



LAURUS  
RYECROFT

**CURRICULUM  
KNOWLEDGE AND SKILLS  
SUBJECT REFERENCE GUIDE  
YEAR 9**

# BELIEFS AND VALUES

Students will develop their **KNOWLEDGE** of:

- secular world views- atheism and humanism. explorations of arguments against god's existence. The philosophical problem of evil and suffering
- ultimate philosophical questions such as 'why is there something rather than nothing?' and 'why do evil and suffering exist?'
- sacred texts
- philosophical literacy
- sex and relationships
- mental health

Students will develop their **SKILLS** in:

- using comprehensive religious, ethical and philosophical language to analyse a range of religions and beliefs
- contextualising interpretations of religion with reference to historical, cultural, social and philosophical ideas
- critically evaluating the impact of beliefs and values
- coherently analysing differing interpretations of religious, spiritual and moral sources, using some of the principle methods by which religion and belief is studied
- appraising different understandings of religion and belief
- interpreting and evaluating varied forms of expression
- synthesising a range of evidence, arguments, reflections and examples, fully justifying their own views and providing detailed evaluations
- giving independent, well informed and highly reasoned insights in the beliefs and values of others
- providing well-substantiated and balanced conclusions
- debating challenging questions

# COMPUTING

Students will develop their **KNOWLEDGE** of:

- encryption and how it is used to keep data safe
- whether a task would be best completed by humans or computers
- different solutions for solving the same problem
- what 'if statements' and 'loops' are and how to use them effectively
- what software is most suitable for a particular task
- how a network and the internet work
- different ways to keep data safe

Students will develop their **SKILLS** in:

- using of logical reasoning to predict outcomes
- breaking down a problem to create a suitable solution
- effectively using search engines
- making appropriate improvements to solutions based on feedback received, and comment on the success of the solution
- creating digital products for a particular audience
- using arithmetic operators, 'if statements' and 'loops' to create a small program
- finding and correcting errors in programs (debugging)
- declaring and assigning variables

# ART

Students will develop their **KNOWLEDGE** of:

- developing ideas through purposeful investigations (researching appropriately)
- demonstrating a critical understanding of relevant different sources (showing clear links with Artists, Craftspersons and Designers, and cultural links)
- recording their ideas effectively
- understanding how to improve their work through using appropriately relevant success criteria
- annotating and evaluating effectively using relevant language and keywords to display a firm understanding
- being able to plan, follow and use the design process to create successful products or outcomes
- understanding and applying the principles of responsible and environmental design
- a wide range of appropriate tools and equipment
- being able to identify, apply and demonstrate principles of workshop safety
- further developing knowledge of a wide range of materials and their properties, be able to select appropriately
- understanding a range of target markets, their needs, wants and requirements and the implications for their design or product
- a wide range of techniques to finish/decorate a product and justify choices
- designing and making techniques and processes
- having a good understanding of how relevant manufacturing processes are carried out in industry

Students will develop their **SKILLS** in:

- the accuracy of recording through observational studies and other means (eg. quality of drawing, photographs, compositional ideas)
- the practical application of different media (how well media is used)
- the exploration and manipulation of relevant materials and techniques (how well they are used)
- developing a personal response through creativity within their work (developing relevant ideas, CPR)
- discussing and explaining ideas relevant to their work
- discussing and comparing the work of others (artists and such like)
- Annotating and evaluating effectively using relevant language and keywords
- being able to carry out a range of relevant and effective research tasks
- applying evaluation and analysis skills to ensure a quality outcome/finish
- applying and demonstrating competent illustration skills
- drawing from a wide range of appropriate technical language when annotating
- being able to plan and follow a successful design project
- demonstrating and leading independently when using tools, equipment and materials
- using a wide range of tools and equipment with accuracy, skill and safety in mind

- demonstrating a wide range of finishing or decorative techniques with accuracy and skill
- being able to identify and record areas for improvement and/or modification, both during and after project completion
- understanding and applying the principles of quality assurance and quality control

# DRAMA

Students will develop their **KNOWLEDGE** of:

- Movement (Proxemics, Marking the moment, physical theatre, slow motion)
- Voice (narration as characters, volume and projection, accent and dialect, applying voice to a character)
- Characterisation (contrasting characters, rhythm for characters, naturalistic/non-naturalistic techniques)
- Stagecraft (use of props – minimalist and multi-use, use of form – abstract and naturalism)

N.B. This knowledge is in addition to the development of their Year 8 movement, voice, characterisation and stagecraft knowledge, which will now be explored at a more advanced level.

