CURRICULUM
KNOWLEDGE AND SKILLS
SUBJECT REFERENCE GUIDE
YEAR 8

ART AND DESIGN

Students will develop their **KNOWLEDGE** of:

- how to explore different artists and make connections with them.
- how to be successful in their work and how to use success criteria.
- how to use the formal elements and understand what they are.
- how to interpret and read artwork through the understanding of Visual Literacy.
- how to collect resources to help in their own work.
- how to use artist concepts to help develop their own ideas.
- Explore themes such as Surrealist Landscapes and World Cultures, and artforms associated with these themes.

Students will develop their **SKILLS** in:

- drawing through means such as observational studies, photography and documenting ideas.
- using and experimenting with different media such as pencil, pens, different types of paint, collage, inks.
- learning new processes such as 3D design, print making and mixed media.
- developing a personal response through creativity within their work
- (developing relevant ideas, CPR) including problem solving.
- discussing and explaining ideas relevant to their work using art terminology.
- discussing and comparing the work of others (artists and such like).
- annotating and evaluating using relevant language and keywords.

COMPUTING

Students will develop their **KNOWLEDGE** of:

- Advantages and disadvantages of using social media
- Different types of Cyber-attacks and how to prevent these
- How a computer uses binary
- The different components needed for a computer to work effectively
- The difference between hardware and software and their role within a computer system.
- How and why networks are used
- Some computational thinking techniques
- Basic programming concepts
- Different types of graphics

Students will develop their **SKILLS** in:

- How to stay safe online – specifically when using social media
- How to report suspicious behaviour online
- How to protect against cyber attacks
- How to convert between binary/denary/hexadecimal
- How to add binary values
- How to break down a problem and create a suitable solution.
- How to find and correct errors in programs (debugging).
- How to declare and assign variables.
- How to describe the difference between the internet and WWW
- How to evaluate the benefits of different networks
- How to edit graphics

DESIGN TECHNOLOGY

Students will develop their **KNOWLEDGE** of:

- celebrating British Innovation and successful design in history.
- developing knowledge to make informed choices with regard to smart and new material properties and selection.
- understanding the performance characteristics of materials and the impact this has on medical design.
- developing their knowledge and understanding of how to apply iterative design strategies.
- developing knowledge of a user's needs and how to design to prevent misuse and crime
- being able to test, evaluate and develop ideas
- being able to discuss the benefit of automation and Computer Aided Manufacture
- understanding the wider impact of technology and sustainable approaches

Students will develop their **SKILLS** in:

- being able to carry out effective research tasks
- applying and developing technical communication skills
- developing and applying evaluation and analysis skills
- being able to plan and follow a range of design approaches
- developing independency when working on a project
- use of modelling and Computer Aided Design in communicating ideas
- carrying out testing strategies and recording results
- being able to identify and record areas for improvement and/or modification
- developing the ability to discuss and articulate ideas

DRAMA

Students will develop their **KNOWLEDGE** of:

Theatrical Style:

- Bertolt Brecht and Epic theatre
- Steven Berkoff and Total theatre
- Frantic Assembly and Physical theatre

Cultural Enhancement:

- War and conflict (WW1/2)
- Exploration of Shakespeare's 'Macbeth'
- 1970s/80s Britain (Thatcherism)
- Outcasts in society (making links to current social issues)
- Social and political impact of key historical events (Slave Trade, Titanic, Hillsborough, 9/11)

Theatrical Conventions:

- Alienation devices (breaking fourth wall, placards, 360 still image, juxtaposition, third person narrative, multi-role)
- Stylised movement (choral, robotic, repetition, slow/fast motion, exaggerated, canon)
- Physical theatre devices (tableaux, chorus, dynamics, body as prop, repetition, canon)
- Marking the moment
- Conscience alley

Students will develop their **SKILLS** in:

- Communication and oracy
- Basic analysis i.e. giving reasons and explanations when offering ideas and evaluating work
- Group work
- Leadership/directing
- Active listening
- Verbal evaluation
- Using drama terminology when creating or evaluating work
- Audience awareness

ENGLISH

Students will develop their **KNOWLEDGE** of:

Reading -

- a range of texts to help students articulate their ideas in a sophisticated way
- the way in which language, structure, form and context are used to enable a writer to express their ideas and effect their audience.

