DIDSBURY
HIGH SCHOOL

# Curriculum Knowledge and Skills

## Subject Reference Guide

## Year 8

## 2023-2024

**Y8 Art**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• art history<br>How has the past influenced the present?<br>• the creative process<br>• how to develop ideas taking purposeful inspiration from art movements / artists' work<br>• how to improve their work using success criteria<br>• using art vocabulary and terminology appropriately<br>• measured observational drawing<br>• composition<br>• health and safety when working with unconventional materials and clay | Students will develop their skills in:<br><br>• how to develop ideas through purposeful investigations and experimentation<br>• exploring media including pencil, paint, clay, print making, and collage<br>• annotating and evaluating using relevant language and keywords<br>• carrying out observational measured drawing as well drawing to express and communicate ideas.<br>• developing independency when working on a project<br>• developing creativity through their knowledge of artists work/ art movements |

**Y8 Beliefs and Values**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• Islam: the significance of God and the practices within Islam, the role and significance of Islamic scripture<br>• Sikhism: Sikh beliefs about God and how this impacts the lives of the sikh community with specific focus on the concept of service to others.<br>• RSE Curriculum: healthy and positive relationships and the potential dangers of negative relationships, an exploration of resilience and mental health. The risks involved with Exploitation, Harassment and unsafe situations. E.g. peer pressure.<br>• PSHE Curriculum: The physical and psychological risks involved with using Alcohol and Drugs, the laws surrounding these and how peer pressure may lead to someone being in an unsafe situation regarding drugs/ alcohol. Mental wellbeing and resilience.<br>• ethics: What does it mean to be good? Ethical theories and how they impact the way a person may respond to a number of different situations. | Students will develop their skills in:<br><br>• posing and suggesting answers to questions of belonging, identity, meaning, purpose, truth and commitment relating these to their own lives and other's lives<br>• explaining what inspires and influences them, expressing their own and other's views of the challenges of belonging to religion<br>• connecting religious ideas and practices<br>• articulating their own personal responses to ultimate questions<br>• taking a proactive part in decision making activities with your peers<br>• respecting the views of others<br>• explaining the importance of key religious beliefs and philosophical/ ethical beliefs.<br>• evaluating different opinions and drawing out different arguments. |

**Y8 CAD/CAM**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• Design thinking and communication through;<br>- sketching<br>- physical modelling<br>- technical drawing and rendering techniques using perspective<br>- CAD modelling<br>• design influences and precedents to be able to reflect on key features to inspire creative solutions to 'solve' design tasks.<br>• how developments in Design and Technology influence design decisions and practice<br>• the responsibility on designers to consider sustainability through design responses.<br>• the importance of design requirements and how these link to user needs and wants.<br>• how to develop ideas through purposeful investigations (researching appropriately)<br>• form vs function and function over form<br>• how industry professionals use digital design tools when exploring and developing design ideas through using industry standard software – AutoCAD Revit.<br>• BIM and its advantages and disadvantages<br>• tier 3 key terminology throughout the design process | Students will develop their skills in:<br><br>• being able to effectively communicate design ideas<br>• developing problem solving and independent thinking skills through challenge tasks given.<br>• problem solving to improve independency when working on a project<br>• manipulation of relevant materials and techniques (how well they are used)<br>• developing a personal response through creativity within their work (developing relevant ideas)<br>• developing ideas through purposeful investigations (researching appropriately)<br>• annotating and evaluating effectively using relevant language and keywords<br>• using CAD – 3dimensional CAD modelling using industry standard software AutoCAD Revit |

**Y8 Computing**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• the different ways to keep themselves and their data safe<br>• the difference between hardware and software and their role within a computer system<br>• how binary Images constructed<br>• whether a task would be best completed by humans or computers<br>• the fact that different solutions exist for the same problem<br>• what 'if statements' and 'loops' are and how to use them effectively<br>• what 'variables' and 'commands' are and how to use them effectively<br>• which software is most suitable for a particular task<br>• how a network and the internet work<br>• the different types of networks, and their individual attributes (LAN/WAN/PAN)<br>• computer crimes, social issue in computing and relevant legislation<br>• data storage and security methods | Students will develop their skills in:<br><br>• staying safe online<br>• using a range of input and output devices<br>• working with binary, decimal and hexadecimal conversions<br>• different operations in binary<br>• Adobe Photoshop<br>• using logical reasoning to predict outcomes<br>• breaking down a problem and create a suitable solution<br>• making appropriate improvements to solutions based on feedback received, and comment on the success of the solution<br>• declaring and assigning variables in JavaScript to create a mobile app<br>• declaring and assigning variables in Python<br>• writing IF statements in Python<br>• finding and correcting errors in programs (debugging) in JavaScript and Python<br>• database application software<br>• querying (searching) data on tables using a structured query language (SQL) |

