

Daffodil Grammar School for Girls

Curriculum Plan - Computing and Digital Literacy

Key Stage 3 Scheme of Work

Key stage / year groups KS3 (Years 7-9)	Time allocation KS3: 1-2 periods weekly.	Delivery model Discrete Computing lessons covering digital literacy, online safety, systems, data and programming.	Grouping / pathway Mixed ability, with structured support and challenge through practical tasks and projects.
Curriculum coverage Final subject scheme of work for the stated key stage(s).	Assessment cycle Regular formative checks, summative assessment and targeted intervention.	Review cycle Annual curriculum review, supported by termly assessment analysis.	Version 1.2
Intent Clear subject purpose with ambitious knowledge, skills, literacy and character development.	Implementation Cumulative sequencing across the key stage(s), with deliberate retrieval and careful modelling.	Assessment Response Regular formative checks, summative assessments and question-level analysis to guide intervention.	

1. Curriculum intent (Computing & Digital Literacy)

Computing at Daffodil Grammar School for Girls aims to ensure that all pupils in Key Stage 3:

Become confident, safe and responsible users of technology, understanding their digital footprint and staying safe online.
 Develop computational thinking skills (decomposition, pattern recognition, abstraction, algorithms) and practical programming skills in at least one textual language (e.g. Python), plus visual tools where helpful.

Understand the principles of computer science:

Data representation (binary, text, images, sound – at KS3 level).

How hardware and networks work (including the internet).

Gain essential digital literacy and productivity skills:

Online research, evaluation of information, file management.

Word processing, presentations, spreadsheets, simple databases.

Responsible use of email and collaborative tools.

Reflect on the ethical, social and environmental impact of technology (screen time, social media, AI, privacy, bias, climate impact of tech).

See computing as relevant to their futures: further study (GCSE CS/IT), STEM careers, business, creative industries and everyday life.

Use technology in a way that reflects Islamic values (integrity, modesty, kindness, avoiding harm) and British values (rule of law, respect, responsibility).

Time allocation:

KS3: 1–2 periods per week (Years 7–9).

Grouping: mixed ability, with differentiation in tasks, scaffolds and stretch activities.

2. KS3 overview (Years 7–9)

Across KS3, pupils will:

Every year:

Do some programming (block-based and/or text-based).

Learn about computer systems & networks.

Work on digital literacy & productivity tasks.

Revisit online safety & digital wellbeing at an age-appropriate level.

Build from guided, structured tasks in Year 7 to more independent projects and problem-solving by Year 9.

3. Year 7 – Foundations in Digital Literacy & Computing

Overall intent: Ensure all pupils have a secure baseline of digital skills, safe online behaviours, and a first taste of programming and computing concepts.

Term	Unit	Key Content	Skills & Outcomes	Assessment Focus
Autumn 1	Digital Foundations & Online Safety	- Logging in, file management, cloud storage (if used).- School ICT acceptable use; strong passwords; privacy basics.- Online safety: cyberbullying, respectful communication, reporting concerns.- Digital footprint & reputation; link to Islamic values (modesty, honesty) and British values.	- Navigate school systems; organise files sensibly.- Recognise unsafe situations online; know how to seek help.	Baseline digital skills checklist + short e-safety quiz and scenario-based written responses.
Autumn 2	Introduction to Computing & Hardware	- What is a computer? Inputs/outputs, CPU, memory, storage.- Types of devices; basic components inside a PC.- Simple binary introduction (bits/bytes, binary for small numbers).	- Identify key components of a computer system.- Convert a few small numbers between binary/decimal (with support).	Short test (labelling diagrams, multiple choice, short answers).
Spring 1	Block-Based Programming (e.g. Scratch)	- Sequencing, selection (if), iteration (loops).- Variables (score, timer), simple operators.- Creating a simple interactive project (e.g. quiz or animation).	- Apply core programming constructs in a block-based environment.- Design, test and debug a simple program.	Project marked with rubric (functionality, use of sequence/selection/loops, creativity, testing).

Term	Unit	Key Content	Skills & Outcomes	Assessment Focus
Spring 2	Digital Literacy – Documents & Presentations	- Word processing: headings, styles, images, tables, citations/basic referencing.- Presentation skills: clear slides, images, avoiding overload.- Research skills: using search engines, recognising reliable sources, avoiding plagiarism.	- Produce a well-structured document and presentation on a given topic (e.g. “Staying Safe Online” or “Women in Computing”).	Document + presentation assessed for layout, clarity, appropriate images, basic referencing and accuracy.
Summer 1	Introduction to Spreadsheets & Data	- Basic spreadsheet skills: cells, formulae, SUM, AVERAGE, MIN, MAX.- Simple charts (bar, line, pie).- Using spreadsheets to model simple scenarios (e.g. budgeting).	- Use formulas to perform calculations.- Create and interpret simple charts; understand purpose of spreadsheets.	Spreadsheet assignment (task sheet with required formulas and charts).
Summer 2	Creative Project & Review	- Mini project combining skills (e.g. create a simple game in Scratch and a short poster about it).- Review of Year 7 computing concepts.	- Plan, create and present a small digital product.- Reflect on skills learned and targets for Year 8.	End-of-Year 7 assessment (short written test + project review).

