SiL x WLC

GENERAL CURRICULUM FRAMEWORK

Young Scholar Tournament - Preliminary Stage

Junior Scholars (Ages 12-14) | Senior Scholars (Ages 15-17)

Multi-Subject Proficiency • Reasoning • Global Awareness • Innovation

Framework principle

A broad, internationally accessible and academically ambitious preliminary assessment that samples knowledge across disciplines while rewarding the ability to read carefully, reason logically, interpret evidence and apply learning in unfamiliar contexts.

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Our motto: "Practice Makes Improvement"

A curriculum-reference framework for international competition use

1. Purpose, Scope and Alignment

This document defines the curriculum intent, content domains, progression expectations, assessment architecture and quality-assurance principles for the Preliminary Stage of the SiL x WLC Young Scholar Tournament. It is designed to guide paper setters, reviewers, school partners, teachers and candidates across both competition divisions.

Important remark

Both papers for the Junior and Senior Scholar batches follow the same format. The key difference between the two will be the depth and difficulty of the subject domain, as well as the sophistication of the questioning style.

1.1 Status of the framework

- It is a broad curriculum and assessment specification, not a closed revision syllabus or a promise that every listed topic will appear in every paper.
- Each annual paper samples from the stated domains and may apply an annual theme - for example, Technology & Globalisation - as a cross-curricular context.
- The framework is aligned by reference to the National Curriculum for England and related Department for Education subject-content expectations; it is not itself a national qualification or statutory programme of study.
- Content will remain globally relevant and accessible to students studying in different national systems, while retaining a recognisably British academic character and standard British English.

1.2 Relationship to Key Stages 3-5

Division	Age range	Primary English reference point	Progression emphasis
Junior Scholars	Ages 12-14	Predominantly Key Stage 3	Secure core knowledge; clear application; single- and multi-step reasoning; emerging evaluation across familiar and global contexts.
Senior Scholars	Ages 15-17	Key Stage 4 with transition towards Key Stage 5	Greater conceptual depth; more specialised vocabulary; multi-stage quantitative and logical reasoning; evaluation of evidence, uncertainty, competing interpretations and wider implications.

Technical note: the statutory National Curriculum for England is organised through Key Stage 4. References to Key Stage 5 in this framework therefore draw on Department for Education AS/A-level subject-content expectations and common post-16 academic practices, rather than a statutory "KS5 National Curriculum".

1.3 Intended outcomes

- Demonstrate broad multi-subject proficiency rather than narrow specialisation.
- Read accurately and critically, including when information is unfamiliar or contested.
- Apply mathematical, scientific, computational and design knowledge to practical contexts.
- Use verbal and visual reasoning to identify structures, relationships, transformations and codes.
- Connect history, geography, citizenship, economics, technology and current affairs.
- Exercise judgement under time pressure and select the strongest answer from plausible alternatives.
- Provide a fair preliminary-stage basis for identifying students ready for more discursive and applied later stages.

2. Assessment Architecture

The Junior and Senior sample papers each use a 60-minute, 80-mark structure. Every question or sub-question carries one mark. The same six-section blueprint is retained for both divisions to support comparability, operational efficiency and a clear programme identity.

Sec.	Domain	Marks	Weight	Primary assessment focus
1	General Knowledge, History & World News	10	12.5%	Global awareness, historical/geographical understanding, citizenship, economics, logic and contemporary issues
2	English, Reading & Language Use	25	31.25%	Critical reading, vocabulary, inference, grammar, spelling, sentence structure and Standard English
3	STEM & Innovation	20	25%	Mathematics, biology, chemistry, physics, computing, data, engineering and design thinking
4	Verbal Reasoning	12	15%	Lexical manipulation, orthographic patterns, coding and deductive reasoning
5	Non-Verbal Reasoning	8	10%	Spatial visualisation, rotation, classification, matrices, nets, transformations and sequences
6	Miscellaneous / Cross-Curricular Scholarship	5	6.25%	Literature, music, culture, science history, geography and verified contemporary knowledge
	TOTAL	80	100%	60 minutes

2.1 Typical item formats

- Five-option multiple-choice questions with one best answer.
- Reading-comprehension questions on an extended passage.
- Cloze items testing grammar, syntax, cohesion and word form.
- Segmented sentence-error identification, including “No mistake”.
- Short verbal-reasoning sets involving letter movement, bracket completion, hidden words and code mapping.
- Diagrammatic reasoning involving patterns, nets, rotations, cross-sections, matrices, counting and transformations.
- Short quantitative problems requiring efficient calculation and disciplined unit use.

