Priestnall

# CURRICULUM KNOWLEDGE AND SKILLS SUBJECT REFERENCE GUIDE YEAR 8

# ART AND DESIGN

Students will develop their **KNOWLEDGE** of:

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

Students will develop their **SKILLS** in:

- drawing through a range of techniques in observational studies
- experimenting and using different media such as pencil, pens, types of paint and collage
- learning new processes such as printmaking, mixed media and basic papercutting
- developing a personal response through creativity withing their artwork
- discussing and explaining ideas relevant to their work using art terminology
- discussing and comparing the work of others (artists and other sources)
- annotating and evaluating using relevant language.

# COMPUTING

Students will develop their **KNOWLEDGE** of:

- understanding the impact technology may have when considering ethical, legal, cultural and environmental issues
- understanding whether a task would be best completed by humans or computers
- applying existing programming knowledge when using Microbits
- knowing the difference between hardware and software and their role within a computer system
- knowing the main functions of an operating system
- how an image is represented in binary.

Students will develop their **SKILLS** in:

- being able to describe a variety of impacts technology may have on individuals and the wider world
- being able to use logical reasoning to predict outcomes
- being able to break down a problem and create a suitable solution
- being able to find and correct errors in programs (debugging)
- being able to declare and assign variables
- binary conversions and addition.

# DESIGN AND TECHNOLOGY

Students will develop their **KNOWLEDGE** of:

- about an increasing range of designers, engineers, chefs, technologists and manufacturers
- iconic design related to Great British design history and broader international designs
- about textile fibre sources e.g. natural and synthetic and fabrics e.g. cotton, felt
- using simple electronic circuits incorporating inputs and outputs including sound
- understand the performance of structural elements to achieve functioning solutions
- understand the properties of materials, including smart materials, and how they can be used to advantage
- about the physical properties of materials e.g. grain, brittleness,
- flexibility, elasticity, malleability and thermal
- simple planning tools, for instance Gant charts
- a variety of design approaches, for example biomimicry and user-centred design, to generate creative ideas.

Students will develop their **SKILLS** in:

- use a broad range of manufacturing techniques including handcraft skills and machinery to manufacture products precisely
- actively involve others in the testing of their products
- evaluate their structures against their original brief and identify ways of improving them
- use a wider, range of materials, components and ingredients, taking into account their properties
- using a broad range of material joining techniques including stitching, mechanical fastenings, heat processes and adhesives
- how to control outputs including sound
- a range of cooking techniques for example, selecting and preparing ingredients; using utensils and electrical equipment
- how to taste and cook a broader range of ingredients and healthy recipes, accounting for a range of needs, wants and values.

# DRAMA

Students will develop their **KNOWLEDGE** of:

- the mystery of Flannan Isle (historical context) and the form of mystery plays
- Bertolt Brecht, Epic Theatre and the concept of Alienation. Where Brecht fits within the development of theatre and his influence on modern day theatre
- works by John Godber and the links between satire/ political theatre to Brecht's Epic Theatre
- script work and how to use dramatic rehearsal techniques in the development of characters from play scripts
- the work of William Shakespeare and his play Macbeth. Historical and social context within the Jacobean period. How to portray status and stock characters
- a variety of real-life historic events, explored through the form of forum theatre and verbatim theatre
- more advanced drama strategies, conventions and techniques
- physical theatre and how to tell a story through physical theatre conventions, with a focus on Frantic Assembly and their building blocks to devising.

Students will develop their **SKILLS** in:

- Developing 360 degree still images focusing on levels to communicate power and status
- Using non-naturalistic movement techniques such as: movement in cannon, unison, exaggerated movement, repeated movement, robotic movement, and movement in both fast and slow motion
- Use of physical theatre and body as prop to commutate narratives
- The use of Narration: Experimenting with first and third person speaking.
- Choral and Canon speech
- Development of the vocal tool box such as: Emphasis, articulation, accent, tone, pace, pitch, projection, and pauses
- Understanding how to deliver classical Shakespearian language and stock characters
- Basic analysis i.e. giving reasons and explanations when offering ideas and evaluating work
- Group work and cooperation
- Leadership/directing
- Active listening
- Verbal evaluation
- Non-verbal communication
- Using drama terminology when creating or evaluating work
- Development of new drama techniques, strategies and conventions.

# 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 -

- 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.

Writing -

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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
- Wars of the Three Kingdoms
- Enlightenment and revolution
- The Industrial Revolution
- The British Empire

Students will develop their **SKILLS** in:

- causation
- change and continuity
- historical evidence
- interpretation
- significance.

# 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.

# MODERN FOREIGN LANGUAGES:
# FRENCH, GERMAN AND SPANISH

Students will develop their **KNOWLEDGE** of:

- understanding that nouns have a gender and knowing the gender of a range of these
- understanding the difference between the different words used to say 'a/the/some'
- agreeing adjectives correctly and accurately
- using different verb forms for regular and some irregular verbs in the present tense
- using time markers to express different time frames
- using verbs in the past, present and future tenses
- understanding and using a variety of vocabulary to add detail to a range of topics.

Students will develop their **SKILLS** in:

- holding a short conversation with some spontaneity
- speaking with generally accurate pronunciation and intonation
- asking questions for communicative purposes
- giving opinions in different ways with reasons
- writing with extended sentences using connectives
- using vocabulary books and/or a dictionary to check spellings and find words
- checking work for mistakes in spelling and meaning
- writing paragraphs which include more complex language
- identifying cognates and key words to understand unfamiliar language
- understanding simple poetry and stories which stimulate their imagination
- 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
- transcribing words and short sentences which they hear with increasing accuracy
- translating texts using their understanding of both the Target Language and English to convey meaning accurately
- identifying learning needs from tests and assessments (study skills) and responding to feedback.

# MUSIC

Students will develop their **KNOWLEDGE** of:

- a range of musical elements – pitch, dynamics etc
- musical symbols – notes on a stave, treble clef, stave etc
- notes of the keyboard
- some notes on a musical stave, read fairly accurately from a score with note names
- rhythmic musical symbols – crotchets, minims etc
- various genres of music and know some of the musical features of that genre.

Students will develop their **SKILLS** in:

Performing Music -

- sing with expression and clear diction
- demonstrate reasonable confidence/high level of confidence in performance
- maintain an appropriate role within a group (leading, solo part or support)
- keep their own part going in a group performance
- perform fluently

Composing Music -

- improvise melodic/rhythmic material within extended structures
- use tempo and dynamics creatively
- create compositions which explore different sounds and the musical elements
- refine and improve work effectively in rehearsals, developing initial ideas further.

Understanding Music -

- recognising a variety of different instrument sounds, knowing the instrument families (to a higher level)
- knowing and recognising musical elements in listening tasks (to a higher level)
- suggesting improvements to their own and others' work
- describing and compare musical features in listening tasks, using appropriate vocabulary
- exploring the contexts, origins and traditions of different musical styles
- using appropriate musical vocabulary when creating or evaluating work.

# PHYSICAL EDUCATION (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:

- 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. rugby/netball)
- 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 improvement.

# 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.


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