4. Year 8 – Programming, the Web & Data

Overall intent: Build on foundations with more structured programming (introducing text-based coding), deeper online safety (social media) and web skills.

Term	Unit	Key Content	Skills & Outcomes	Assessment Focus
Autumn 1	Text-Based Programming 1 (Python or similar)	- Introduction to text-based syntax.- Variables, input/output, simple arithmetic.- Selection (if/elif/else); simple validation.- Debugging and interpreting error messages.	- Write small programs that take input and produce output.- Use selection to make decisions in code.	Programming tasks (e.g. password checker, simple calculator) assessed via rubric (correctness, structure, comments).
Autumn 2	The Internet, Web & Online Services	- Difference between internet and World Wide Web.- Basic networking: routers, servers, clients, packets.- How web pages are delivered; URLs, HTTP/HTTPS.- Dangers: phishing, scams, malware; safe/ethical behaviour online.	- Explain in simple terms how data travels across a network.- Recognise and respond appropriately to suspicious online content.	Written assessment: diagrams + short explanations; e-safety scenario responses.

Term	Unit	Key Content	Skills & Outcomes	Assessment Focus
Spring 1	Web Design & HTML/CSS (Intro)	- Structure of a web page: HTML tags, headings, paragraphs, links, images, lists.- Simple inline or basic CSS for colour and fonts.- Designing a simple, appropriate web page (e.g. about a hobby or “My Ideal Study Space”).	- Create a multi-page website with basic navigation.- Use clear, accessible and modestly presented content.	Practical assessment: check code validity, navigation, layout and appropriateness of content.
Spring 2	Spreadsheets & Data Handling (Level Up)	- Relative vs absolute cell references.- More functions (e.g. IF, COUNTIF).- Data analysis: sorting, filtering, interpreting graphs.	- Use spreadsheets for slightly more complex modelling tasks (e.g. comparing costs, results analysis).- Use charts to support decisions.	Spreadsheet project (e.g. “Choose the best phone plan / trip option using data and formulas”) with written justification.
Summer 1	Data Representation (Images, Text, Sound – Intro)	- Bits/bytes recap; character encoding (ASCII/Unicode basics).- How images are represented: pixels, resolution, colour depth (concept level).- Simple idea of sample rate and quality for sound.	- Explain, at a high level, how text and images are stored in binary.- Understand trade-offs (quality vs file size) in simple terms.	Short written test using diagrams and simple calculations (e.g. approximate file size).
Summer 2	Digital Wellbeing & Social Media	- Impact of screen time and social media on mental health, sleep, concentration.- Privacy settings, blocking/reporting tools.- Handling online conflicts in a way consistent with Islamic values and school behaviour policy.- Building a positive online presence.	- Identify practical strategies for healthy tech use.- Reflect on own habits; make a realistic improvement plan.	Reflective task (written or multimedia) + short quiz on key concepts.

5. Year 9 – KS4 Bridge: Problem-Solving, Cybersecurity & Impact of Technology

Overall intent: Prepare pupils for GCSE pathways (Computer Science / IT), more independence, and a mature understanding of technology's impact on society.

Term	Unit	Key Content	Skills & Outcomes	Assessment Focus
Autumn 1	Text-Based Programming 2 (Python – Next Steps)	- Recap of Year 8 constructs.- Iteration: for and while loops.- Combining selection and iteration; nested structures.- Simple use of lists/arrays (e.g. handling multiple items).	- Design and implement small programs that solve problems using loops and decisions.- Use decomposition and pseudo-code/flowcharts to plan.	Programming project (e.g. quiz game, simple text-based menu program) assessed for design, correctness, structure, documentation.

Term	Unit	Key Content	Skills & Outcomes	Assessment Focus
Autumn 2	Algorithms & Computational Thinking	- Decomposition, abstraction, pattern recognition.- Algorithm design using flowcharts and pseudocode (language-agnostic).- Basic searching/sorting algorithms at conceptual level (e.g. linear search, bubble sort).	- Represent and reason about algorithms away from a specific language.- Trace simple algorithms; identify outputs.	Written and practical tasks: tracing algorithms, drawing flowcharts, explaining choices.
Spring 1	Cybersecurity & Law	- Threats: viruses, worms, trojans, phishing, shoulder surfing, brute force attacks.- Technical and human countermeasures (strong passwords, 2FA, antivirus, firewalls, updates).- Legal frameworks (Computer Misuse Act, Data Protection principles) explained in age-appropriate, UK-law aligned way.- Clear statement that hacking, cheating, bypassing filters etc. are unlawful and against school/Islamic values.	- Identify common cyber threats and suitable defences.- Understand, in outline, key legal principles and why obeying the law is essential.	Scenario-based assessment: recommendations for securing a school/home system + short-answer law questions.
Spring 2	Databases & Information Management (if resources allow)	- Basic database concepts: fields, records, tables.- Simple queries (e.g. using query builder or simple SQL-like thinking, depending on tools).- Practical scenario (e.g. simple library or contact database).	- Create, populate and query a basic database.- Explain advantages of electronic data storage and associated responsibilities (privacy).	Practical database task + short answer questions.
Summer 1	Impacts of Technology & AI	- Social, ethical and environmental impacts of digital technology (privacy, bias in algorithms, e-waste, employment changes).- Introduction to AI concepts at an accessible level (training data, bias, appropriate use).- Islamic and British values reflections: justice, fairness, stewardship, respect for others.	- Discuss benefits and risks of technology from multiple perspectives.- Form balanced arguments about topical tech issues.	Extended written piece / presentation on a chosen tech issue (e.g. social media, AI in education, surveillance).

