CURRICULUM KNOWLEDGE AND SKILLS SUBJECT REFERENCE GUIDE YEAR 8

ART AND DESIGN

Students will develop their **KNOWLEDGE** of:

- art, craft & design's importance and value as a subject.
- art based media, materials and processes and how these can be exploited within their work.
- art, craft & design practitioners (historical and contemporary) styles and movements.
- cultures, ideas and opinions from the wider world.
- art specific language to support discussion, analysis and evaluation of work.

Students will develop their **SKILLS** in:

- drawing, drawing style and technique.
- the practical application of different media relevant to their project or theme.
- the exploration and manipulation of relevant materials and techniques.
- developing a personal response through creativity within their work.
- discussing and explaining ideas relevant to their work.
- discussing and analysing the work of others (artists and such like).
- analysing and evaluating effectively using relevant language and keywords.

BELIEFS AND VALUES

Students will develop their **KNOWLEDGE** of:

- What is mental health and wellbeing?
- How can we look after our mental health?
- What does it mean to be resilient?
- What do Hindus believe about god/gods?
- What do Hindus believe about the afterlife?
- How did Sikhi begin?
- What are important traditions in Sikhi?
- What are the different types of relationships and families?
- What does the law say about relationships and how can we report abuse?

Students will develop their **SKILLS** in:

- Making informed contributions to debates and class discussions.
- Discussing sensitive issues.
- Having respectful conversations.
- Being able to explain religious teachings and practices
- Using inclusive language.
- Giving justified opinions.
- Explaining the importance of key events, people and places

COMPUTING

Students will develop their **KNOWLEDGE** of:

- how to create computer games using visual programming languages.
- how to recognise the AND, NOT and OR logic gates.
- how to construct truth tables for the AND, NOT and OR logic gates.
- how to create logic diagrams using the AND, NOT and OR logic gates.
- the purpose of algorithms.
- algorithmic thinking and how it is used to solve problems in Computing.
- decomposition and how it is used in Computing.
- abstraction and how it is used in Computing.
- what data compression is and how we can compress data.
- how to store images as binary data.
- how to create and use variables effectively.
- how to store and manipulate string and numbers when programming.
- different data types used within programming languages.
- how to use iteration and selection effectively when programming.
- how to declare and use procedures and functions when programming.

Students will develop their **SKILLS** in:

- becoming more confident at creating computer games using visual programming languages.
- recognising the different logic gates and completing logic truth tables.
- being able to complete complex logic truth tables using multiple logic gates.
- being able to solve problems using logical and algorithmic thinking.
- being able to calculate the file size of an original image stored on a computer.
- being able to calculate the file size of a compressed image on a computer.
- creating and using variables effectively when programming.
- storing and manipulating string and numbers when programming.
- storing and using different data types when programming.
- using iteration and selection when programming.
- declaring and using procedures and functions when programming.

DESIGN TECHNOLOGY

D&T is taught as one of three Technology subjects during the year.

Students will develop their **KNOWLEDGE** of:

- developing their knowledge and understanding of the design process.
- understanding the role of a designer and their responsibility to society and the environment.
- describing the basic principles and rules of workshop safety.
- being able to name and use appropriate tools and equipment.
- developing knowledge to make informed choices regarding material selection.
- developing knowledge of a target market's needs and how this affects design ideas.
- applying knowledge of a range of techniques to finish/decorate a product and justify choices.
- developing a basic knowledge of how to apply and follow designing and making techniques and processes.

Students will develop their **SKILLS** in:

- being able to carry out effective research tasks.
- developing and applying evaluation and analysis skills.
- applying and developing basic illustration skills.
- using a range of appropriate technical language when annotating.
- being able to plan and follow a basic design activity.
- developing independence when working on a prototype.
- using tools and equipment with accuracy, skill and safety in mind.
- demonstrating a range of finishing or decorating techniques with accuracy.
- being able to identify and record areas for improvement and/or modification.

DRAMA

Students will develop their **KNOWLEDGE** of how to create and analyse work using the following conventions:

Style, Genre and Practitioners

- Frantic Assembly's style and process.
- Commedia dell'Arte and History of Comedy
- Physical Theatre.
- Chair duets.

Approaches to Script.

- Puppetry.
- Soundscape.
- Multi-rolling.
- Character relationships.
- Creating psychological characters.
- Creating tension on stage.
- Taking on the role of a Director.

Approaches to Devising.

- Two touch Theatre.
- Abstract movement.
- Use of Greek Chorus.
- Split Stage.
- Cross Cutting.
- Marking the Moment.
- Creating from stimulus.

Throughout all schemes of learning students will develop **Physical Skills** (Facial Expression, interaction, gesture, gait, proxemics, levels, posture/body language, stillness) and **Vocal Skills** (emphasis, articulation, accent, tone, pause, pitch, pace, projection).

Students will also develop their **SKILLS** across areas relating to **creating, performing and responding**:

- Communication and Oracy.
- Group and Teamwork.
- Leadership and Directing.
- Analysis and Evaluation.
- Using drama terminology when creating and responding to work.
- Audience awareness and etiquette.

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 Literature.

Students will develop their **SKILLS** in:

Reading -

- articulating informed interpretations of meanings supported by textual reference.
- embedding references into a response to support interpretations.
- inferring meaning based upon evidence.
- analyse 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 -

- select appropriate words and phrases from a rich and wide vocabulary for both meaning and effect.
- demonstrate control of spelling, punctuation and grammar.
- utilise a variety of sentence structures with control.
- organise 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 -

- talk 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.
- understand the range and uses of spoken language.

FOOD AND NUTRITION

Food and Nutrition is taught as one of three Technology subjects during the year.