Writing –

- the methods used to write with engagement and control.

Speaking and Listening -

- the various ways in which talk and discussion can be used to articulate meaning.

Cultural Knowledge –

- How English has changed from Ancient Greece to the modern era.
- The influences that the different cultures and eras have had on the English Language and its Literature.

Students will develop their **SKILLS** in:

Reading -

- articulating informed interpretations of meanings supported by appropriate textual reference
- Embedding references into a response to support interpretations.
- Inferring meaning based upon evidence
- analysing methods used to convey ideas, including language, structure & form
- relating different texts to their relevant social, historical and literary context
- analysing methods used to convey ideas, including language, structure & form
- identifying and commenting on the effect of writer's methods, using the author's name when analysing the impact of techniques
- comparing ideas, attitudes, methods and contexts in order to evaluate effectiveness
- evaluating the effect of a text on its audience.

Writing -

- selecting appropriate words and phrases from a rich and wide vocabulary for both meaning and effect
- demonstrating control of spelling, punctuation and grammar
- utilising a variety of sentence structures with control
- organising cohesive whole texts, effectively sequencing and structuring details within texts
- producing texts that match the audience, purpose and register of different genres
- writing with control and engagement.

Speaking and Listening -

- talking in purposeful and imaginative ways to explore ideas and feelings
- listening and responding to others, including in pairs and groups
- creating and sustaining different roles and scenarios
- understanding the range and uses of spoken language.

FOOD AND NUTRITION

Students will develop their **KNOWLEDGE** of:

- understanding food, diet and health.
- applying the principals of the Eat Well guide and relate this to their diet.
- applying the principles of food safety and hygiene.
- the main nutrients and their functions.
- the source, seasonality and characteristics of a wide range of ingredients.
- developing a deeper knowledge of food preparation and cooking techniques.
- understanding of British dishes and other cultures.

Students will develop their **SKILLS** in:

- following a recipe using appropriate ingredients and equipment to prepare and cook a range of more complex dishes.
- demonstrating a wide range of food preparation and cooking techniques.
- developing creative, technical and practical expertise to perform everyday tasks confidently.
- evaluating and testing their ideas and products.
- using a range of specialist equipment, techniques and processes.
- using a range of ingredients to make nourishing savoury and sweet recipes.
- using the cooker (hob, grill, oven) with increased confidence.
- using the bridge hold and claw grip with confidence.
- knowing how to test that food is cooked correctly.
- knowing the correct method to prepare a range of fruit and vegetables.

GEOGRAPHY

Students will develop their **KNOWLEDGE** of:

- Population and migration
- Ecosystems
- Changing places
- Rivers
- Global superpowers

Students will develop their **SKILLS** in:

- Cartography
- Graphicacy
- Numeracy
- Enquiry
- Communication

HISTORY

Students will develop their **KNOWLEDGE** of:

- Reformation
- Witchcraft
- The English Civil War
- Restoration Britain
- The Industrial Revolution
- The British Empire – expansion
- Irish Nationalism

Students will develop their **SKILLS** in:

- Causation
- Change and Continuity
- Using Historical evidence
- Interpretation

MATHS

Students will develop their **KNOWLEDGE** of:

- being able to interpret ratio tables and using these as tools to solve numerical problems
- selecting appropriate models to represent and solve numerical problems including comparing measurements and operations with fractions
- using appropriate calculations including unitary method and begin to consider decimal and fractional multipliers in developing proportional reasoning
- using the number line effectively to order numbers written in different formats for example, indices and standard form
- using a combination of strategies to calculate the area of more complex shapes including non-rectilinear
- using the area model to expand single and double brackets and begin to reverse this process (leading to factorising) whilst further developing algebraic manipulation skills
- exploring co-ordinate geometry through big picture ideas linking algebra and graphs
- developing statistical reasoning which begins to draw conclusions from data represented in varying ways
- further developing geometric reasoning through exploring shape and space, including circle geometry

Students will develop their **SKILLS** in:

- building on the noticing skills developed, they make and test conjectures
- successfully justifying their conjectures and refining these with contributions from others
- developing generalisation skills
- regularly questioning peers' contributions to the development of mathematical ideas
- being able to compare graphs and representations. Students use information given in graphical form to drive new information. Students appreciate links in graphical representation and are able to reverse problems (start with any aspect to complete others).