**Y8 Drama**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• the theatre company Frantic Assembly and their style of performance<br>• how physical theatre (chair duet, hymns hands, round-by-through, ensemble) can be used to communicate a narrative<br>• the playwright William Shakespeare & the social, cultural and historical context of the play Macbeth<br>• identifying and presenting the key components of a tragedy<br>• the style of Elizabethan/Jacobean theatre<br>• the playwright Willy Russel & the social, cultural and historical context of the play Blood Brothers<br>• identifying and presenting the key components of a tragi-comedy<br>• the theatrical practitioner Bertolt Brecht and his 'epic theatre'<br>• technical elements of theatre and how they can generate atmosphere and tension in performance<br>• a variety of rehearsal strategies and how these can develop a performance and character<br>• theatre in education and how drama can be used as a tool for change and education | Students will develop their skills in:<br><br>• stylised/abstract movement (canon/simultaneous movement, flocking, puppetry)<br>• speaking & repetition<br>• soundscape/collages<br>• rehearsal strategies<br>• performing in various audience configurations (proscenium, thrust, traverse & the round)<br>• using technical elements in order to deepen meaning (lighting & sound)<br>• method acting (emotion memory, magic "if", total life, objectives & super-objectives)<br>• the verfremdungseffekt & epic theatre (placards, symbolic props, direct address/asides, spass)<br>• group work<br>• leadership/directing<br>• active listening<br>• verbal evaluation<br>• using drama terminology when creating or evaluating work<br>• audience awareness<br>• presenting<br>• applying social, cultural and political context of play texts in performance |

**Y8 English**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br>**Reading**<br>• a range of texts to help students articulate their ideas in a sophisticated way<br>• the way in which language, structure, form and context are used to enable a writer to express their ideas<br>• the development of texts throughout the history of Literature<br>• an understanding that although historical context may have an impact on how a reader might interpret a text, universal themes transcend time<br>**Writing**<br>• the methods used to write with engagement and control, including sentence structure, punctuation, vocabulary, whole-text structuring and spelling<br>• an understanding of different formats and tones to suit a specific purpose<br>**Speaking and Listening**<br>• the various ways in which talk and discussion can be used to articulate meaning | Students will develop their skills in:<br>**Reading**<br>• developing reading skills such as evaluation, prediction, inference and summarising<br>• articulating informed interpretations of meanings supported by textual reference<br>• analysing methods used to convey ideas, including language, structure & form<br>• comparing ideas, attitudes, methods and contexts in order to evaluate effectiveness<br>• relating different texts to their relevant social, historical and literary context<br>• identifying and commenting on the effect of writer's methods<br>• knowing and identifying a wide range of language and structure terminology<br>**Writing**<br>• selecting appropriate words and phrases from a rich and wide vocabulary<br>• demonstrating control of spelling, punctuation and grammar<br>• utilising a variety of sentence structures with control<br>• organising cohesive whole texts, effectively sequencing and structuring details within texts<br>• producing texts that match the audience, purpose and register of different genres<br>**Speaking and Listening**<br>• talking in purposeful and imaginative ways to explore ideas and feelings<br>• delivering ideas and views in a confident and clear way<br>• listening and responding to others, including in pairs and groups<br>• creating and sustaining different roles and scenarios<br>• understanding the range and uses of spoken language |

**Y8 Food and Nutrition**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• **nutrition** – all micro and micronutrients and their role in a healthy diet; how to identify nutrients in dishes that they make and the use of food labels and how these influence food choices.<br>• **evaluation** – tier three vocabulary to describe the appearance, aroma, taste and texture of food and how to give detailed adaptations to a product to improve the quality.<br>• **food science** – heat transfer methods during the cooking process and develop knowledge of how these link to different cooking methods; and how different ingredients have different functions in cooking.<br>• **food hygiene and safety** – the 4 C's and their importance in kitchen hygiene and develop knowledge of specific food poisonings, allergens and intolerances.<br>• **food provenance** – the importance of food miles and food waste and how to reduce food's impact on the environment and how foods vary in different cultures. | Students will develop their skills in:<br><br>• the procedures needed to get prepared to cook in a kitchen, demonstrating a practical understanding of food hygiene and safety.<br>• being competent a range of basic equipment – including, the cooker and knives.<br>• being comfortable in preparing and using a range of ingredients using different methods to create a range of savoury and sweet dishes.<br>• demonstrating an increasing range of food preparation skills, including use of hand- held electrical equipment. |