Students will develop their **KNOWLEDGE** of:

- applying basic principles of food safety and hygiene.
- high risk and low risk foods, temperature control and types of contamination.
- developing a basic knowledge of food preparation and cooking techniques.
- different methods of cooking.
- developing their knowledge and understanding of ingredients and healthy eating.
- nutrient sources and functions.
- menu planning using current healthy eating guidelines.
- understanding environmental issues such as food miles.
- food provenance – seasonal foods.
- sensory evaluation of food.

Students will develop their **SKILLS** in:

- using the bridge hold and claw grip correctly.
- identifying small items of equipment and their uses.
- demonstrating the safe use of sharp knives.
- weighing and measuring ingredients correctly.
- learning and using the cooker (hob, grill, oven) safely.
- following a recipe using appropriate ingredients and equipment to prepare and cook a range of dishes.
- carrying out a range of practical activities with independence.
- demonstrating a range of food preparation and cooking techniques.
- evaluation techniques.

GEOGRAPHY

Students will develop their **KNOWLEDGE** of:

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

Students will develop their **SKILLS** in:

- Cartography
- Graphicacy
- Numeracy
- Enquiry
- Communication

HISTORY

Students will develop their **KNOWLEDGE** of:

- The Reformation.
- Witchcraft in the 17th Century
- The English Civil War.
- Impact of the English Civil War
- Revolutions.
- Industrial Revolution.
- The British Empire.

Students will develop their **SKILLS** in:

- Causation.
- Interpretation.
- Change and Continuity.
- Significance.
- Historical Evidence.

MATHS

Students will develop their **KNOWLEDGE** of:

- being able to interpret ratio tables and using these as tools to solve numerical problems.
- using appropriate calculations including unitary method and begin to consider decimal and fractional multipliers.
- using the number line effectively to order numbers written in different formats as well as to solve equations with unknown on both sides.
- using the area model to expand single and double brackets and begin to reverse this process (leading to factorising).
- using a combination of strategies to calculate the area of more complex shapes.

Students will develop their **SKILLS** in:

- building on the noticing skills developed, they make and test conjectures. Students successfully justify their conjectures and refine these with contributions from others.
- 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:

- Musical terms, symbols and genres.
- a range of musical elements – melody, harmony, tempo, instrumentation, rhythm, pitch, dynamics
- recognising rhythmic musical symbols – crotchets, minims.
- recognising various genres of music and know some of the musical features of that genre.

Students will develop their **SKILLS** in:

Performing Music:

- singing in tune with fluency and accuracy.
- performing music on the keyboard, guitar and ukulele.
- keeping in time with others.
- performing by ear and from notation.

Composing Music:

- improvising melodic/rhythmic material within extended structures.
- using tempo and dynamics creatively.
- creating compositions which explore different sounds and the musical elements.
- refining and improving work effectively in rehearsals, developing initial ideas further.

Understanding Music:

- recognising a variety of different instrument sounds, knowing the instrument families.
- knowing and recognizing musical elements in listening tasks.
- 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.

PE

Students will develop their **KNOWLEDGE** of:

- more advanced skills, techniques and tactics used in sports and physical activities
- rules and regulations, tactics and strategies 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 to improve performance in Dance.
- safety factors during physical activity and sport for more advanced activities
- the benefits of leading fit and healthy lifestyles including extracurricular sports clubs.

Students will develop their **SKILLS** in:

- a wide variety of activities: team and individual games, athletic and gymnastic activities, dance, health related exercise and outdoor adventurous activities
- Teamwork.
- techniques in a range of sports in increasingly complex drills under 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.
- dance styles and techniques from different cultures, including accurate replication and developing choreography
- identifying strengths and weaknesses of their own and others' work and suggesting improvements
- leadership of warm ups, basic drills and cool downs.

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.

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.
- reviewing 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 sound 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 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.

TEXTILES

Textiles is taught as one of three Technology subjects during the year.

Students will develop their **KNOWLEDGE** of:

- health and safety rules when using Textiles advanced specialist tools and equipment.
- the purpose of a design specification.
- safe and accurate use of a sewing machine and iron.
- how to change and develop colour in fabric.
- basic Textiles construction techniques.
- recycled Textiles and how to repurpose effectively.
- subject specific vocabulary.

Students will develop their **SKILLS** in:

- using methods of research for inspiration and accuracy.
- analysing textiles products to identify strengths, weaknesses.
- design work which involves detailed annotation and drawing techniques.
- dyeing techniques.
- using a sewing machine safely and accurately.
- independent Textiles practical preparation.
- marking and cutting and fabric accurately.
- evaluation techniques.

ATTITUDES AND HABITS REFERENCE GUIDE

At school we expect our students to display the following Attitudes and Habits:

ATTITUDES

- Ready to learn and quick to settle
- Takes responsibility for learning
- Has a thirst for learning
- Willing to work independently with focus/without teacher input
- Willing to actively participate in a variety of situations
- Seeks to develop learning by questioning
- Takes risks to further learning
- Maintains a positive relationship with others
- Shows respect at all times
- Always puts effort into learning/classwork/P & P
- Understands the importance of working to deadlines
- Takes responsibility for their own and others' safety in school/classroom/learning environment
- Meets school expectations of behaviour/learning/attendance

HABITS

- Prepared to learn
- Fully equipped for lessons
- Prepared for assessment
- Actively engages with learning
- Always responds to targets/feedback
- Seeks to demonstrate knowledge through answering questions
- Seeks opportunities to be challenged
- Able to work independently with focus
- Willing to ask for help if needed and knows where to find help
- Follows all instructions
- Work is well organised
- P & P is always completed
- Regularly meets deadlines
- Seeks opportunities to participate in extra-curricular activities and/or roles of responsibility
- Attendance follows school's expectations