Term	Unit	Key Content	Skills & Outcomes	Assessment Focus
Summer 2	KS4 Taster & Project	- Introduction to GCSE Computer Science / IT options – what they involve.- Mini NEA-style project: small, self-chosen coding or digital media project, planned and documented in stages.- Reflection on own strengths and interests.	- Manage a mini project: plan, implement, test and evaluate a digital solution.- Understand KS4 expectations and pathways.	Project portfolio (planning, implementation, testing, evaluation) + self-assessment; informs KS4 guidance.

6. Cross-cutting strands

Online Safety & Digital Citizenship

Revisited each year at increasing depth:

Year 7: Basic safety, cyberbullying, reporting, respect.

Year 8: Social media, privacy, oversharing, digital reputation.

Year 9: Cybersecurity, legal issues, digital footprints for future education/employment.

Always framed within:

School policies (behaviour, safeguarding, acceptable use).

Islamic values (respect, no backbiting, no indecency, honesty).

British values (rule of law, mutual respect, individual liberty with responsibility).

Digital Literacy across the curriculum

Computing supports wider subjects:

Research skills, referencing and critical evaluation of sources (History, Geography, Science, RS).

Use of spreadsheets and data in Maths, Science and Business later on.

Presentation and document skills for projects across the curriculum.

7. Assessment schedule

KS3 Computing

Formative assessment:

Regular feedback during practical tasks (programming, documents, spreadsheets).

Self- and peer-assessment checklists (e.g. testing and debugging, e-safety scenarios).

Low-stakes quizzes for key concepts and vocabulary.

Summative assessment:

At least one summative task per unit:

Programming projects.

Practical digital artefacts (website, spreadsheet, document, presentation).

Short written tests for theory units (hardware, networks, data representation, cybersecurity, impacts).

End-of-year overview (Y7–9):

Judged against school computing criteria (emerging / developing / secure / exceeding) in:

Computational thinking & programming.

Digital literacy.

Understanding of computer systems & networks.

Online safety & digital responsibility.

8. Inclusion, SEND & EAL in Computing

Tasks are designed to be accessible but scalable:

Clear instructions, step-by-step guides, and example code for those who need it.

Extension challenges (e.g. extra features in programs) for high attainers.

For SEND:

Use of visual supports (flowcharts, screenshots, code snippets).

Chunking instructions and regular checkpoints.

Flexible outcomes (e.g. simpler program but well-understood).

For EAL:

Key vocabulary lists with definitions and images where helpful.

Modelling of sentence structures for written answers (e.g. “One advantage is... because...”).

Heavy use of demonstration and worked examples.

9. SMSC, British values & Islamic ethos

Computing & Digital Literacy strongly support:

Spiritual & moral development:

Reflecting on ethical dilemmas (AI, social media, privacy).

Considering honesty, respect and responsibility online.

Social development:

Collaborative programming and group projects.

Learning to communicate politely and constructively online and in class.

Cultural development:

Understanding global nature of the internet.

Celebrating contributions to computing from diverse cultures, including Muslim and female pioneers.

British values:

Rule of law: cybercrime is illegal; respect for licensing, copyright, data protection.

Individual liberty: making informed choices about online behaviour within safe boundaries.

Mutual respect & tolerance: respectful online communication; tackling hate and bullying.

Islamic ethos:

Emphasising integrity, modesty and avoiding harm in all digital interactions.

Encouraging learners to use technology for good: learning, creativity, service to others.

Clear rejection of harassment, spreading rumours, sharing inappropriate content, hacking or breaking school/UK laws.

Curriculum quality assurance checklist

Use this checklist during annual curriculum review, departmental moderation and inspection preparation.

Area	Quality question	Evidence
Intent	Curriculum intent is clear, ambitious and linked to the school ethos.	
Sequencing	Knowledge, skills and vocabulary build logically over time.	

Area	Quality question	Evidence
Assessment	Key assessments identify gaps and inform teaching, intervention and revision.	
Inclusion	SEND, EAL, foundation and high-attaining pupils are considered without lowering ambition.	
Implementation	Resources, routines and lesson expectations are understood by staff.	
Impact	Pupil work, assessment evidence and pupil voice show progress over time.	

Suggested review evidence: scheme updates, assessment analysis, samples of pupil work, intervention records, pupil voice, lesson visits, book looks and department meeting notes.