2.2 Assessment conditions and implications

The average available time is approximately 45 seconds per mark. Consequently, the paper assesses not only knowledge but also fluency, attention, efficient strategy selection and the ability to move between subject domains without losing accuracy. Questions should be concise enough to be answerable within the overall time limit, while still requiring genuine thought rather than superficial recall.

2.3 Recommended cognitive-demand profile

Cognitive band	What it involves	Junior guide	Senior guide
Knowledge & comprehension	Recall, recognise, define, identify, interpret direct information	Approximately 25-35%	Approximately 15-25%
Application & analysis	Use knowledge in context; calculate; infer; connect; compare; decode; identify cause or structure	Approximately 40-50%	Approximately 40-50%
Evaluation & strategic reasoning	Judge evidence, select strongest explanation, handle uncertainty, test claims, solve multi-step problems	Approximately 20-30%	Approximately 30-40%

These percentages are recommended blueprint ranges rather than fixed mark allocations. Paper setters will preserve an accessible entry point while ensuring sufficient stretch to differentiate and identify high-performing candidates.

3. Progression from Junior to Senior Scholars

Progression is achieved through deeper content, more demanding reasoning and a more sophisticated relationship between question and context - not by changing the overall paper structure.

Dimension	Junior Scholars	Senior Scholars
Knowledge base	Broad KS3 knowledge, with emphasis on secure concepts and recognisable contexts.	Consolidated KS4 knowledge with selective post-16 concepts, wider disciplinary vocabulary and less familiar contexts.
Reading	Clear main ideas, explicit detail, vocabulary in context, direct inference and common language effects.	Nuanced argument, ambiguity, representation, reliability, competing interpretations, rhetorical choices and epistemic uncertainty.
Mathematics	Fluent number, ratio, percentage, scale, data, introductory algebra and geometry.	More formal algebra/functions, compound measures, probability, statistical interpretation and multi-step modelling.
Science	Core concepts and direct applications across biology, chemistry and physics.	More precise mechanisms, variables, experimental design, causal interpretation and quantitative science.
Computing & innovation	Algorithms, sensors, iteration, simple systems, data and AI awareness.	Binary/data representation, networks, evaluation of algorithms, control groups, bias, security and systems-level reasoning.
Verbal reasoning	Common vocabulary and relatively direct transformations.	Less frequent vocabulary, denser coding, multiple constraints and more deceptive distractors.
Non-verbal reasoning	Concrete pattern recognition, nets, rotations and one-rule transformations.	Multi-attribute coding, 2D/3D cross-sections, composite transformations and larger visual search spaces.
Questioning style	One or two reasoning steps; distractors usually reflect common misconceptions.	Multiple reasoning steps; distractors may be partially true but fail on scope, causality, assumptions or precision.

Progression rule

A Senior item will not merely contain harder vocabulary or larger numbers. It will demand a more mature conceptual judgement, a longer reasoning chain, a more precise use of evidence, or a more complex transfer of knowledge.

3.1 International accessibility (*for paper setters and reviewers*)

- Use clear Standard British English, while preserving the academic vocabulary that is genuinely being assessed.
- Avoid loading STEM questions with unnecessary idiom or culturally specific phrasing.
- Provide sufficient context for unfamiliar institutions, historical episodes or technologies unless the knowledge itself is the target.
- Use metric units by default and state units consistently.
- Avoid questions whose answer depends on a very local school experience, television reference or commercial brand.
- Maintain challenging reasoning without turning English-language complexity into an unintended barrier in non-English sections.

4. Domain Framework: General Knowledge, History & World News

10 marks

4.1 Purpose

This domain assesses whether candidates can place events, systems and contemporary developments within a broad global context. It combines durable knowledge with the ability to recognise cause, consequence, significance, interdependence, source limitations and public-policy implications.