**Y8 Geography**

| Knowledge | Skills |
|---|---|
| Students will be demonstrating greater fluency with world knowledge by drawing on increasing breadth and depth of content and contexts. Students will also be showing a greater understanding of the world by organising and connecting information and ideas about people, places, processes and environments.<br><br>For example, students will develop their knowledge of:<br><br>• population and migration<br>• ecosystems<br>• changing places<br>• rivers<br>• global superpowers | Students will be improving their competence in geographical enquiry, and their application of skills in observing, collecting, analysing, evaluating and communicating.<br><br>For example, students will develop their skills in:<br><br>• cartography<br>• graphicacy<br>• numeracy<br>• enquiry<br>• communication |

**Y8 History**

| Knowledge | Skills |
|---|---|
| Students will further their understanding of substantive concepts.<br><br>These include in Y8: monarchy, authority, revolution, resistance, the Church, society, culture, civil war, parliament, reform, liberty, democracy, colonisation, imperialism, patriarchy, slavery, emancipation and industrialisation.<br><br>They will do this by studying a variety of historical examples from British and World History, including:<br><br>• Martin Luther and the European Reformation<br>• Religious change under the Tudor Monarchs<br>• West African Kingdoms<br>• The British Civil Wars<br>• Enlightenment and revolution (including the French, American and Haitian revolutions)<br>• Transatlantic slavery<br>• The Industrial Revolution<br>• Colonialism and interpretations of the British Empire<br><br>This will help them answer:<br>• How has the nature of power changed over time?<br>• How have people's beliefs and ideas changed over time?<br>• How have conflicts and conquests shaped the world?<br>• How have revolutions shaped the world?<br>• Is History a story of progress? | **Disciplinary Knowledge**<br>We aim to induct students into the academic history community by developing their skills in analysing:<br>• causation<br>• change and continuity<br>• historical evidence<br>• interpretation<br><br>**Procedural Knowledge: Historical Writing**<br>Students are also tasked with developing their procedural knowledge of how to write high quality history, with feedback focused on the development of analytical paragraphs as building blocks for future extended essay writing<br><br>**Disciplinary Reading**<br>Reading lies at the heart of the history curriculum. Students progress from reading for comprehension, to reading extended historical narratives, and finally reading historical works in search of argument and to explore the evidence basis for historical claims.<br><br>**Historical Evidence and Interpretation**<br>The other focus of practice is in developing students understanding of source utility. This is integrated into the curriculum and in Y8 culminates in the British Empire enquiry, which engages with the evidence base of a wide range of historians. |

**Y8 Languages**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• how to build on basic grammar and vocabulary from Year 7 as appropriate to ensure progress<br>• a wide range of verb forms including regular and irregular verbs<br>• how to use verb forms in past, present and future tenses with confidence<br>• using time markers to express different time frames<br>• agreeing adjectives correctly and accurately<br>• using a broad range of relevant vocabulary to express ideas in creative ways<br>• manipulating grammar to express their own ideas. | Students will develop their skills in:<br><br>• checking work systematically for errors<br>• reviewing and redrafting work and correcting errors regularly (study skills)<br>• making connections between the target language and English to support progress<br>• speaking for longer with increasing spontaneity in answering questions<br>• developing opinions using a range of structures<br>• practising challenging spellings and key expressions / verbs to improve accuracy in writing<br>• using language creatively to express their own ideas<br>• reading and understanding both gist and detail in longer texts<br>• listening to and understanding speech of varying speed and length to understand both gist and detail<br>• translating texts using their understanding of both the target language and English to convey meaning accurately<br>• independently using a dictionary and / or vocab book as reference for support and to deepen vocabulary<br>• understanding and appreciating a range of literary texts such as poems, stories and songs, which stimulate ideas and opinions<br>• identifying learning needs from tests and assessments (study skills) and responding to feedback. |

**Y8 Maths**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• ratio tables and using these as tools to solve numerical problems<br>• appropriate models to represent and solve numerical problems including comparing measurements and operations with fractions<br>• appropriate calculations including the unitary method and begin to consider decimal and fractional multipliers in developing proportional reasoning<br>• the number line to order numbers written in different formats for example, indices and standard form<br>• a combination of strategies to calculate the area of more complex shapes including non-rectilinear<br>• the area model to expand single and double brackets and begin to reverse this process (leading to factorising) whilst further developing algebraic manipulation skills<br>• co-ordinate geometry through big picture ideas linking algebra and graphs<br>• statistical reasoning which begins to draw conclusions from data represented in varying ways.<br>• geometric reasoning through exploring shape and space including circle geometry | Students will develop their skills in:<br><br>• noticing - making and testing conjectures.<br>• justifying conjectures and refining these with contributions from others.<br>• generalising<br>• questioning peers' contributions to the development of mathematical ideas<br>• comparing 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)<br>• considering what makes a given problem more demanding as well as how it can be simplified<br>• using mathematical language appropriately |

