. It is usually linked in some way to I.T. and the use of computers. Through I.T. can be integrated in other areas.

KEY WORDS	DEFINITION
DIFFUSER	Tool used to create sprayed effects on paper
D.T.P	Desk top publishing
OVERLAY	Sheet layed over part or all of design
TEXT	Lettering content of design

STUDENT ASSESSMENT

In Year 8 the following skills are assessed:

1. Development of ideas
2. Ability to record from direct observation
3. The use of both 2D and 3D Media
4. The students ability to review, modify and evaluate their work.
5. Their knowledge and understanding related to the subject
6. The students ability to evaluate their own an other peoples work
7. The students use of appropriate language, literacy skills.

Presentation of work is also assessed as it is the students homework record.

Assessment is continuous throughout the year and each teacher keeps a record of marks for classwork and homework.

The marks as well as the National Curriculum level achieved for each piece of work is recorded onto a sheet which is updated at the end of each project so students can monitor their own progress.

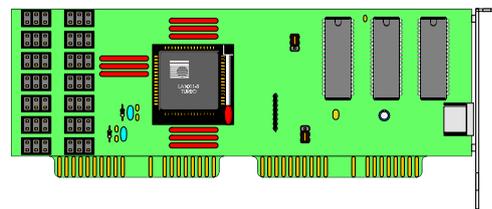
Target setting is part of on-going teaching in class and is part of all subject report writing.

Learning targets at KS3 include:

- Improving observational drawing skills
- Developing hand, eye co-ordination skills
- Learning and using appropriate language, terminology
- Increasing knowledge of other artists, craftsmen's work
- To develop skills, use of processes using a wide range of materials and equipment.

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS IN YEAR 8
All pupils are given the opportunity during the year to carry out work in the following specialist areas: Drawing and Painting Print-making and Textiles Photography 3D Design Graphic Design ICT	<ul style="list-style-type: none"> • To develop skills at observational drawing using a broad range of media • To develop hand, eye co-ordination skills • To learn correct language, vocabulary • Increase knowledge of other artists work • To develop skills using a range of resources and materials

DESIGN TECHNOLOGY



TOPIC: GRAPHICS PACKAGING USING CAD 6 weeks or ½ term

Outline of Work

Students will design a package to meet the need of given design briefs

They will also learn the principles behind the creation of graphic design relating to packaging. This project will involve extensive use of ICT develop the net and graphics.

KEY WORDS	DEFINITION
NET/DEVELOPMENT	The outline of a flat shape which can be folded and formed in to a three dimensional shape.
SYMBOL	A graphic design consisting of words and/or picture(s)
TYPOGRAPHY	The study and design of letters shapes
BARCODE	A symbol consisting of series of parallel thick thin lines that can be read using a scanner and contains useful data.
COMPLEMENTARY COLOURS	Colours that visually go together

TOPIC: PERIPHERAL INTERFACE CONTROL

Outline of Work

Students will design and make an interactive display using a P/C interface device. This programmable about enables them to control output devices used in an Interactive display.

This project will be based on a team approach – students working together to produce a single outcome which will then be presented to the group.

KEY WORDS	DEFINITION
P/C	Peripheral Interface Controller
INPUT	The input stage of a system, e.g. Switch, sensor
OUTPUT	The output stage of a system, e.g. Light (LED), movement (motor), sound (buzzer).
FLOW CHART	A diagram that uses symbols to represent a series of actions or processes.
FEEDBACK	An event that causes a process or output to change.
DIGITAL SIGNAL	A voltage that can only be in one of two states 'ON' or 'OFF'.

TOPIC: DESIGN AND MAKE ASSIGNMENT – CLOCKS

Outline of Work

Students complete an assessed design and make assignment. The brief is to design and make a clock for a specific purpose using a given range of materials.

KEY WORDS	DEFINITION
THERMO PLASTICS	The property of a plastic which allows it to be reheated and moulded many times
WASTING PROCESS	The manufacturing process where material is removed from final component
TENSOL CEMENT	Acrylic adhesive
TEMPLATES	A drawing guide for use during marking out materials
LINE BENDING	The manufacturing process used to bend sheet plastic

TOPIC: EXTENDED TASK- Complete at home in a approx. 6 weeks or ½ term

Outline of Work

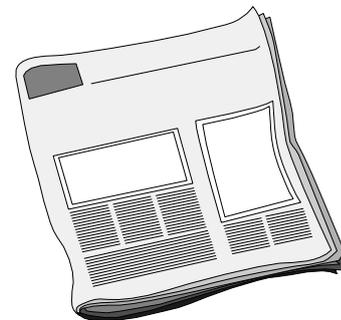
Students complete a range of graphical skills to improve their presentation of their future design work. Students complete a number of assignments on Shading and Rendering 3D objects made from different materials.

In this module students will learn how to communicate and present their ideas effectively using:

- 1) Formal 3 dimensional drawing techniques
- 2) Freehand sketching techniques

KEY WORDS	DEFINITION
ISOMETRIC	A three dimensional drawing technique
CRATING	Creating 3D shapes within a drawn wire frame box
RENDERING	Adding colour and pattern to enhance design
FREEHAND SKETCHING	Drawing without the use of equipment

ENGLISH



The Department runs courses in English and Drama.

The Year 8 English course continues to focus on those skills introduced and developed in Year 7. The students engage in a number of varied tasks designed to enhance and extend their performance in the three attainment targets: Speaking and Listening, Reading and Writing.

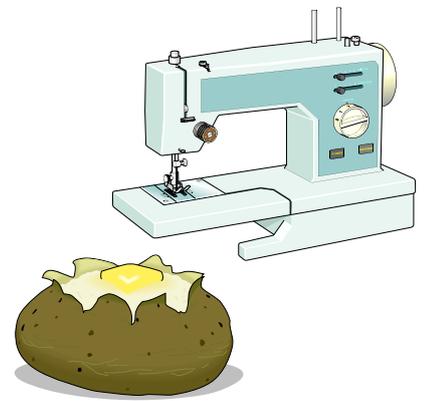
The Year 8 Drama course concentrates on developing movement and speech skills through exercises and group improvisations with a strong emphasis on creativity as well as the development of storyline.