Students will develop their **SKILLS** in:

- group work
- leadership / directing
- active listening
- using drama terminology when creating or evaluating work
- audience awareness
- verbal analysis
- communication with an audience using eye contact and projection
- staying in role

# 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
- the development of texts throughout the history of Literature, including 5 key areas: Ancient, Medieval, Shakespearean and Renaissance, Victorian and War and Hard Times
- an understanding that although historical context may have an impact on how a reader might interpret a text, universal themes transcend time

Writing –

- the methods used to write with engagement and control, including sentence structure, punctuation, vocabulary, whole-text structuring and spelling
- an understanding of different formats and tones to suit a specific purpose

Speaking and Listening –

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

Students will develop their **SKILLS** in:

Reading –

- developing reading skills such as evaluation, prediction, inference and summarising
- articulating informed interpretations of meanings supported by textual reference.
- analyse methods used to convey ideas, including language, structure & form
- compare ideas, attitudes, methods and contexts in order to evaluate effectiveness
- relate different texts to their relevant social, historical and literary context
- identify and comment on the effect of writer's methods
- know and identify a wide range of language and structure terminology

Writing –

- select appropriate words and phrases from a rich and wide vocabulary
- 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
- produce texts that match the audience, purpose and register of different genres

Speaking and Listening –

- talk in purposeful and imaginative ways to explore ideas and feelings
- deliver ideas and views in a confident and clear way

- listen and respond to others, including in pairs and groups
- create and sustain different roles and scenarios
- understand the range and uses of spoken language



## FOOD AND NUTRITION

Students will develop their **KNOWLEDGE** of:

- extending their knowledge and understanding of food, diet and health
- extending their knowledge of consumer food choices
- explaining the characteristics and functions of ingredients and how they are used in cooking
- adapting and following basic recipes to prepare and cook a range of dishes
- demonstrating a range of food preparation and cooking techniques and independently apply the principles of food safety and hygiene
- understanding the scientific principles behind preparing and cooking foods
- understanding the basic terminology of food science

Students will develop their **SKILLS** in:

- adapting and following a recipe using appropriate ingredients and equipment to prepare and cook a range of more complex and well-presented dishes
- demonstrating an extended range of food preparation and cooking techniques with accuracy
- developing creative, technical and practical expertise to perform everyday tasks confidently and with flair
- evaluating, testing and adapting their ideas and products
- using a range of specialist equipment, techniques and processes
- using a range of ingredients to adapt and make savoury and sweet recipes
- using the cooker (hob, grill, oven) with confidence
- using the bridge hold and claw grip with confidence and accuracy
- being aware and confident of how to prepare, cook, store and reheat food safely
- improving time management skills
- demonstrating the function of ingredients in a range of different products
- demonstrating batch production and explaining the importance portion control

## **GEOGRAPHY**

Students will develop their **KNOWLEDGE** of:

- Development
- Tectonics
- Glaciation
- 21st century challenges
- Coasts

Students will develop their **SKILLS** in:

- Cartography
- Graphicacy
- Numeracy
- Enquiry
- Communication

# HISTORY

Students will develop their **KNOWLEDGE** of:

- Why World War's I & II took place
- Key events of World War II such as, The Blitz, Dunkirk and the Atomic Bomb
- The rise of Hitler and how he came to power in Germany
- The dictatorships of Hitler and Stalin and how Germans and Russians lived their lives under the Nazi and Communist regimes
- What the Holocaust was, the reasons behind it and the consequences of it
- Decolonisation

Students will develop their **SKILLS** in:

- Explaining why some changes or events are more important than others
- Making a judgement about change and continuity
- Evaluating why a source might be useful for a historian by considering its nature, origin and purpose
- Investigating different reasons for significance and making a judgement about them
- Analysing how significance might vary according to different viewpoints
- Explaining why some causes and consequences are more important than others
- Investigating events and making a judgement about change and continuity
- Understanding chronology and being able to explain events in order