4.2 Content strands

Strand	Indicative coverage
History and historical change	Ancient and modern civilisations; major turning points; industrialisation; communication and printing; conflict and cooperation; significant people, institutions and inventions; chronology, cause, consequence and significance.
Geography and global systems	Countries, cities and regions; physical and human geography; trade routes; migration; resources; time zones; globalisation; development; environmental change; transport and supply chains.
Citizenship, government and law	Democracy; Parliament and institutions; law and rights; international organisations; public policy; transparency; governance; responsible participation and reasoned debate.
Economics and financial awareness	Trade, tariffs, exchange, prices, incentives, network effects, public spending, risk, intergenerational equity and basic macroeconomic or development indicators.
World news and media literacy	Major recent events; digital information; polling and sampling; representation; misinformation; disclosure; evidence quality and the distinction between reporting, interpretation and opinion.
Logic and innovation processes	Simple syllogisms, conditional reasoning, design cycles, research-design-test sequences, prototyping, iteration and systems thinking.

4.3 National Curriculum for England correspondence

- History KS3: chronological security, connections, contrasts, trends, significance, evidentially supported accounts and rigorous use of sources.
- Geography KS3: locational knowledge, global systems, human and physical processes, models and interpretation of data sources.
- Citizenship KS3-4: democracy, government, law, international relations, money, critical examination of social and political issues, weighing evidence and reasoned argument.
- English and mathematics: critical reading of claims, numerical interpretation of data, proportions, sampling and the limits of evidence.

4.4 Junior-Senior differentiation

Division	Expected demand
Junior	Identify major institutions, inventions, countries and global processes; recognise straightforward cause and consequence; apply familiar concepts such as globalisation, renewable resources or design iteration; interpret simple logical statements.
Senior	Analyse policy effects, sampling weaknesses, economic incentives, technological governance and historical change; distinguish correlation from causation; evaluate the representativeness, transparency or fairness of claims; reason through formal conditions and implications.

4.5 Paper-setting guidance (*for paper setters and reviewers*)

- Balance durable knowledge with a limited number of carefully verified current-affairs items.
- Use a published information cut-off date for facts that can change, and source such facts from authoritative evidence.
- Avoid “trivia for trivia’s sake”; each item will reward useful cultural literacy, a meaningful concept or disciplined reasoning.
- Where a question concerns economics, politics or contested issues, use neutral wording and one defensible best answer.

5. Domain Framework: English, Reading & Language Use

25 marks

5.1 Indicative internal structure

Component	Indicative marks	Assessment focus
A. Extended reading and critical comprehension	10	Main ideas, detail, inference, evidence, vocabulary, structure, language effect, purpose, fact/opinion and evaluation.
B. Cloze and grammatical cohesion	6	Tense, agreement, clause linking, prepositions, word form, conditionals, cohesion and idiomatic Standard English.
C. Spelling and sentence structure	9	Error detection in segmented sentences, including spelling, punctuation, agreement, parallelism, word choice and “No mistake”.

5.2 Reading curriculum

- Retrieve and synthesise explicit information from extended fiction, literary non-fiction, journalism, public-information texts and discursive writing.
- Infer attitudes, motives, relationships, causes and unstated implications, with reference to textual evidence.
- Interpret vocabulary and phrases in context, including figurative and technical language.
- Analyse how openings, examples, contrasts, sequencing, quotation and narrative framing shape meaning.
- Identify purpose, audience, viewpoint, tone, bias, fact, judgement, qualification and uncertainty.
- Evaluate the strength, precision and limits of a claim, including the relationship between evidence and interpretation.
- Recognise language devices such as metaphor, personification, oxymoron, alliteration, contrast and rhetorical framing where appropriate.

5.3 Language-use curriculum

Area	Indicative coverage
Grammar and syntax	Tense and aspect; subject-verb agreement; pronouns; determiners; quantifiers; modals; conditionals; relative clauses; conjunctions; complementation; parallel structures.
Vocabulary and word form	Contextual meaning; collocation; affixes; parts of speech; formal/informal register; precise word choice; commonly confused words.
Spelling and punctuation	Standard British spelling; apostrophes; homophones; agreement-related endings; sentence boundaries; punctuation where it affects meaning.
Cohesion and coherence	Reference, substitution, conjunction, logical sequence, consistency of tense and clear relationships between ideas.
Editing and proof-reading	Locate one error or confirm correctness; test the sentence as a whole rather than relying on local pattern recognition.

5.4 National Curriculum and post-16 correspondence

- KS3 English: increasingly challenging texts; vocabulary in context; inference and evidence; purpose, audience and context; analysis of language, structure and organisation; accurate Standard English.
- KS4 progression: critical reading of high-quality texts; evaluation of claims and evidence; comparison of ideas and perspectives; precise written control.
- KS5 transition: close analysis of language and discourse, representation, genre, context, ambiguity and the relationship between linguistic choices and meaning.