**Y8 Music**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• various musical terms, symbols and genres<br>• a range of musical elements - pitch, dynamics etc.<br>• basic musical symbols – treble clef, stave etc.<br>• basic rhythmic musical symbols – crotchets, minims etc.<br>• various genres of music and know some of the musical features of that genre | Students will develop their skills in:<br><br>Performing Music:<br><br>• singing in tune with fluency and accuracy<br>• performing on the keyboard, ukulele, tuned percussion and other band instruments<br>• keeping in time with others<br>• performing by ear and simple notations<br><br>Composing Music:<br><br>• improvising repeated patterns<br>• improvising simple melodic/rhythmic phrases<br>• sharing a range of ideas in group tasks<br>• creating compositions which have a sense of structure<br>• composing using a variety of notations<br>• composing music for a specific scene using Logic Pro<br>• creating compositions which explore different sounds and the musical elements<br><br>Understanding Music:<br><br>• recognising a variety of different instrument sounds, knowing the instrument families<br>• knowing the musical elements and recognise some in listening tasks<br>• making improvements to their own work<br>• identifying different genres of music and some of their features in a listening task<br>• using appropriate musical vocabulary when creating or evaluating work |

**Y8 PE**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• more advanced skills, techniques and tactics used in sports and physical activities<br>• rules and regulations for a range of sports<br>• the immediate effects of exercise on the body and training methods to improve sporting performance<br>• linking muscle names to specific joint movement across a range of activities<br>• more advanced compositional ideas to improve performance in Dance<br>• safety factors during physical activity and sport for more advanced activities (e.g. scrummaging in rugby)<br>• the benefits of leading fit and healthy lifestyles including extracurricular sports clubs | Students will develop their skills in:<br><br>• racquet, striking and fielding, invasion games, athletics, dance, health related exercise<br>• teamwork<br>• techniques in a range of sports in increasingly complex drills under pressure<br>• overcoming challenging opponents in competitive situations in team and individual games (e.g. rugby/netball).<br>• pressured decision making in competitive sports, including some analysis of opponents' strategies<br>• identifying strengths and weaknesses of their own and others' work and suggesting improvements<br>• leadership of warm-ups, basic drills and cool downs. |

**Y8 Science - Biology**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• aerobic and anaerobic respiration in living organisms necessary for life<br>• the structure of the respiratory and circulatory system and the function of organs<br>• the principles of diffusion including factors that affect diffusion<br>• osmosis and its importance in living organisms<br>• how pathogens cause diseases<br>• the difference between communicable and non-communicable diseases and how each are treated<br>• how vaccines can lead to immunity to specific diseases<br>• the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules<br>• relationships in an ecosystem, including food webs and nutrient cycling | Students will develop their skills in:<br><br>• using percentage change and why it is used when measuring changes in volume, length or mass<br>• commenting on accuracy and reliability of experiments and suggesting improvements<br>• calculating averages e.g. the mean result<br>• describing and explaining trends in data<br>• drawing pyramids of numbers and biomass<br>• calculating the zone of inhibition<br>• safely carrying out a heart dissection to locate key structures |

**Y8 Science - Chemistry**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• atoms, elements, compounds, and mixtures - building on the knowledge that they gained in year 7.<br>• how mixtures can be separated and how the type of mixture will determine the separating technique to be used<br>• metals and their properties, uses, behaviour and reactions as well as how they are extracted from the Earth.<br>• the rates of chemical reactions and learn how to measure the speed of a chemical reaction using various techniques<br>• how different factors can affect the rate of reaction | Students will develop their skills in:<br><br>• research as they find out about the properties and extraction of metals<br>• using models to help them understand abstract theory<br>• investigation and will further develop skills learnt in year 7 by forming hypotheses,<br>• identifying variables, carrying out controlled investigations, analysing results, drawing<br>• drawing conclusions and evaluating their investigative methods |

**Y8 Science - Physics**

| Knowledge | Skills |
|---|---|
| Students will develop their knowledge of:<br><br>• topics covered in year 7, deepening that understanding or delving into a new aspect of the topic<br>• the forces involved in motion<br>• how to calculate and investigate different aspects of speed, velocity, and acceleration<br>• the basics of series and parallel circuits (review) before moving on to more complex ideas of electricity such as resistance and how it changes with length<br>• the basics of I-V relationships<br>• energy changes including 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<br>• light and how it travels as a wave including the shape and key features of the wave<br>• gravitational forces, looking at the solar system from the point of view of the forces acting on people, satellites, and planets | Students will develop their skills in:<br><br>• using and manipulating formulae, including appropriate use of units<br>• investigation by developing those skills learnt in year 7 including forming hypotheses, identifying variables, carrying out controlled investigations, analysing results, drawing graphs, drawing conclusions, and evaluating investigative methods |