KEY WORDS	DEFINITION
CHRONOLOGICAL	Writing where events follow each other in time
NON-CHRONOLOGICAL	Writing about feelings or ideas etc, that does not follow a strict time sequence
BIOGRAPHY	Someone's life story
AUTO BIOGRAPHY	One's own life story
GENRE	Kind of writing, e.g. drama, poetry. Sub-Genre e.g. gothic, romance
ATMOSPHERE	The mood created by a writer
PROSE	'Ordinary' writing
VERSE/POETRY	Imaginative text usually, but not always, set with rhyme, rhythm, stanzas (verses) often using detailed images.
DRAMA	Writing in script form; performance
CHARACTER	A person; what they are like
SETTING	Where events take place
ACT	A large division in a play
SCENE	A small division in an Act
PHRASE	Part of a sentence
PREFIX	A meaningful section of a word added to the beginning
SUFFIX	A meaningful section of a word added to the end
PRONOUN	A word standing in for a noun
CONJUNCTION	A connecting word
DISCUSS	Consider the arguments for and against
ARGUE	To forcefully discuss. Promoting one's own opinion over others
PERSUADE	To present an opinion which could benefit others
ADVISE	To support, encourage and guide others
EXPLAIN	Give reasons for your ideas. Aim for 2-3 sentences per point
EXPLORE	Give reasons and evidence for your ideas

KEY WORDS	DEFINITION
DESCRIBE	Present details of a setting, character, experience using detailed imagery possibly including sights, sounds, smells
ANALYSE	Develop explanation referring closely to how the writer uses language, presents characters. Use regular evidence
P.E.E.	Point. Evidence. Explain. A point is a statement/idea. The evidence is a quotation that supports that idea. Explanation <u>should</u> be detailed- approximately two per point/quote

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS IN YEAR 8
Units of work follow the objectives in the KS3 Strategy. Assessments in Speaking and Listening, Reading and Writing are made throughout the year. Each unit of work receives a formal assessment and work is placed in National Curriculum folders. Students will be actively involved in both self-review and target setting . In addition students will complete two formal assessments in both Reading and Writing during the year.	<ul style="list-style-type: none"> • In reading – trace the development of themes, values or ideas in a text • In writing revise the style and structure to focus upon different purposes eg. advise, persuade • In drama, learn to improve in groups and use speech/movement for specific effect

FOOD/TEXTILE TECHNOLOGY



During this year students will participate in the following activities in Food and Textile Technology.

1. Design and make a range of cookies for health conscious consumers, with a focus on mixing, combining and shaping ingredients (covered in Year 7 or 8 depending on timetable allocation), linked to “Change One Thing” week.
2. Explore the use of staple foods in the diet of people from different countries. Investigate how the use of these foods are incorporated into our diet, and their importance as a part of a balanced diet.
3. Learn basic skills required for successful short crust pastry production and its use in different dishes. Teamwork is encouraged with batch production of a range of small pastry products. Existing products are evaluated and new fillings investigated.
4. Using a major sporting event as inspiration, students will investigate and develop skills in stencilling and quilting. Students are expected to be aiming for a high quality product.

KEY WORDS	DEFINITION
STAPLE (food)	Basic or plain food, usually widely available and nutritious which forms the basis of the diet of a particular country
CONSISTENCY	The “feel” of a mixture to ensure the correct degree of dryness/moistness
MANUFACTURE	The making of a product to meet a need
PRODUCT	An item which is manufactured usually to be sold
BATCH-BAKING	Making large quantities of a mixture to produce several batches of a product
EVALUATE	To assess the success or otherwise of a product or procedure
STENCIL	A drawing or design made by applying colour over a cut out pattern
APPLIQUÉ	The addition of surface decoration by using one type of fabric on top of another
PROCESS	The stages of product goes through during manufacture
FLOW CHART	A way of showing the logical stages in the production of a product using words and diagrams

ASSESSMENT

Work is assessed on a weekly basis with marks awarded for attainment and effort. Overall levels are awarded termly culminating in an end of Key Stage level for designing and making according to National Curriculum criteria. Extended Homework Task based on Staple Food (Breads). (Details in booklet – issued).

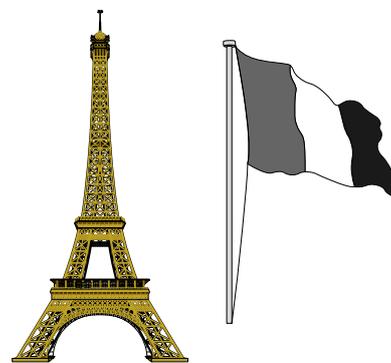
Typical Learning Target:

At the end of Key Stage 3 students should be able to work independently and should competently use a broad range of processes, materials and equipment.

This is achieved by:

1. Written comments on work and oral comments at the end of practicals, students are encouraged to improve the scope and quality of their work.
2. Comments and targets on annual reports give focussed areas for development.

FRENCH



This course of study follows topics based on the areas of experience from the National Curriculum.

Students continue to build their language skills, including the use of two or three verb tenses.

KEY WORDS	DEFINITION
COMPARATIVE	Compares two things – bigger than etc
ADVERB	Describes a verb
AGREEMENT	Making words agree in number or gender
PRONOUN	Stands in place of a noun e.g. he/she/it
POSSESSIVE ADJECTIVE	Shows that something belongs to something/someone else. e.g. his/her
NEGATIVE	Talking about not/never etc doing something
PERFECT TENSE	A past tense equivalent to I did/I have done
REFLEXIVE VERBS	Verbs which show an action done to oneself, e.g. I wash <u>myself</u> .
IMPERATIVE	The command form of a verb, e.g. Go!
PREPOSITION	A word which shows position. e.g. on, under, behind.
MODAL VERB	A verb whose sense is incomplete in itself, e.g. I must, I can, I want

ASSESSMENT AND TARGET SETTING

Students are regularly assessed against National Curriculum level descriptors throughout the year. They are continually informed of their current level, and of what they need to do in order to progress further.

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS
Students are regularly assessed against National Curriculum level descriptors. Expected progress: All = Level 3 Most = Levels 4/5 A few = Level 6	To move into work on other tenses (eg. Future and Conditional Tenses) To continue to build vocabulary To continue to develop pronunciation and intonation. To become familiar with the requirements of GCSE controlled assessments.

GERMAN



KEY STAGE 3 GERMAN IN TWO YEARS

The Year 8 course follows topics based on areas of experience from the National Curriculum.

AUTUMN TERM

Students learn basic greetings and then go on to cover personal identification factors such as age, birthday and brothers and sisters, school, local area and environment. We also begin to look at the Perfect Tense.