5.5 Junior-Senior differentiation

Element	Recommended profile
Junior passage guide	Approximately 500-750 words; clear structure; contemporary or global topic; a mixture of explicit and inferential questions; common academic vocabulary supported by context.
Senior passage guide	Approximately 700-1,000 words; denser argument or literary non-fiction; ambiguity, competing pressures, source or evidence issues; questions requiring evaluation of precision, authority, tone and uncertainty.
Junior language items	Core grammar, agreement, common word forms, standard collocation, apostrophes, parallelism and high-frequency spelling distinctions.
Senior language items	Complex tense relationships, conditionals, subordination, formal register, abstract nouns, subtle agreement, advanced editing and errors embedded in otherwise convincing sentences.

6. Domain Framework: STEM & Innovation

20 marks

This domain integrates mathematics, science, computing, data literacy, engineering and design. It will reward conceptual understanding and transfer, not merely formula recall.

6.1 Recommended coverage balance

Cluster	Indicative marks	Coverage
Mathematics and quantitative reasoning	8-10	Number, algebra, ratio, rates, geometry, probability, statistics, units and modelling.
Biology, chemistry and physics	6-8	Core disciplinary knowledge plus working-scientifically skills.
Computing, engineering, design and innovation	4-6	Algorithms, data, AI, systems, prototyping, structures, sensors, control, sustainability and iteration.

The ranges overlap intentionally. Annual papers may alter the mix while preserving a balanced 20-mark STEM section.

6.2 Mathematics strands

Strand	Indicative content
Number	Integers, fractions, decimals, percentages, powers, roots, factors, multiples, primes, standard form and estimation.
Ratio, proportion and rates	Ratios, scale, direct comparison, percentage change, compound measures, speed, density, unit conversion and growth/decay contexts.
Algebra and functions	Expressions, equations, substitution, sequences, functions, relationships between variables and simple modelling.
Geometry and measures	Angles, polygons, area, volume, scale drawings, transformations, 2D/3D relationships and structural geometry.
Probability and statistics	Probability, independent events, averages, range, outliers, charts, sampling, sensitivity and interpretation of data.
Mathematical reasoning	Select operations, detect unreasonable answers, compare methods, work backwards and solve multi-stage problems.

6.3 Science and working-scientifically strands

Area	Indicative content
Biology	Cells, DNA, genes, chromosomes, replication, variation, ecosystems, plant processes, human systems and health.
Chemistry	Particles, elements, compounds, reactions, materials, resources, separation, energy changes and environmental chemistry.
Physics	Forces, motion, speed, energy, electricity, waves, pressure, density, space and orbital motion.
Working scientifically	Hypotheses, variables, controls, measurement, repeatability, reliability, models, uncertainty, causation, correlation and evaluation of evidence.

6.4 Computing, engineering and innovation strands

- Algorithms as precise rule-based processes; sequencing; selection; iteration; efficiency and logical comparison.

- Data representation, binary digits, networks, latency, authentication, privacy and cyber-security principles.
- Artificial intelligence, training data, bias, transparency, evaluation and appropriate human oversight.
- Engineering structures, forces, stability, trusses, honeycombs, materials and design trade-offs.
- Sensors, actuators, microprocessors, automatic control and the relationship between input, processing and output.
- Iterative design: research, design, prototype, test, evaluate, refine and communicate.

6.5 National Curriculum and post-16 correspondence

- Mathematics KS3-4: fluency, reasoning and increasingly sophisticated problem-solving across number, algebra, ratio, geometry, probability and statistics.
- Science KS3-4: deeper disciplinary understanding, connections between “big ideas”, application to phenomena, models, evidence and objective revision of explanations.
- Computing KS3-4: algorithms, computational abstractions, data, systems, logical reasoning, digital responsibility and evaluation of technology.
- Design & Technology KS3: iterative design, technical knowledge, prototypes, testing, evaluation and successful participation in a technological world.
- KS5 transition: greater mathematical formalism, quantitative analysis, experimental design, precise terminology, evaluation of assumptions and integration of knowledge across disciplines.

