**Y10 Computer Science 6-week plan:**

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| **Subject** | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| **Week 6** | Using 2.1 Workbook:  - Create a **program in Python** for an RPG game using your flowchart and pseudocode you completed before half term to guide you.  Resources:  - 2.1 Workbook (recap slides 19-20)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) | Using 2.1 Workbook:  - Modify algorithm from last lesson to correct an issue with player 2 winning more battles than player 1.  - The algorithm on slide 22 does not run as expected in two ways. Identify and correct the errors in the pseudocode.  Resources:  - 2.1 Workbook (slides 21-22)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) | Using 2.1 Workbook:  - Create a “dungeon master” toolkit program which includes a range of caverns and keeps track of elements such as the ‘health’ and ‘capabilities’ of a player This is an open-ended task meaning as much detail can be added as you wish!  Resources:  - 2.1 Workbook (slide 22)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) |
| **Week 7** | Using 2.1 Workbook:  - Continue with “dungeon master” toolkit program from last lesson.  Resources:  - 2.1 Workbook (slide 22)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) | Using 2.1 Workbook:  - Continue with “dungeon master” toolkit program from last lesson.  Resources:  - 2.1 Workbook (slide 22)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) | Using 2.1 Workbook:  - Test “dungeon master” toolkit program from previous lessons. Ask someone else to test it too! Get their feedback – what worked/did not work?  Resources:  - 2.1 Workbook (slide 22)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) |
| **Week 8** | Using 2.1 Workbook:  - Create a **flowchart** for an RPG game using an algorithm provided (slide 23).  - Create the **pseudocode** for an RPG game using an algorithm provided (slide 24).  Resources:  - 2.1 Workbook  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) | Using 2.1 Workbook:  - Create a **program in Python** for an RPG game using your flowchart and pseudocode you completed before half term to guide you (slide 24).  Resources:  - 2.1 Workbook (recap slides 19-20)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) | Using 2.1 Workbook:  - Continue to create a **program in Python** for an RPG game using your flowchart and pseudocode you completed before half term to guide you (slide 24).  Resources:  - 2.1 Workbook (recap slides 19-20)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 How to produce algorithms…](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45)) |
| **Week 9** | Using 2.1 Workbook:  - Write the pseudocode required to find a ‘Geography’ book using a **linear search**.  - Create a program to test the **linear search** pseudocode.  Resources:  - 2.1 Workbook (slide 9)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 Linear](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45) [search](https://www.youtube.com/watch?v=mce2XxIVkVU&list=PLCiOXwirraUAf7ueVPl99gktxzJNEIyCC&index=4)) | Using 2.1 Workbook:  - Create a program to output the latitude and longitude of European capital cities using a **linear search**.  - Add validation and allow the user to add and remove cities.  Resources:  - 2.1 Workbook (slide 9)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 Linear](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45) [search](https://www.youtube.com/watch?v=mce2XxIVkVU&list=PLCiOXwirraUAf7ueVPl99gktxzJNEIyCC&index=4)) | Using 2.1 Workbook:  - Write the pseudocode required to find a ‘Geography’ book using a **binary search**.  - Create the program to test the **binary search** pseudocode.  Resources:  - 2.1 Workbook (slides 10 – 11)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 Binary search](https://www.youtube.com/watch?v=Eiy5DAr1ijs&list=PLCiOXwirraUAf7ueVPl99gktxzJNEIyCC&index=5)) |
| **Week 10** | Using 2.1 Workbook:  - Demonstrate the sequence of steps of a **bubble sort** algorithm using provided data.  - Write a program to perform a **bubble sort**.  Resources:  - 2.1 Workbook (slide 12)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1](https://www.youtube.com/watch?v=wvAblqsEj54&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-&index=45) [Bubble](https://www.youtube.com/watch?v=5GqZ0Gueb0Q&list=PLCiOXwirraUAf7ueVPl99gktxzJNEIyCC&index=6) sort) | Using 2.1 Workbook:  - Demonstrate the sequence of steps of a **merge sort** algorithm using provided data.  - Write a program to perform a **merge sort**.  Resources:  - 2.1 Workbook (slides 13-14)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 Merge sort](https://www.youtube.com/watch?v=TcNNPUIRqI8&list=PLCiOXwirraUAf7ueVPl99gktxzJNEIyCC&index=7)) | Using 2.1 Workbook:  - Demonstrate the sequence of steps of a **insertion sort** algorithm using provided data.  - Write a program to perform an **insertion sort**.  Resources:  - 2.1 Workbook (slide 15)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.1 Insertion sort](https://www.youtube.com/watch?v=ZV3Gd2wZBro&list=PLCiOXwirraUAf7ueVPl99gktxzJNEIyCC&index=8)) |
| **Week 11** | Using 2.2 Workbook:  - Write programs using basic string manipulation and file handling operations (reading/writing to a text file).  Resources:  - 2.2 Workbook (slides 5-7)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.2 The use of basic string manipulation](https://www.youtube.com/watch?v=F_dpYmI74E0&list=PLCiOXwirraUDRk5TlB2ulS3V2-0tB3vcS&index=3)  [2.2 The use of basic file handling operations](https://www.youtube.com/watch?v=zQWUgu7f_0E&list=PLCiOXwirraUDRk5TlB2ulS3V2-0tB3vcS&index=4)) | Using 2.2 Workbook:  - Identify, explain and create functions and procedures.  Resources:  - 2.2 Workbook (slide 9)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.2 How to use sub programs](https://www.youtube.com/watch?v=9gyO0ZOXQU4&list=PLCiOXwirraUDRk5TlB2ulS3V2-0tB3vcS&index=6)) | Using 2.2 Workbook:  - Create a program to store and search for data using SQL lite.  Resources:  - 2.2 Workbook (slide 11)  - GCSE OCR pseudocode guide  - Craig n Dave videos ([2.2 The use of records to store data](https://www.youtube.com/watch?v=F3w0DOqhik4&list=PLCiOXwirraUDRk5TlB2ulS3V2-0tB3vcS&index=10)  [2.2 The use of SQL to search for data](https://www.youtube.com/watch?v=YejAkhvh6N0&list=PLCiOXwirraUDRk5TlB2ulS3V2-0tB3vcS&index=11)) |