- considering what makes a given problem more demanding as well as how it can be simplified
- using mathematical language appropriately.

MFL – FRENCH, GERMAN AND SPANISH

Students will develop their **KNOWLEDGE** of:

- how to build on basic grammar and vocabulary from Year 7 as appropriate to ensure progress
- using a wide range of verb forms including regular and irregular verbs
- using verb forms in past, present and future tenses with confidence
- using time markers to express different time frames
- agreeing adjectives correctly and accurately
- using a broad range of relevant vocabulary, including vocabulary from the GCSE specification, to express ideas in creative ways
- manipulating grammar to express their own ideas.

Students will develop their **SKILLS** in:

- checking work systematically for errors
- reviewing and redrafting work and correcting errors regularly (study skills)
- making connections between Target Language and English to support progress
- speaking for longer with increasing spontaneity in answering questions
- developing opinions using a range of structures
- practising challenging spellings and key expressions / verbs to improve accuracy in writing
- using language creatively to express their own ideas
- reading and understanding both gist and detail in longer texts
- listening to and understanding speech of varying speed and length to understand both gist and detail
- translating texts using their understanding of both the Target Language and English to convey meaning accurately
- independently using a dictionary and / or vocab book as reference for support and to deepen vocabulary
- understanding and appreciating a range of literary texts such as poems, stories and songs, which stimulate ideas and opinions
- translating short texts between English and the Target Language
- identifying learning needs from tests and assessments (study skills) and responding to feedback.

MUSIC

Students will develop their **KNOWLEDGE** of:

Music Theory:

- Developed application of the stave, treble and bass clef pitches, rhythm values and rest values.
- Accidentals and chromatic notes
- Key signatures
- Ukulele and guitar chord boxes

Appraising Music:

- The development of the orchestra over time.
- Music from a variety of different genres including music from the 'great composers.'
- Developed understanding of the musical elements and linked subject specific vocabulary.

Students will develop their **SKILLS** in:

Performing:

- Keyboard: Right hand melodies to include moving hand position and chromatic notes.
- Keyboard: playing with two hands.
- Singing: singing as a class in unison and in simple parts. Singing as part small of a group performance.
- Ukulele and Guitar: performing multiple chord sequences.
- Percussion: inclusion of percussion in smaller ensemble contexts.

Composing:

- Improvising, composing, and notating extended rhythms and melodies.
- Sequencing, arranging, and editing using music technology software.
- Composing drum loops and bass lines using music technology software.

PE

Students will develop their **KNOWLEDGE** of:

- more advanced skills, techniques and tactics used in sports and physical activities
- rules and regulations for a range of sports
- the immediate effects of exercise on the body
- linking muscle names to specific joint movement across a range of activities
- more advanced compositional ideas as well as attacking and defensive principles
- safety factors during physical activity and sport for more advanced sport specific skills
- the benefits of leading fit and healthy lifestyles including extracurricular sports clubs.