6.6 Junior-Senior differentiation

Division	Expected demand
Junior	Direct but non-routine calculations; secure KS3 concepts; one or two linked steps; familiar phenomena; introductory algorithms, AI and engineering principles; answer options diagnose common misconceptions.
Senior	Longer chains of reasoning; formal equations and probability; more precise science mechanisms; experimental design; interpretation of control groups and outliers; systems-level computing and technology questions; distractors may fail because of a hidden assumption or misuse of causality.

7. Domain Framework: Verbal Reasoning

12 marks

Verbal Reasoning assesses flexible control of written language and the ability to infer hidden rules. It complements, but is not identical to, the English section: the emphasis is on rapid transformation, pattern recognition and deduction rather than extended comprehension.

Task family	Typical rule	Primary skills
Letter transfer	Move one letter from the first word to the second while preserving order and producing two valid words.	Lexical flexibility, orthographic control, elimination and working memory.
Bracket completion	Insert the same letter to complete the word before each bracket and begin the word after it.	Segmentation, word formation and simultaneous constraint satisfaction.
Hidden word	Identify a four-letter word spanning the end of one word and the beginning of the next.	Visual-verbal scanning, boundary awareness and vocabulary.
Code mapping	Infer letter-number or word-code relationships and apply the mapping to a new item.	Symbolic reasoning, pattern extraction and algorithmic thinking.

7.1 Curriculum correspondence

- English KS3-4: vocabulary growth, spelling, morphology, word relationships, precise language and proof-reading.
- Mathematics and computing: pattern recognition, symbolic representation, algorithms, constraints and systematic elimination.

7.2 Progression

Division	Expected demand
Junior	High-frequency words, transparent transformations, smaller search space and fewer interacting constraints.
Senior	Less frequent vocabulary, plausible near-solutions, denser coding, larger search spaces and greater need to verify the entire transformation.

7.3 Item-writing principles (*for paper setters and reviewers*)

- All resulting words must be standard, age-appropriate British English unless a clearly signalled proper noun or technical term is intended.
- The rule must be sufficient to determine one answer; accidental alternatives must be eliminated during review.
- Code questions will be solvable from the information supplied and must not require guesswork about unstated conventions.
- Avoid vocabulary that is needlessly archaic, dialectal or culturally obscure for international candidates.

8. Domain Framework: Non-Verbal Reasoning

8 marks

Non-Verbal Reasoning assesses visual-spatial and abstract reasoning with reduced dependence on extended language. It is especially valuable in an international competition because it provides an additional route for candidates to demonstrate analytical ability.

Task family	Indicative demand
Classification and odd-one-out	Identify the figure that violates a shared rule or differs on a relevant attribute.
Sequences and matrices	Infer how position, shading, orientation, quantity or symbol changes across a sequence or grid.
Rotation and transformation	Recognise invariant structure under rotation, reflection, translation or combined changes.
Nets and 2D/3D relations	Fold nets, identify opposite faces, interpret cross-sections and match different views of solids.
Visual coding	Infer the attributes represented by letters or symbols and apply the code to a new target.
Counting and connectivity	Count composite shapes, track moving cells, connect paths or select a tile satisfying multiple spatial constraints.

8.1 Curriculum correspondence

- Mathematics KS3-4: geometry, transformations, plans and elevations, properties of 2D and 3D shapes and systematic counting.
- Design & Technology and Art & Design: spatial communication, structures, visual composition, evaluation and representation of ideas.
- Computing: abstraction, pattern recognition, logical transformation and decomposition.

8.2 Progression

Division	Expected demand
Junior	Single dominant rule, familiar geometric forms, clear rotations, straightforward nets and one-stage visual codes.
Senior	Multiple attributes, composite rules, cross-sections, more complex rotations, distractors preserving some but not all invariants, and larger visual search spaces.

9. Domain Framework: Miscellaneous / Cross-Curricular Scholarship

5 marks

This section rewards broad cultural and academic literacy beyond the principal domains. It should feel eclectic but not arbitrary: every question will represent knowledge reasonably expected of an internationally minded young scholar.

9.1 Indicative content

- Literature and rhetoric: authors, genres, major works, literary devices and the language of analysis.
- Music and the arts: common terminology, forms, traditions, creators and cultural significance.
- Science and intellectual history: landmark discoveries, major scientists, awards and the development of ideas.
- World geography and culture: languages, cities, institutions, heritage and globally significant events.
- Verified current knowledge: major forthcoming events, recently recognised achievements or widely reported international developments.

