

Year 11 CS Journey



Tier 3 Vocabulary:

Autumn 1	Autumn 2	Spring 1
Variable, Constant, Operator, Assignment, Programming construct, Sequence, Selection, Count controlled & Condition controlled iteration	Pseudocode, Flowchart, Trace table, Searching algorithms, Binary, Linear search, Bubble, Merge, Insertion sort	Defensive design, Anticipating misuse, Authentication, Input validation, Maintainability, Syntax error, Logical error

FINISH

Spring 1

Sp1: ☐ Producing Robust Programs

Why this?

- ☐ Defensive design. ☐ Authentication, code maintainability and testing.
- ☐ How are robust programming produced?

Why now?

- ☐ Further knowledge of programming for paper 2. ☐ Gain experience of algorithms and problem solving.

Reading:

- ☐ What is intelligence? Can it be mimicked by a machine?

Au2: ☐ Algorithms

Why this?

- ☐ Computational thinking and algorithmic thinking. ☐ Search and sort algorithms. ☐ Flow diagrams and pseudocode. ☐ Errors. ☐ Trace Tables

Why now?

- ☐ Core algorithms in computer science help with knowledge and understanding of problem solving and programming.

Reading:

- ☐ Big data and invasion of privacy

Au1: ☐ Programming Fundamentals ☐ Algorithms

Why this?

- ☐ Variables, Constants, Input, Output, Assignment. ☐ Know the 3 basic programming constructs. ☐ Variables, constants, operators. ☐ SQL, files.

Why now?

- ☐ Commence paper 2 topics.
- ☐ Consolidate programming knowledge. ☐ Reinforce core concepts.

Reading:

- ☐ The evolution of hardware over the last 50 years

Su1: ☐ Paper 1 & 2 Revision

☐ Exam Practice

Why this?

- ☐ Gain experience in answering computational thinking, algorithms and programming questions.

Why now?

- ☐ Essential preparation for the Paper 1 and Paper 2 exams.

Reading:

- ☐ Past Paper Questions, Essay Question Practice

Sp2: ☐ Boolean Logic

☐ Programming Languages and IDE's

Why this?

- ☐ Logic diagrams. ☐ Truth Tables.
- ☐ Low level vs. High level languages.
- ☐ Translators, compilers and interpreters. ☐ IDE's

Why now?

- ☐ Gain experience in answering computational thinking, algorithms and programming questions.

Reading:

- ☐ How binary made possible modern computers

Summer 1

Spring 2

Autumn 2

Autumn 1

START

Tier 3 Vocabulary:

Spring 2	Summer 1
Logic diagram, Logic gate, AND, OR, NOT, Truth table, High-level language, Low-level language, Translator, Compiler, Interpreter	