KEY WORDS	DEFINITION
GENDER	Whether a word is masculine/feminine or neuter in German
MASCULINE	Nouns preceded by Der / Ein (en)
FEMININE	Nouns preceded by Die / Eine
NEUTER	Nouns preceded by Das / Ein
SENTENCE	A group of words which make complete sense, containing a finite verb, a capital letter at the beginning and a full stop at the end
VERB	A doing or being word
PRESENT TENSE	An action happening now, or a habit e.g. I am playing tennis/ I play tennis
NOUN	A thing
ADJECTIVE	A describing word
SINGULAR	One of anything
PLURAL	Two or more of anything
CONSONANT	Letters in the alphabet which are not vowels
VOWEL	Letters a, e, i, o, u
CONJUGATE	To use different parts of a verb

ASSESSMENT AND TARGET SETTING

Students are assessed against National Curriculum level descriptors throughout the year. They are regularly informed of their current level, and of what they need to do in order to progress further.

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS IN YEAR 8
Students are regularly assessed against National Curriculum level descriptors. Expected progress: All = Level 2 Most = Levels 3/4 Some = Level 4 (occasionally Level 5)	To move into work on other tenses (e.g. Perfect Tense) To continue to build vocabulary To continue to develop pronunciation

GEOGRAPHY



By pointing out volcanic eruptions or earthquakes on TV as they occur and watching the weather forecast with your children you can improve their geographical knowledge.

AUTUMN TERM - HAZARDS

In this module all natural phenomena caused by instability of the earth's crust are identified and studied, such as volcanoes, earthquakes and mountain building

KEY WORDS	DEFINITION
VENT	The 'chimney' of the volcano
MAGMA	Melted rock beneath the surface of the earth
LAVA	Melted rock above the surface of the earth
SEISMIC WAVE	A wave of energy released by the earthquake
PLATE	A 'piece' of the earth's crust
PLATE MARGIN	The edge of the plate
SUBDUCTION ZONE	The area beneath the crust in the mantle

SPRING TERM – WEATHER AND CLIMATE

This module looks at all the components which have to be measured to compile a weather forecast. The weather and climate of the UK is then studied and compared with several other world climate zones.

KEY WORDS	DEFINITION
THERMOMETER	An instrument to measure temperature
ANEMOMETER	An instrument to measure wind speed
RAIN GAUGE	An instrument to measure rain fall
HYGROMETER	An instrument to measure humidity
BAROMETER	An instrument to measure pressure
ISOBAR	Lines joining points of equal pressure
ANTICYCLONE	A high pressure weather system
DEPRESSION	A low pressure weather system
MICRO-CLIMATE	A local climate covering a small area caused by a hedge, a wood or a building.

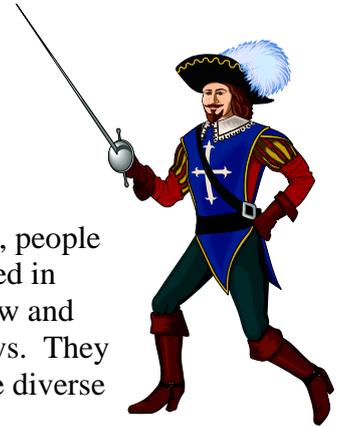
SUMMER TERM - COASTS

The theme of physical geography continues with a study of coasts. The work of the sea and the problems of coastal management are considered.

KEY WORDS	DEFINITION
BAY	A sheltered part of a coast between two headlands
ESTUARY	The widening channel of a river where it meets the sea with a mixing of salt water and fresh water
HEADLAND	A narrow area of land jutting into the sea
LONGSHORE DRIFT	A process whereby beach material is gradually shifted laterally along the beach as a result of waves breaking diagonally
SPIT	A low narrow ridge of pebbles or sand joined to the coastline at one end with the other terminating in the sea. It is formed by longshore drift.

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS IN YEAR 8
<ul style="list-style-type: none"> • Assessment will take place during the year through Enquiries, Formal Tests and Thinking Skills Activities. These assist in identifying National Curriculum attainment. • Knowledge, understanding and skills are tested • Merit certificates are issued for high effort and/or achievement in certain pieces of work throughout the year. 	<ul style="list-style-type: none"> • To develop geographical vocabulary and use it appropriately in short essays • To extract data from a variety of sources • To interpret data • To complete a more complex geographical enquiry • To develop thinking skills • To appreciate that they can influence environmental quality through their actions • To develop revision skills

HISTORY



In Year 8 students will develop knowledge and understanding of the events, people and changes in the enquiries studied this year. Building on the topics studied in Year 7 they will also develop their source evaluation skills and examine how and why historical events and individuals have been interpreted in different ways. They will evaluate the significance of Key individuals and events and explore the diverse experience of people and societies in the periods studied.

AUTUMN TERM

Britain (1603 – 1750)

This study of crowns, parliaments and people includes Civil Wars, the beheading of King Charles 1, the establishment of a Commonwealth led by Oliver Cromwell, witchcraft and plague. Students will consider to what extent England was ‘turned upside down’ in the Seventeenth Century

Enquiries will include:

- The Gunpowder Plot – were the Catholics framed?
- What were the causes and consequences of the Civil Wars?
- Oliver Cromwell – hero or dictator?
- How was London life changed by Plague and Fire 1665-6?

During Globalisation Week students explore Britain’s growing trade links with the world in the Seventeenth Century and study issues of trade and Fairtrade in the world today.

KEY WORDS	DEFINITION
CONSPIRACY	Secret plot involving a number of people
CIVIL WAR	A war between groups of people in the same country
PURITAN	Protestants who were extremely strict in their religion and morals
ROUNDHEAD	A supporter of Parliament against King Charles I
CAVALIER	A Royalist supporter of King Charles I
COMMONWEALTH	The republic of England ruled by Cromwell
BUBONIC PLAGUE	A disease caused by fleas and spread by rats
RESTORATION	When the Stuarts were restored to the throne in 1660
REPUBLIC	System of governing a country without a King or Queen
REVOLUTION	The overthrow of the government.

SPRING TERM

World Study before 1900 – the Black Peoples of the Americas: from slavery to equality?

Students will study the issues and events that characterise the history of the millions of Black Africans taken as slaves to the Americas.

Key questions will include:

- What lay behind the horrors of the Atlantic Slave Trade?
- What was life like on a Slave Plantation?
- How and why did the Slave Trade and Slavery come to an end?

KEY WORDS	DEFINITION
SLAVERY	The system whereby persons are the legal property of others, and have no rights of their own
TRIANGULAR TRADE	The route taken by slave ships between the UK, Africa and the Americas
PLANTATIONS	Estates growing cotton, tobacco and other crops in America
BRANDING	The way slaves were marked with their owner's initials by a hot iron
THE ABOLITION OF SLAVERY	The ending of slavery
THE KU KLUX KLAN	A movement of white people in the southern states of the USA, hostile to Negroes and formed after the Civil War

SUMMER TERM

Britain 1750-1900

Students will study the main economic and social changes in this period. The impact of industrialisation and urbanisation on the lives of ordinary people will be examined. Students will learn about the local area and the role of the Co-operative Movement in Lincoln.