9.2 Selection safeguards (*for paper setters and reviewers*)

- Use one clear reference date for current questions and record the authoritative source during item development.
- Avoid celebrity gossip, transient internet trends and questions that favour one national media environment.
- Ensure that the answer is not debatable because of definitions, exchange-rate fluctuations, ranking methodology or publication date.
- Where a superlative is used - “largest”, “highest”, “most spoken” - define the metric precisely.

Annual updating requirement

Section 6 and all current-affairs material elsewhere must be reviewed for factual currency before each live administration. Questions whose answer may change after publication should include a precise date, metric and recognised source.

10. Cross-Cutting Competencies and Annual Themes

The Young Scholar Tournament should let the participants feel like one coherent scholarly challenge rather than six unrelated mini-tests. Cross-cutting competencies and an annual theme will help connect the sections without distorting the subject balance.

Competency	What candidates demonstrate	Most visible in
Evidence literacy	Distinguish fact, inference, opinion and speculation; assess source quality; interpret limitations; select evidence that actually supports a claim.	General Knowledge, English, Science, Miscellaneous
Quantitative literacy	Use number, ratio, rates, probability, statistics and graphs to understand real situations.	STEM, General Knowledge, Non-Verbal Reasoning
Systems thinking	Recognise interdependence, feedback, trade-offs, networks, supply chains and unintended consequences.	General Knowledge, STEM, annual theme
Communication	Understand precise wording, vocabulary, tone, structure and symbolic systems.	English, Verbal Reasoning, all sections
Ethical and civic judgement	Consider fairness, responsibility, sustainability, future generations, rights and public consequences.	General Knowledge, English, STEM
Creativity and innovation	Understand design cycles, alternative solutions, adaptation and the movement from idea to tested product.	STEM, Non-Verbal Reasoning, later tournament stages
Cultural literacy	Recognise significant literature, history, geography, arts, institutions and ideas from the UK and wider world.	General Knowledge, English, Miscellaneous

10.1 Use of an annual theme

An annual theme may shape contexts, passages and selected questions across the paper, but it will not turn the Preliminary Stage into a narrow specialist examination. The theme will function as a connecting lens. For example, Technology & Globalisation can support questions on trade, digital networks, ethics, language, AI, energy, data and historical change while the paper still retains full multi-subject breadth.

11. Scoring, Reporting and Use of Results

11.1 Scoring

- The sample-paper model assigns one mark to each question or sub-question, producing a raw score out of 80.
- The default framework does not require weighted section scores; the published competition rules will state clearly if any weighting or penalty for incorrect answers is introduced.
- Where multiple paper sets are used, forms will be equated through matched blueprints, common difficulty targets and statistical review.

11.2 Recommended diagnostic reporting

Reporting strand	Source sections	What the profile indicates
Global Scholarship	Sections 1 and 6	Breadth of world knowledge, historical/geographical understanding, cultural literacy and current-awareness accuracy.
Communication & Language	Section 2 and part of Section 4	Reading comprehension, vocabulary, grammar, editing, lexical flexibility and precision.
STEM & Quantitative Reasoning	Section 3	Mathematical fluency, scientific understanding, data interpretation, computing, engineering and innovation.
Abstract Reasoning	Sections 4 and 5	Pattern recognition, symbolic reasoning, verbal transformation and visual-spatial analysis.

11.3 Appropriate interpretation

The Preliminary Stage score should be interpreted as a broad snapshot of performance under timed, selected-response conditions. It is particularly useful for ranking, identifying relative strengths and selecting candidates for later stages. It should not be treated as a complete measure of creativity, collaborative ability, spoken communication or extended project work; those capabilities are more appropriately assessed in subsequent tournament stages.

Appendix A. Junior Scholar Curriculum Descriptor

Domain	Junior descriptor
General Knowledge	Recognises important world institutions, countries, historic developments and global systems; explains direct cause/consequence; applies core concepts to familiar contemporary contexts.
English	Understands a substantial KS3-level passage; identifies main ideas, detail and inference; interprets vocabulary and common devices; controls core grammar, spelling and sentence structure.
Mathematics	Works fluently with number, ratio, percentage, scale, averages, introductory algebra, probability and geometry; solves one- and two-stage contextual problems.
Science	Applies secure KS3 biology, chemistry and physics; connects scientific ideas to everyday phenomena; understands variables, models and evidence at an introductory level.
Computing & Innovation	Understands algorithms, iteration, sensors, simple control, AI/data concerns and prototyping; identifies the purpose of common components and processes.
Verbal Reasoning	Recognises word structures and solves constrained letter, hidden-word and code problems using common vocabulary.
Non-Verbal Reasoning	Identifies patterns, rotations, odd-one-out rules, cube-net relationships and simple visual codes.
Cross-Curricular Scholarship	Demonstrates broad interest in literature, music, culture, geography, science and verified major events.