# GCSE SPANISH

Students will develop their **KNOWLEDGE** of:

- How to review and improve on basic grammar and vocabulary from Year 7/8 as appropriate to ensure progress
- Using a wide range of regular and irregular verb forms
- Using verb forms in past, present and future tenses without prompting
- Using time markers to express different time frames
- Using adjective agreement confidently in different contexts
- Using a wide range of topic specific vocabulary from the GCSE specification to express ideas in creative ways
- Manipulating more complex grammar to express ideas in a more sophisticated style

Students will develop their **SKILLS** in:

- redrafting their work to improve accuracy
- holding longer conversations and reacting spontaneously to questioning
- Developing their ideas and points of view using a wide range of structures
- independently using a dictionary/or vocab book to deepen vocabulary and as reference material
- understanding and appreciating a range of literary texts such as poems, stories and songs, which stimulate ideas and opinions
- translating longer texts between English and the target language in a variety of contexts and understanding the skill of translation
- Structuring extended pieces of writing, responding to unseen stimuli
- Reading and listening for both gist and detail in increasingly lengthy passages of text / spoken language

# MATHS

Students will develop their **KNOWLEDGE** of:

- using ratio tables to solve problems with fluency. They select appropriate strategies considering efficiency when using a calculator and when this is not allowed. They can use multiplication and division by decimals and fractions with relative ease
- using the number line efficiently to order numbers written in different formats including index form, standard form and surd form. They use combination tables when solving linear simultaneous equations
- developing effective strategies to solve equations with unknown on both sides including those involving subtraction and fractional values of  $x$
- using the area model effectively to factorise and expand single and double brackets
- using a combination of strategies to calculate area and surface area of complex shapes

Students will develop their **SKILLS** in:

- appreciating that being stuck is a necessary step to learning mathematics and are developing strategies to make progress in these situations. They are able to simplify multi-step problems and appreciate the importance of identifying what they can work out in order to make some progress with a given task
- developing noticing and justification skills to actively make links in areas of mathematics and where appropriate outside the subject. They have an inquisitive approach to mathematics and are not satisfied with reaching a solution. They regularly ask themselves questions like 'how can the problem made easier/harder', 'what changes if we change ...', 'what happens if ...', 'is this always/sometimes/never true'
- appreciating links in graphical representation and are able to reverse problems (start with any aspect to complete others) – in particular looking at the graph of quadratics
- using mathematical language appropriately • beginning to distinguish between examples and mathematical proof
- using construction equipment with relative ease

# MUSIC

Students will develop their **KNOWLEDGE** of:

- the elements of music (pitch, dynamics, tempo, texture, sonority (timbre), rhythm, metre, melody, harmony, tonality, articulation).
- musical symbols (such as notes on a staff, treble clef, time signatures, accidentals).
- notes of the keyboard (able to know the notes without support).
- treble clef notation (have a good understanding of treble clef notation for use in practical tasks).
- rhythmical musical symbols (crotchets, minims, quavers, equivalent rests etc.).
- musical genres (developing understanding of the musical features within a variety of musical genres. exploring the contexts, origins and traditions of different musical styles).
- musical vocabulary (knowledge of various musical terms, including Italian terms and ability to apply them correctly to various musical tasks).

N.B. This knowledge is in addition to the development of their Year 8 musical knowledge, which will now be explored at a more advanced level.

Students will develop their **SKILLS** in:

Performing Music:

- singing with expression, clear diction, fluency and accuracy – both solo and in a group
- demonstrating high level of confidence in performance
- maintaining an appropriate role within a group (leading, solo part or support)
- showing awareness of the needs of others in group tasks
- performing fluently and accurately on the keyboard and tuned percussion
- performing longer parts from memory and/or from music notations

Composing Music:

- improvising melodic/rhythmic material within extended structures
- using tempo and dynamics creatively
- sustaining and developing musical ideas
- making significant contributions to a group
- composing music for different genres which explore musical features and devices
- using rehearsal time effectively to refine material.