Key questions will include:

- How industrialised was Britain by 1850?
- What effects did industrial changes have on the lives of ordinary people?
- How and why has the Co-operative grown in Lincoln between 1861 and 2009?
- An EXTENDED HOMEWORK TASK over one month will involve a study of Lincoln 1750 and the present day.

KEY WORDS	DEFINITION
INDUSTRIAL REVOLUTION	A period of great change after about 1770 when people began to make goods in factories using machines
CHOLERA	A disease carried in water supplies contaminated by sewage. It was usually fatal.
TRADE UNION	An organisation of workers set up to get better conditions and wages for their members
WORKING CLASS	The social group which forms part of the population which earns a living by manual labour
SLUM	A area of very poor housing
ENCLOSURE	The process of enclosing the open fields with hedges and fences
DOMESTIC SYSTEM	The pre-industrial system where things are made by people working at home
PAUPER APPRENTICES	Orphans who were sent to work in the factories by the authorities who looked after them
ENTREPRENEUR	Someone who makes money from establishing a business e.g. a factory
OVERSEER	A person in charge of a group of workers in the new factories
CO-OPERATIVE SOCIETIES	Groups set up by working people to work together to improve their lives. Some groups set up shops where the profits belonged to the members

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS IN YEAR 8
<ul style="list-style-type: none"> • Tests on key words • End of module tests covering National Curriculum skills in chronology, knowledge and understanding, source evaluation and interpretation • A significant piece of class/homework from each module will be assessed against National Curriculum Levels • Evidence from 1-3 used to report on their NC level at the end of the year • Homework exercises are assessed throughout the year using the Department mark scheme. Students are awarded A-E for effort and 1-10 for the work. A copy of this can be found in the front of student exercise books. 	<ul style="list-style-type: none"> • Knowledge and understanding of key words • Include supporting facts and dates in answers • Explain the reasons for an event and make links between them • Identify sources which are useful for answering a question • Assess the reliability of a source in an answer • Suggest some reasons for different interpretations of events

Computing



In Year 8, computing is built around a core of teaching objectives organised into four themes:

- Finding information
- Developing ideas
- Communicating Information
- Reviewing, evaluating and modifying work as it progresses.

Students will experience the use of Computing as a tool to aid them in their studies of all subject areas. Importantly, Students will also learn to recognise where and when it is appropriate to apply Computing with a main objective of becoming Computing capable in an ever changing digital world.

Year 8, The following units are some basic starts to meeting the new Programme of Study (2012/13) to develop their learning in the digital world. Students will complete units called, stop frame animation, Modeling, Databases, Advanced Word Processing (long Document), Cloud based multimedia presentation.

Topics to be covered:

Autumn	Module 1	Stop frame animation (I Can Animate)
	Module 2	Stop frame animation (I Can Animate)
Spring	Module 3	Modelling (Excel 2010)
	Module 4	Modelling (Excel 2010)
Summer	Module 5	Databases (Access 2010)
	Module 6	Multimedia presentations (Prezi)

In **Module 1 and 2**, pupils will learn how to make an exciting stop-motion animation which allows students to explore animation with PlayDoh. Using the new software “I Can Animate” which will open up the door to animation as a creative tool for learning and enabling students to use their imagination and creativity to engage in the wider curriculum.

Key Word	Definition
Gantt	<i>Gantt chart design with project design is that they attempt to define the project work breakdown structure</i>
Mind Map	<i>a graphical method of taking notes. Their visual basis helps one to distinguish words or ideas, often with colours and symbols</i>
Stop Motion	<i>is an animation technique to make a physically manipulated object appear to move on its own.</i>

Cell Animation	<i>hand-drawn drawing these frames; each frame must match exactly what is going on</i>
Claymation	<i>a process of photographing a kind of animated cartoon using three-dimensional clay puppet figures</i>
Computer animation	<i>is the process used for generating animated images by using computer graphics</i>

Module 3 & 4 Students will learn how to make a Spreadsheet model - changing, using and printing from it. They investigate the use of a variety of mathematical formula and functions including SUM, AVERAGE, MAX, MIN, IF. Computer model will enable students to ask what if scenarios dependant on a range of factors or variables that students can alter, so it enables them to see how the situation would work out if did different things. Students will be able to gain knowledge that can be confidently used in other subjects.

Key Word	Definition
Cell	<i>An individual component of a spreadsheet.</i>
Data	<i>Numbers or text used by a computer.</i>
Function	<i>A calculation used in spreadsheets e.g. SUM.</i>
Orientation	<i>Location or position e.g. left, right, up, down.</i>
Chart	<i>A sheet presenting information in the form of graphs or tables.</i>
Formula	<i>An equation used in spreadsheets in order to perform calculations on data.</i>

From **Module 5** , pupils will be selecting and using tools and facilities in Database software to enter, sort and search for information for business purposes.

Key Word	Definition
Database	<i>A base of information which could be filed electronically or manually.</i>
Flat File Database	<i>Only one table of information is used to build this database.</i>
Form	<i>A way to input the data in the database effectively.</i>
Primary Key	<i>A unique identifier of a collection of records.</i>
Query	<i>A search for information in the database.</i>
Report	<i>Information which could be used to make decisions.</i>
Table	<i>The structure of how the database will look like.</i>

Module 6 Students will use a cloud based multimedia presentation software to create an exciting interactive presentation (Prezi) Students will be able to create an exciting presentation and include, text, images, videos and other presentation media placed upon the canvas. Students will be able to designate the size of objects and pan and zoom in and between these objects in a prescribed navigation path. Students will be able to gain knowledge that can be confidently used in other subjects.

Key Word	Definition
Multimedia	<i>is media and content that uses a combination of different content on the web</i>
Navigation	<i>A well-designed structure makes it easy to define a navigation system, and the two together make designing page layouts</i>
Pan	<i>Move around in a direction</i>
Zoom	the focal length (and thus angle of view)
Canvas	Canvas is a technical and general graphics drawing, imaging,

Assessment

In the first part of a topic students will learn new skills and complete practice tasks to develop Computing capability. Throughout the year students will be assessed and tested on six generic assessment tasks which will be produced independently by students. The assessment tasks will have less direct teacher input.