Students will develop their **SKILLS** in:

- climbing, trampolining, health related exercise, invasion games, Dance, Table tennis, athletics & striking & fielding
- teamwork
- techniques in a range of sports in increasingly complex drills under increasing pressure
- overcoming challenging opponents in competitive situations in team and individual games (e.g. Table Tennis/Netball/Hockey)
- pressured decision making in competitive sports, including some analysis of opponents' strategies
- accurately replicating movement patterns and using them successfully under pressure
- identifying strengths and weaknesses of their own and others' work and suggesting improvements

RELIGIOUS STUDIES (RS)

Students will develop their **KNOWLEDGE** of:

- the significance of the Five Pillars of Islam, the Qur'an, Sunni and Shi'a Muslims, the 6 articles and 5 pillars, the 5 roots and 10 obligatory acts
- challenging Islamophobia
- the role of the media in influencing beliefs and attitudes
- Historical and Religious beliefs about the prophet Muhammad (pbuh)
- challenging racism, prejudice and discrimination
- key Buddhist beliefs and practices
- the significance of the teachings of the Buddha
- how Beliefs and Values are expressed through art.

Students will develop their **SKILLS** in:

- analysis of religious texts
- using reasoning and examples to express insights into the relationship between beliefs, teachings and world issues
- evaluating your own and others' views on ultimate questions
- considering the challenges of belonging to religion in the modern world, focusing on values and commitments
- evaluating the significance of religious, historical and other views for understanding abstract concepts
- using a range of sources to find out about topical and controversial issues
- making informed contributions to a debate
- respecting the views of others and exploring a range of opinions to draw your own conclusions
- empathy and sensitivity.

SCIENCE – BIOLOGY, CHEMISTRY AND PHYSICS

Students will develop their **KNOWLEDGE** of:

Biology –

- the principles of diffusion including factors that affect diffusion
- osmosis and its importance in living organisms
- the principles of active transport and why is it important in plants and animals
- how pathogens cause diseases
- the difference between communicable and non-communicable diseases and how each are treated
- aerobic and anaerobic respiration in living organisms necessary for life
- the structure of the respirator and circulatory system and the function of organs within each system
- the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules
- how factors affect the rate of light intensity and how this knowledge is importance in commercial farming
- relationships in an ecosystem, including food webs and nutrient cycling.

Chemistry –

- atoms, elements, compounds and mixtures that they gained in year 7
- how mixtures can be separated and how the type of mixture will determine the separating technique to be used
- metals and their properties, uses, behaviour and reactions as well as how they are extracted from the Earth
- the rates of chemical reactions. Students will learn how to measure the speed of a chemical reaction using various techniques and how different factors can affect the rate.
- the earth's structure and the gasses that form the Earth's atmosphere.
- how changes in the Earth's atmosphere can impact the environment

Physics –

- the helical learning model. Students will cover the same general topics in year 8 as in year 7. Each unit generally starts as a refresher of year 7 knowledge before, deepening that understanding or delving into a new aspect of the topic

- the forces involved in motion. Students calculate and investigate different aspects of speed, velocity and acceleration.
- students review the basics of series and parallel circuits before moving on to more complex ideas of electricity such as static electricity and resistance
- investigating energy changes, and students will learn what the differences are between energy, work and power. This will lead students on to the thermal physics topic, which after linking heat energy and temperature students will look at how energy can be transferred by conduction, convection and radiation.
- the waves unit. Students will revise what they learnt about waves in the light unit of year 7 and compare and contrast that learning with the new topic of light waves.
- gravitational forces, looking at the solar system from the point of view of the forces acing on people, satellites and planets.

Students will develop their **SKILLS** in:

Biology –

- how to use % change and why it is used when measuring changes in volume, length or mass
- how to comment on accuracy and reliability of experiments and suggest improvements
- how to calculate averages e.g. the mean result
- how to describe and explain trends in data
- how to draw line and bar graphs
- how to calculate surface area: volume
- how to safely carry out a heart dissection to locate key structures.

Chemistry –

- research as they find out about the properties and extraction of metals
- using models to help them understand abstract theory
- investigation and will further develop skills learnt in year 7 by forming hypotheses, identifying variables, carrying out controlled investigations, analysing results, drawing conclusions and evaluating their investigative methods.

Physics –

- how to use and manipulate formulas, including appropriate use of units. Students develop these skills through practice in many new situations.
- investigation by developing those learnt in year 7 by; forming hypotheses, identifying variables, carrying out controlled investigations, analysing results, drawing graphs, drawing conclusions and evaluating their investigative methods.