Y11

Revision Olympics

Sheldon School
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GCSE Computer Science

Revision Guide
December 2024–May 2025

Exam Specification and General Support

Exam specification and exam board	GCSE Computer Science Edexcel 1CP2
Past paper questions	Sheldon Sharepoint Pearson
Useful revision websites	BBC Bitesize Isaac Computer Science YouTube
Exam info	Topics: 1, 2, 3, 4 and 5 – Monday 12 May 2024 (PM) – 1.5 hours Topics 6 – Tuesday 20 May (PM) – 2 hours

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Week	Activity 1	Activity 2
1 2.12.24		
2 9.12.24		
3 16.12.24	**Topic 1: Computational Thinking** 1.1 Decomposition and Abstraction **Revision Activity:** Watch videos on decomposition and abstraction techniques. **Link:** BBC Bitesize - Computational Thinking	**Basic Python Syntax** 1. Introduction to Python **Revision Activity:** Write basic print statements and variable assignments in Python.
4 6.01.25	**Topic 1: Computational Thinking** 1.2 Algorithms **Revision Activity:** Create flowcharts for simple algorithms. Link: BBC Bitesize - Algorithms	**Basic Python Syntax** 1. Introduction to Python **Revision Activity:** Write basic print statements and variable assignments in Python.
5 13.01.25	**Topic 2: Data** 2.1 Binary **Revision Activity:** Practice converting denary to binary and vice versa. **Link:** BBC Bitesize - Binary	**Operators** 4. Arithmetic Operators **Revision Activity:** Write a program to perform basic arithmetic operations.
6 20.01.25	**Topic 2: Data** 2.2 Data Representation **Revision Activity:** Explore how data is represented in computers (ASCII, images). **Link:** BBC Bitesize - Data Representation	**Relational and Logical Operators** 5. Using relational operators in Python **Revision Activity:** Create a program that compares two numbers and outputs results.
7 27.01.25	**Topic 2: Data** 2.3 Data Storage and Compression **Revision Activity:** Discuss different storage types and their uses. **Link**: BBC Bitesize - Data Storage	**Relational and Logical Operators** 5. Using relational operators in Python **Revision Activity:** Create a program that compares two numbers and outputs results.

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Week	Activity 1	Activity 2
8 3.02.25	**Topic 3: Computers** 3.1 Hardware Components **Revision Activity:** Research the role of different hardware components. **Link:** BBC Bitesize - Hardware	**Control Flow - If Statements** 6. Writing if statements **Revision Activity:** Write a program to check if a number is even or odd.
9 10.02.25	**Topic 3: Computers** 3.2 Software **Revision Activity:** Explore types of software and their functions. **Link:** BBC Bitesize - Software	**Control Flow - If/Else Statements** 7. Using if/else statements **Revision Activity:** Extend the previous program to include an else statement.
HALF TERM	**Topic 4: Networks** 4.1 Types of Networks **Revision Activity:** Create a comparison chart of LAN and WAN. **Link:** BBC Bitesize - Networks	**Repetition - Loops** 8. Using for loops **Revision Activity:** Write a program that prints numbers 1 to 10.
10 24.02.25	**Topic 4: Networks** 4.2 Network Security **Revision Activity:** Discuss various network security measures. **Link:** BBC Bitesize - Network Security	**Repetition - While Loops** 9. Using while loops **Revision Activity:** Write a program that continues until a user inputs 'stop'.
11 3.03.25	**Topic 5: Issues and Impact** 5.1 Environmental Issues **Revision Activity:** Research the environmental impact of digital devices. **Link:** BBC Bitesize - Environmental Issues	**Functions** 10. Writing functions **Revision Activity:** Create a function that calculates the area of a rectangle.

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Week	Activity 1	Activity 2
12 10.03.25	**Topic 5: Issues and Impact** 5.2 Ethical and Legal Issues **Revision Activity:** Discuss data protection laws and ethical issues. **Link:** BBC Bitesize - Ethical and Legal Issues	**Parameters and Return Values** 11. Functions with parameters **Revision Activity:** Modify the previous function to accept parameters for length and width.
13 17.03.25	**Topic 1: Computational Thinking** 1.3 Truth Tables **Revision Activity:** Create truth tables for various logical operations. **Link:** BBC Bitesize - Truth Tables	**List Manipulation** 12. Creating and manipulating lists **Revision Activity:** Create a list and write a program to manipulate it (add, remove items).
14 24.03.25	**Topic 1: Computational Thinking** 1.2 Algorithms (Standard Algorithms) **Revision Activity:** Study sorting algorithms like bubble sort. **Link:** BBC Bitesize - Algorithms	**Advanced List Operations** 13. 2D Lists **Revision Activity:** As task 12 but with 2D lists.
15 31.03.25	**Topic 2: Data** 2.1 Binary (Conversions) **Revision Activity:** Work on binary conversion challenges. **Link:** BBC Bitesize - Binary Conversions	**String Manipulation** 14. Working with strings **Revision Activity:** Write a program that reverses a string and counts vowels.
EASTER BREAK (week 1)	**Topic 3: Computers** 3.3 Programming Languages **Revision Activity:** Compare high-level and low-level languages. **Link:** BBC Bitesize - Programming Languages	**File Handling** 15. Reading and writing files **Revision Activity:** Write a program that reads from a text file and outputs its content.

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Week	Activity 1	Activity 2
EASTER BREAK (week 2)	**Topic 4: Networks** 4.1.5 Network Speeds **Revision Activity:** Discuss factors affecting network speed. **Link:** BBC Bitesize - Network Performance	**Turtle** 16. Turtle **Revision Activity:** Pick a simple object and write a program that draws that object using Turtle.
16 21.04.25	**Topic 5: Issues and Impact** 5.3 Cybersecurity **Revision Activity:** Research cybersecurity threats and solutions. **Link:** BBC Bitesize - Cybersecurity	**Final Project** 17. Create a complete program **Revision Activity:** Build a mini-project using Python covering all learned concepts.
17 28.04.25	**Review and Consolidation** Review all topics and key concepts.	**Final Project** Complete and review your project.
18 5.05.25	**Mock Exam Paper 1** Complete practice paper exam for Paper 1. **Link:** BBC Bitesize - Mock Exam	**Mock Exam Paper 2** Complete a practice paper for Paper 2.
19 12.05.25	**Review Mock Exams** Discuss answers and feedback on Paper 1. **Link**: BBC Bitesize - Review	**Review Mock Exams** Discuss answers and feedback on Paper 2.
20 19.05.25	**Final Revision and Tips** Focus on areas of weakness identified in mocks. **Link**: BBC Bitesize - Exam Tips	