When students are set homework tasks their work is marked and annotated with an effort, attainment grade and National Curriculum level and sub level, in line with the Computing Department and Academy Policies. Students' work is assessed throughout each topic both formative and summative, students organise and store work in a student file in academy. All marks are collated on a central tracking spreadsheet using the Aim High software.

Target setting

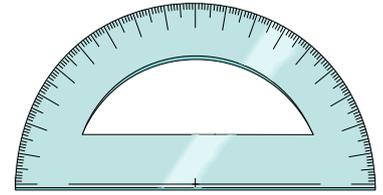
Target setting is part of an on-going process between teacher and student. Teachers provide written positive constructive comments on work, alongside attainment and effort marks, about every third piece of homework. At the end of each project a summary sheet details ways that students can improve their work. Targets are also listed on annual written reports.

Some Computing targets may include:

- To become an independent learner
- To use Computing to complete **all** homework whenever possible and relevant.
- To use 'Print Preview' to check a document **before** printing.
- To be ecologically aware and 'think before printing'
- To include a title in a **header** and a name in the **footer** before printing.
- To consider **purpose** and **audience** when producing work using a computer.

To experiment and try as many advanced tools in a program as possible

MATHEMATICS



This subject is taught using a levelled approach. Students work on topics that are appropriate to their ability.

KEY WORDS	DEFINITION
SQUARE	What you get if you multiply a number by itself (e.g. 25 is the square of 5)
SQUARE ROOT	The opposite of square: since 25 is the square of 5, 5 is the square root of 25
SUM	The result of adding two or more numbers
FACTOR	The numbers that go into something exactly (e.g. the factors of 6 are 1,2,3 and 6)
MULTIPLE	The answers to a times table (e.g. the multiples of 5 are 5,10, 15, 20, and so on)
PRODUCT	The result of multiplying two or more numbers
PROBABILITY	How likely something is to happen (written as a fraction, decimal or percentage)
MEAN	The result of adding some numbers and dividing by however many there were.
MEDIAN	The middle number when data is lined up in order of size
MODE	The most common one
RANGE	The biggest take away the smallest
FREQUENCY	How often something happens
RATIO	The relationship of one thing to another, measured by their quotient
NEGATIVE NUMBER	A number less than 0
BEARING	The angle of one place from another, measured clockwise from 'North'
POWER/INDICES	How many times a number is multiplied by itself
ACUTE ANGLE	An angle less than 90°
OBTUSE ANGLE	An angle more than 90° but less than 180°
REFLEX ANGLE	An angle more than 180° but less than 360°
DISCRETE	Data which can only take on certain values (e.g. the score on a dice)
CONTINUOUS	Data which can take on any value (e.g. time, weight, height)
FREQUENCY TABLE	A way of summarising data

KEY WORDS	DEFINITION
AREA	The amount of space inside a flat (two-dimensional) shape
EXPRESSION	A sum involving letters, such as $a+2$
EQUATION	A sum involving letters with its answer, such as $a+2=7$ (so a must be 5)
GRAPH	A means of illustrating a connection between two amounts
PIE CHART	A way of representing information in a circle (or 'pie')
FRACTION	One number divided by another
DECIMAL	A number after the decimal point, such as the '6' in 2.6
PERCENTAGE	A fraction of 100
SCATTER DIAGRAM	A graph plotting one set of data against another
CORRELATION	The degree to which two sets of data are related
nth TERM	An expression which can be used to find any term in a sequence
VOLUME	The space within a 3-dimensional shape
INEQUALITY	A statement that something is bigger or smaller than something else
TRIAL AND IMPROVEMENT	A numerical (an inexact) way of solving equations
THEOREM	A rule which applies in all cases (and can be proved)
TRANSFORMATION	The mapping of one image onto another
TRANSLATION	A shift (e.g. move a shape 3 square along and 2 square down)
ROTATION	Twisting a shape around a point by a number of degrees
REFLECTION	A mirror-image
LINE SYMMETRY	When the two halves of a shape are mirror-images of each other
ROTATIONAL SYMMETRY	When a shape fits into itself when twisted around
QUADRATIC EQNS	Equations involving a squared term
HYPOTENUSE	The longest side of a right-angled triangle

In Globalisation Week, students will be calculating the volume of water that they flush away each year.

ASSESSMENT

Tests will be given at least every half term. National Curriculum levels will be awarded. Assessment is continuous throughout the year as teachers keep a record of homework marks. During exam week students complete a SAT paper at an appropriate level. This includes a non-calculator paper and a mental arithmetic test. Any part of the syllabus may be tested. A National Curriculum level will be awarded on the basis of the test results.

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS IN YEAR 8
<p>During test week, students complete a past Key Stage 3 SAT paper. These are designed to give each student an accurate National Curriculum level.</p> <p>There are four assessment tasks to be completed during the year, which also are designed to give levels. These take place during normal lessons and the teacher will advise students when these are due to take place.</p> <p>The teacher will routinely set homework so that students can monitor their own performance. The work is usually marked in class so that feedback can be given quickly and problems resolved as soon as possible. The teacher will monitor the homework and use it to measure progress.</p>	<p>Key Objectives (mainly level 5 and some level 6)</p> <ul style="list-style-type: none"> • Add, subtract, multiply and divide integers. • Use the equivalence of fractions, decimals and percentages to compare proportions; calculate percentages and find the outcome of a given percentage increase or decrease. • Divide a quantity into two or more parts in a given ratio; use the unitary method to solve simple word problems involving ratio and direct proportion. • Use standard column procedures for multiplication and division of integers and decimals, including by decimals such as 0.6 or 0.06; understand where to position the decimal point by considering equivalent calculations. • Simplify or transform linear expressions by collecting like terms; multiply a single term over a bracket. • Substitute integers into simple formulae. • Plot the graphs of linear functions, where y is given explicitly in terms of x; recognise that equations of the form $y = mx + c$ correspond to straight-line graphs. • Identify alternate and corresponding angles; understand a proof that the sum of the angles of a triangle is 180° and of a quadrilateral is 360°. • Enlarge 2-D shapes, given a centre of enlargement and a positive whole-number scale factor. • Use straight edge and compasses to do standard constructions. • Deduce and use formulae for the area of a triangle and parallelogram, and the volume of a cuboid; calculate volumes and surface areas of cuboids. • Construct, on paper and using ICT, a range of graphs and charts; identify which are most useful in the context of a problem. • Find and record all possible mutually exclusive outcomes for single events and two successive events in a systematic way. • Identify the necessary information to solve a problem; represent problems and interpret solutions in algebraic, geometric or graphical form. • Use logical argument to establish the truth of a statement.