Understanding Music:

- identifying different genres of music and their features within listening tasks.
- describing and comparing musical features in listening tasks, using appropriate vocabulary
- recognising a variety of different instrument sounds, knowing the instrument families (to a higher level)
- knowing the musical elements and recognising them in listening tasks (to a higher level)

- considering successful/non-successful outcomes and improve their own and others' work
- describing and comparing musical features in listening tasks, using appropriate vocabulary
- evaluating how venue, occasion and purpose affect the way music is created performed and heard
- exploring the contexts, origins and traditions of different musical styles
- beginning to analyse music in more detail, using key words and musical terms
- using appropriate musical vocabulary when creating or evaluating work

N.B. The skills in performance, composition and listening & appraising are in addition to the skills they have learnt in Year 8 but working to a more advanced level

# PE

Students will develop their **KNOWLEDGE** of:

- advanced strategies, tactics and skills used in sports and physical activities.
- rules and regulations for a range of sports and the roles of different types of officials
- short and long-term effects of exercise on the body to muscular, cardiovascular and respiratory systems
- choreographed dances with advanced ideas
- safety factors during physical activity and for more advanced activities
- the components of fitness and how you can improve them by using methods of training and principles of training
- the benefits of leading a healthy active lifestyle – through exercise and diet, to also include physical activity outside of school.

Students will develop their **SKILLS** in:

- racquets/striking and fielding/invasion games/athletics/dance/health related exercise
- team work
- using advanced techniques, strategies and tactics in a range of sports in competitive game situations
- being able to make the correct decisions in competitive situations to allow you to beat an opponent regularly
- contemporary and traditional dance styles and techniques, developing choreography and using the four dance key themes effectively in your work
- analysing performance of yourself and others during performance to alter the outcome of a game
- leading groups of students on part of a session, feeding back so others can make improvements
- officiating a variety of roles within a sport – linesman and referee in badminton and over more than one sport



# SCIENCE

Students will develop their **KNOWLEDGE** of:

Biology –

- learning that heredity is a process that transmits genetic information from one generation to the next
- considering a simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin
- developing their understanding of variation, to identify that some organisms compete more successfully, driving natural selection
- how enzymes act as biological catalysts and are responsible for processes such as photosynthesis and respiration that they learnt in Year 8

Chemistry –

- consolidating their understanding of some basic chemistry fundamentals learnt in earlier years. Students will quickly move on to learn about chemical reactions and build upon their knowledge of this topic first covered in year 7. Towards the end of the first term, students will be introduced to the structure of the atom and sub-atomic particles
- continuing to learn about the structure of atoms and discover how this links in with the arrangement of elements in the periodic table. Students will look at group 1, group 7 and transition group elements in more detail
- 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
- building upon ideas first met in Year 7 when they look at different separating techniques including fractional distillation and chromatography

Physics –

- reviewing their understanding of forces and electricity then advancing that understanding using the contexts of Newton's laws of motion and generating electricity
- Simple Machines which covers the topics of pressure, moments and Hooke's Law. These are all essential basics for how this works and also present lots of mathematical skills that are the basis of much of Physics at KS4
- Nuclear Physics covering the basics of alpha, beta and gamma radiation as well as the processes involved in nuclear power
- starlight. Students will combine knowledge of cosmological principles such as the life cycle of stars and the Big Bang theory with how we know anything about space, the light emitted by stars

Students will develop their **SKILLS** in:

Biology –

- an ability to represent continuous and discontinuous data through considering variation between individuals
- developing their practical investigation skills through completing a piece of controlled assessment. They will select, plan and carry out the scientific

enquiries to test hypotheses, including identifying independent, dependent and control variables

- developing their sampling techniques and record observations through the 'Ecology and Environment' topic

Chemistry –

- learning about several different types of chemical reactions, which involve using practical skills and teamwork in order to carry out reactions safely
- carrying out experiments in order to investigate rates of reactions. They will focus on analysing data and interpreting graphs. The students also use conventional models to learn about atomic structure

Physics –

- the practical skills of previous years looking at forces and electric circuits, and develop practical skills involving beams of light, springs and pivots. The expectations of how the data is presented (e.g. table of results and graphs) is to KS4 standard
- calculation - students' skills are also developed through the practise of various formulae