Junior question-style indicators

- One or two reasoning steps are typical.
- Specialist terms are either core KS3 knowledge or supported by context.
- Distractors reflect common misconceptions rather than subtle philosophical distinctions.
- Visual tasks contain one dominant transformation or classification rule.

Appendix B. Senior Scholar Curriculum Descriptor

Domain	Senior descriptor
General Knowledge	Evaluates global policy, economics, governance, media claims, historical transformations and the reliability or representativeness of evidence.
English	Interprets nuanced argument or literary non-fiction; analyses tone, representation, ambiguity, authority, narrative control and the limits of evidence; edits complex Standard English.
Mathematics	Uses KS4 mathematics fluently and applies selected post-16 habits of formal reasoning, including functions, compound change, probability, statistics, modelling and multi-step calculation.
Science	Explains mechanisms precisely; reasons about experiments, variables, controls, causation, uncertainty and quantitative relationships across biology, chemistry and physics.
Computing & Innovation	Understands data representation, networks, latency, algorithms, AI evaluation, bias, security and design systems; reasons about trade-offs and baseline comparisons.
Verbal Reasoning	Solves denser lexical and coding tasks with multiple constraints and less frequent vocabulary.
Non-Verbal Reasoning	Applies composite transformations, visual codes, cross-sections, connectivity rules and multi-attribute classifications.
Cross-Curricular Scholarship	Draws on a mature range of literature, arts, science history, global affairs and cultural knowledge, with precise use of definitions and metrics.

Senior question-style indicators

- Questions often require two or more reasoning steps and careful attention to scope.
- Several options may appear plausible; the strongest answer depends on precision, causality or evidence.
- Specialist terminology is more extensive and may bridge GCSE and introductory A-level expectations.
- Visual tasks may combine several changing attributes or require 2D/3D abstraction.

Appendix C. Curriculum Correspondence Matrix

YST domain	KS3 correspondence	KS4 correspondence	KS5 transition
General Knowledge, History & World News	History, geography, citizenship, English reading, mathematics/data	Citizenship, English, maths; GCSE humanities/economics-style reasoning	Independent research, source evaluation, disciplinary breadth, policy and systems thinking
English, Reading & Language Use	Reading, inference, vocabulary, language analysis, grammar and Standard English	Critical reading, comparison, evaluation, accurate communication	Language/discourse analysis, representation, genre, ambiguity and advanced editing
STEM & Innovation	KS3 maths, science, computing and design & technology	KS4 maths/science/computing; more formal problem solving and data interpretation	A-level habits: formal models, quantitative reasoning, experimental evaluation and disciplinary precision
Verbal Reasoning	Vocabulary, spelling, morphology, pattern recognition	Advanced vocabulary, editing and logical transformation	Symbolic reasoning, language awareness and rapid constraint solving
Non-Verbal Reasoning	Geometry, transformations, 3D forms, abstraction and design	Composite geometry, plans/elevations, algorithmic visual reasoning	Spatial modelling, abstract representation and multi-variable pattern analysis
Miscellaneous	Cultural entitlement across literature, arts, music, history and geography	Broader GCSE cultural and academic literacy	Independent intellectual curiosity and interdisciplinary awareness

References. Framework Sources and Alignment Base

Department for Education and GOV.UK curriculum sources

- National curriculum in England: framework for key stages 1 to 4
- English programmes of study
- Mathematics programmes of study
- Science programmes of study
- Computing programmes of study
- History programmes of study
- Geography programmes of study
- Citizenship programmes of study for key stages 3 and 4
- Design and technology programmes of study
- Music programmes of study
- GCE AS and A level subject content collection

Interpretive note

The curriculum links in this document identify broad correspondence and progression. They do not imply that the Young Scholar Tournament reproduces a particular GCSE or A-level specification, nor that every candidate must study the English national curriculum.