MUSIC



OVERVIEW OF YEAR 8

Unit	Title	ASSESSMENT TASK		
		Main focus for Listening	Performance	Composition
5	Guitar	Rock music	Inside Outside Ensemble	
6	Samba	Folk Song Arrangements	Folk Song	
7	Harmony and Improvisation	Jazz		Jazz Improvisation
8	Introductions and Themes	Film Music		Film Trailer

All students will study music for 2 periods a week throughout year 8.

Each lesson will cover the three required activities for music at Key Stage 3: listening, performing and composition.

Listening skills will be taught through listening to CDs, watching DVDs and making written and verbal responses to questions asked by the teacher. Students will also learn specific vocabulary for each topic and knowledge of this vocabulary will be tested every week.

Performing skills will be taught through playing pieces on the keyboards, guitars, singing songs and playing percussion instruments. Students will play on their own, in a group and sometimes be asked to play and sing as a class.

National Curriculum levels will be recorded on log sheets for each topic. At the end of the year students will be awarded one National Curriculum level from 1 to 7 based on the average grades for the year. These grades will also be used for all reports and tracking documents used by the Academy.

Here is a description of some of the work in each topic:

UNIT 5: GUITAR PERFORMANCE

For this topic students will be playing and singing various rock songs.

UNIT 6: SAMBA

For this unit students will study and perform various samba pieces and explore the music of Latin America.

UNIT 7: IMPROVISATION

In this unit students will learn about jazz and blues and how to improvise music.

UNIT 8: INTRODUCTIONS AND THEMES

In this unit students will compose music to a film trailer using Cubase software.

ASSESSMENT

During each topic students complete assessment log sheets that will be used to monitor and assess progress.

National Curriculum levels from 1 to 8 will be awarded for performing, composing, listening and appraising.

THE ELEMENTS OF MUSIC	
Melody	The main tune. The main part in a piece of music. A melody consists of one note at a time.
Harmony	The chords. The way in which notes fit together in pitch.
hythm	The timing of the music. The beat and where notes occur in time.
Form and structure	The number of sections. How a piece of music is built, the number of different sections and how they change.
Texture	The number of parts. The layers of a piece of music, the number of different instrumental layers and how they change and interact.
Tempo	The speed of the music. The feel and ways in which the speed changes.
Timbre	The sound of each note. The physical properties of the sounds produced.

VOCABULARY YOU NEED TO KNOW AT KEY STAGE 3	
Melody and pitch	High/low, scale, passing note, register, octave, range, sharp, flat, treble clef, bass clef, note names, major, minor, movement by step, movement by leap, key signature
Harmony	Notes fitting together, diatonic, tonic, dominant, subdominant, chord, major, minor, seventh, modulation, movement in thirds, movement in 6ths,
Rhythm	Pulse, beat, crotchet, quaver, semiquaver, dotted, time signature, $\frac{3}{4}$, $\frac{4}{4}$, $\frac{6}{8}$, off beat, cross rhythm, syncopation
Form and structure	Sections, binary, ternary, round, introduction, coda, cadenza, instrumental break, verse and chorus, middle 8, symphony.
Texture	Parts, layers, homophonic, polyphonic, monophonic, melody and accompaniment, countermelody
Tempo	Speed, ritardando, accelerando, rubato,
Timbre	Type of sound, strings, woodwind, brass, percussion, Soprano, alto, tenor, bass, reverberation, EQ
Dynamics	Volume, crescendo, diminuendo, forte, piano

Music Homework

Music of the Week

Throughout the year you will be set homework asking you to listen to music posted on the learning web. You will need to access the Branston Community Academy learning web/Music/Key Stage 3/Homework/Music of the week folder to access the music.

If you do not have internet access please ask your music teacher who will provide the sound files on a memory stick or CD.

Vocabulary

You will be asked to learn vocabulary throughout the year. The vocabulary will also be posted on the learning web.

Musical Activities

Students are encouraged to attend lunchtime and afterschool music groups. Details and times are posted in the academy notices and in the music block corridor. Groups include:

Singing group

Djembe Group

Band

Glee group

Pop/Rock groups

PERSONAL FINANCE



This course gives the student the opportunity to develop their knowledge and understanding of personal finance. In particular, the student will consider the legal and practical constraints on the sources and uses of money; the methods of organising their money through personal budgeting; the considered use of appropriate bank and building society accounts and the concepts and consequences of overspending or payment default.

Students will examine the following areas:

UNIT 1 – PERSONAL FINANCIAL ENCOUNTERS

In this unit, students will develop an understanding of personal financial encounters which everyone experiences in day-to-day life. They will learn what makes money legal, where income can come from and how to understand the documentation, for example payslips, relating to income. This unit will help students develop a practical understanding of using bank accounts, and to calculate the true cost of spending and foreign exchange.

The aim of this unit is to increase students' understanding of everyday financial encounters, enabling them to make informed decisions about their finances.

UNIT 2 – MONEY MANAGEMENT SOLUTIONS

In this unit, Money Management Solutions, students will develop an understanding and good working knowledge of money management; the banking system; methods of payment available to them and where to go for help/advice.

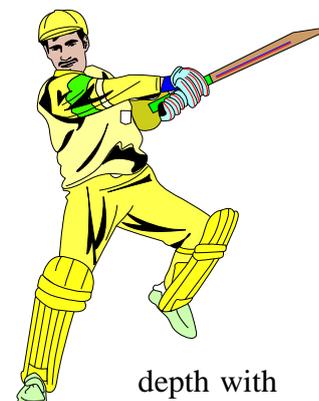
The aim of this unit is to increase the students understanding of the banking systems available to them, enabling learners to make informed choices about their bank account and spending decisions.

UNIT 3 – PERSONAL FINANCE MANAGEMENT

In this unit, students will develop an understanding of the consequences of overspending and/or failing to pay back their borrowings. They will learn where they can go/ the products they can buy for personal financial protection and the unit will also help students develop a practical understanding of spending choices and the impact of their choices on a personal financial budget.

The aim of this unit is to increase the students understanding of personal finance, taking into account affordability, choice and protection.

PHYSICAL EDUCATION



In progressing to Year 8 students will get further opportunities to participate, learn and improve in a whole range of sports. Skills will be taught in more emphasis moving away from the development of basic skills to the those skills in competitive situations.

depth with application of

Students will get far greater opportunity to officiate and coach small groups within them. More in-depth rules will be introduced, as pupils are encouraged to look for ways to succeed and win at sport.

Pupils will be actively encouraged to further develop their Leadership skills and be given clear opportunities to lead both within and out of lessons. Pupils with strengths in this area will get the opportunity to extend these skills through an additional Leadership course.

Playmaker Leadership Award, students will have the opportunity to qualify as a Leader. Training is based upon – enjoyment, co-operation, organisation, safety, communication and responsibility. Students will develop their knowledge of warming up and cooling down, and be taught the STEP principle and how to apply it when delivering a session to a small group

The students will be actively encouraged to analyse their own and others performance in more depth with use of more technical terms and will be expected to show how they can improve and help others improve their current skill levels.

All students will take more complex warm ups and cool downs.

Pupils will further develop their knowledge of the key relationship between Exercise and Health and the importance of exercise to maintain a fit and healthy lifestyle. They will be encouraged to identify areas of sport that they enjoy and develop these areas further, to ensure a fit and healthy lifestyle is maintained.

WINTER ACTIVITIES

These run from September to Easter and include the following:

All Students: Swimming; Gymnastics; Badminton; Rugby (Tag for Girls); Football; Cross Country; Circuits; Handball; Basketball; Netball; Dance; Uni Hoc

SPORTS	KEY WORDS
SWIMMING	Backstroke; Breaststroke; Personal Survival; Treading Water; Surface Dive
GYMNASTICS	Travelling; rolling; flight; sequencing; balance
BADMINTON	Serve; forehand; smash; drop shot; backhand; singles; doubles
RUGBY	Passing; tackling; rucking; scrum; mauling; teamwork;
SPORTS	KEY WORDS
FOOTBALL	Attacking & defending as a team; offside; pressing; width;
BASKETBALL	Lay up; passing; dribbling; defence; set shot; man to man; contact;

	bench ball
NETBALL	Centre pass; positions on court; dodging; footwork; marking; shooting; attacking & defending
DANCE	Floor pattern; aesthetic quality; stimuli; timing; routines; interpretation of music

SUMMER ACTIVITIES

These run from Easter to July and include the following:

All Students: Athletics; Tennis; Stoolball
 Cricket;
 Rounders;
 Swimming

SPORTS	KEY WORDS
ATHLETICS	Sprinting; pace judgement; shot putt; javelin; discus; long jump; relay; technique
VOLLEYBALL	Dig; Set; Smash; Serve; Team rotation; teamwork; communication
TENNIS	Forehand; backhand; serve; volley; smash; tie breaks; tramlines;
CRICKET	Batting; bowling; fielding; seam; grip; catching; long barrier; tactics
ROUNDERS	Batting; bowling; back stop; scoring; no-ball

Students will have the opportunity to broaden their experience of Sport and Physical Education. They will realise the importance of participation in physical activity and its direct link to healthy living and a longer life.

They can further develop their interest and skill levels through extra-curricular clubs and teams. School team will run in Football, Netball, Rounders, Cricket and Tag Rugby (girls only). Clubs will be available in all areas. Tutor Group.

“Change One Thing” Week

All pupils will take part in “Change One Thing” week in the Summer term. During this week all pupils will be given the opportunity to try a different sport in their PE lessons. These will be taken by external coaches, hired in for the week. Last year lessons included Cheerleading, Street dance, Boxercise, Parkour, Extreme Golf and a variety of Extreme sports

Globalisation Week

All pupils will undertake two Globalisation weeks in the Autumn and Summer terms. During these weeks, pupils will be given the opportunity to experience sports from around the world. All of these sports will not be regularly taught on the curriculum and will be new to most pupils. These sports could include American Football, Volleyball, Kabbadi, Hurling, Lacrosse.

In Year 8 the following skills will be assessed in detail:

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS YEAR 8
<ul style="list-style-type: none"> • Assessment of student's practical skills is ongoing throughout the year in every lesson • Each individual sport is assessed and levels are recorded after their respective block of work • Student performance is internally recorded and the average level of their 10 sports is written on the report • After each block a department award will be given to award high achievement and effort 	<ul style="list-style-type: none"> • Ability to link skills, technique and ideas fluently together • Performance shows a distinct degree of precision, control and fluency. • Know how exercise affects your body and can use some technical words to explain • Show understanding of tactical needs and can begin to implement them in competitive situations • Ability to constructively comment on other peoples performance • Shown to improve own performance by watching others • Ideas how to improve others performance • Can show how to warm up and cool down properly

By the end of Year 8 pupils should aim to reach Level 4a/5c. To achieve this level they need to be able to answer YES to the following

- I am able to choose and put together the **skills, techniques** and **ideas**, showing **accuracy, control, consistency** and in a fluent way.
- I am able to think of ways to improve **tactics, strategies** and **compositions**.
- I am able to analyse, **comment** sensibly on **skills** and **techniques** and how to use them in my own and other pupils **performance** in the group.
- I am able to develop **existing skills** and **techniques** to improve my performance.
- I am able to explain how the **body reacts during exercise** and **warm up and cool down** in a way that suits different types of exercise.
- I am able to explain why **regular, safe exercise** is good for my health and fitness.

RELIGIOUS EDUCATION



UNITS STUDIED IN YEAR 8 INCLUDE:

WHAT IS SACRED IN SIKHISM?

This course explores the concept of 'sacred' in the Sikh religious tradition. Students will look at the lives of the Ten Gurus, requirements of Sikhism and the implications for Sikhs today.

KEY WORDS	DEFINITION
GURU	Teacher
GURU GRANTH SAHIB	The Sikh Sacred Text and the 'living Guru'
KHALSA	Brotherhood of Sikhs
MOOL MANTRA	Prayer containing the main beliefs about God, written by Guru Nanak
GURDWARA	Place of worship for Sikhs
5Ks	5 symbols of Sikh identity and strength

FAITH INTO ACTION

A two-part course allowing students to consider what is special in relation to a person and the qualities of a good leader. They then study the life of significant figures both past and contemporary who have had a great impact on others due to their religious beliefs, lifestyles and authority.

KEY WORDS	DEFINITION
MUHAMMED (PBUH)	Founder of Islam. The last and greatest prophet
TEN GURUS	Founder and teachers of the Sikh faith
AUTHORITY	Someone with the perceived right to guide your behaviour
HYPOCRISY	Saying one thing and doing another
INSPIRATION	Something which makes you feel that you can succeed or create

TRUTH, STORY AND COMMITMENT

Students will look at sacred stories and writings. They will consider how stories are passed down from generation to generation and how stories may be a means of expressing commonly held beliefs, ideas and truths. Extracts from sacred writings are studied.

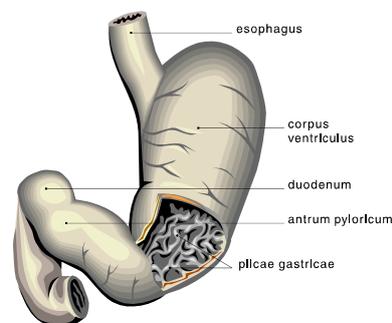
KEY WORDS	DEFINITION
MYTH	Fictional or traditional story based on ancient beliefs
PARABLE	A story with a moral
EVOLUTION	The theory of natural and human progress
CREATION	The act of making something for a purpose
TORAH	Jewish scriptures

WHAT IS SACRED IN BUDDHISM?

KEY WORD	DESCRIPTION
Noble Eightfold path	The way in which the Buddha taught Buddhists to live
Four noble truths	The four truths of life. 1. Suffering happens 2. Suffering is caused by desire 3. There is a cure for suffering 4. The cure for suffering is the eightfold path
Karma	The cycle of cause and effect
Nirvana	A state of eternal happiness and a release from the suffering of this world
Sangha	The Buddhist community
Re-incarnation	The Buddhist belief that whilst the body dies, your soul is reborn into another body
Dukkha	The state of suffering and pain
Dharma	The teachings of the Buddha
Enlightenment	The state of true happiness and understanding

ASSESSMENT FRAMEWORK	COMMON LEARNING TARGETS IN YEAR 7
<ul style="list-style-type: none"> • Students’ work will be assessed throughout the year using the whole school marking guide. • In addition students will be given a level for AT1; Learning about Religion and AT2: Learning from Religion. These will be based on assessment tasks during the following units; <ul style="list-style-type: none"> What is sacred in Sikhism? Faith into Action How do Sikhs and Buddhists respond to Environmental Issues? 	<ul style="list-style-type: none"> • Targets will be set at the end of each assessment in line with the Eight Level Scale of Expectations.

SCIENCE



AUTUMN TERM

Outline of Work Topics

Unit 1: Organisms, Behaviour and Health

- Keeping Health (Food, digestion breathing, respiration, circulation and fitness)
- Studying Disease (Microbes, diseases, immunisation, vaccination, preventing infection, using microbes)

KEY WORD	DEFINITION
DIET	The food that you eat
BALANCED DIET	Eating a wide variety of foods to give us all the things we need
DIGESTION	Process that breaks food into soluble substances in our bodies
AEROBIC RESPIRATION	Process that releases energy from digested food. Needs oxygen from the air. Carbon dioxide is produced as a waste gas
CIRCULATORY SYSTEM	System containing the heart and blood vessels
BACTERIUM	A type of microbe bigger than viruses. (plural = bacteria)
MICROBE	A very small living thing
VIRUS	The smallest type of microbe. Many people think they are not living because they do not carry out the seven life processes for themselves
VACCINE	A mixture containing microbes which normally cause disease which have been treated so that they don't. Injected into people to make them immune
WHITE BLOOD CELL	A type of blood cell which helps to destroy microbes. They either engulf microbes or make antibodies

Unit 2: Chemical and Material Behaviour

- Separating Mixtures (Dissolving, separation techniques)
- Atoms, Elements and Compounds (The periodic table, chemical equations)

KEY WORD	DEFINITION
DISSOLVING	When a solid splits up and mixes with a liquid to make a solution
SOLUBLE	A solid that can dissolve in a liquid. Salt is soluble in water
FILTERING	Separating things that have not dissolved from a liquid. The liquid is passed through a filter to do this
DISTILLATION	The process of separating a liquid from a solution by evaporating the liquid and then condensing it
CHROMATOGRAPHY	Separating dissolved solids from one another. The solids are usually coloured

ELEMENT	All the atoms in an element are the same. A substance that cannot be split up into anything simpler by chemical reactions
METALS	Elements that are shiny, conduct heat and electricity well, and often have high melting and boiling points
NON-METALS	Elements that are not shiny and do not conduct heat and electricity well.
MIXTURE	Two or more different substances that are not joined to each other
COMPOUNDS	Substances that can be split up into simpler substances

SPRING TERM

Outline of Work Topics

Unit 3: Energy, Electricity and Forces

- Magnetism (Magnetic materials, magnetic fields, electromagnets and their uses, generating electricity)
- Sound and Heat (Sound waves, hearing, ultrasound, temperature, how heat is transferred)

KEY WORD	DEFINITION
MAGNETIC MATERIALS	Materials that are attracted to a magnet; iron, cobalt, nickel and steel are all magnetic materials.
ATTRACT	Two things pulling towards each other
REPEL	Push away
MAGNETIC FIELD	The space around a magnet where it can affect magnetic materials or other magnets
ELECTROMAGNET	A coil of wire with electricity flowing in it. An electromagnet has a magnetic field like a bar magnet
DECIBEL (dB)	Unit for measuring the loudness of a sound
PITCH	How high or low a note sounds
EARDRUM	A thin membrane inside the ear which vibrates when sound reaches it
TEMPERATURE	How hot something is, measured in °C
CONDUCTION	The way heat travels through solids
CONVECTION	The transfer of heat in fluids
RADIATION	The transfer of heat energy by electromagnetic waves

SUMMER TERM

Outline of Work Topics

Unit 1: The Environment, Earth and Universe

- Life and Death (Predators and prey, populations)
- Space (Day and Night, Seasons, The Moon, The Solar System, Gravity, Satellites)

KEY WORD	DEFINITION
ADAPTED	When the features of an organism help it to survive in a habitat, it is adapted to that habitat
POPULATION	Total number of individuals of the same species in a habitat
PREDATOR	An animal that catches and eats other animals
PREY	An animal that is caught and eaten by another animal
FOOD WEB	Many food chains linked together
SOLAR SYSTEM	A star with planets and other objects orbiting it
AXIS	Imaginary vertical line that goes from one pole of the Earth to the other. The Earth spins around its axis
ORBIT	The path that a planet takes around the Sun, or the path that a moon or satellite takes around a planet
GRAVITY	The force of attraction between any two objects
SATELLITE	Anything that orbits a planet

ASSESSMENT AND TARGET SETTING

Students will use checklists to self-assess their knowledge before and after each unit. There will be a formal test at the end of each unit. Targets will then be agreed between the teacher and the student.

In addition, there will be level-assessed written tasks set throughout the year focussing on “How Science Works”. How Science Works is divided into five sections:

1. Thinking Scientifically
2. Understanding the Applications and Implications of Science
3. Communicating and Collaborating in Science
4. Using Investigative Approaches
5. Work Critically with Evidence

During the year, there will be a minimum of one assessment in each section. Students will receive written feedback with targets on how to improve in that section.