Digital communications Year 9

Curriculum Intent

The aim of the digital communication department is to introduce students to ICT and computer science and give them a flavour of what GCSE level study is like. We focus on developing a number of key skills across both disciplines, using application software to analyse data and create various multimedia products and enhancing algorithmic thinking with programming to strengthen our student's problem solving skills. We also strive to embed an understanding of how to utilise modern technology in a safe and responsible way. We want our students to be inquisitive and open to the possibilities our future pathways offer.

Project 1| Digital Communications | ICT

Students will learn:-

- Can analyse the target audience and features of an identified user interface.
- Can evaluate the success of a different user interfaces in appealing to their audience.
- Can utilise a variety of image manipulation skills for specific tasks.
- Can develop a user interface that appeals to a given target audience.
- Can reflect on the quality of project work and identify improvements.

Knowledge, understanding & Skills

- Identify different user interfaces and where they could be applicable.
- Accurately identify the design principles needed to create a suitable user interface.
- Use basic image manipulation techniques to alter images
- Create a product that takes into account the accessibility needs of their target audience.
- Evaluate the success of a user interface in appealing to its given target audience considering both strengths and weaknesses.

What does excellence look like?

Able to design an effective user interface that makes use of effective design principles.

Understand the role of accessibility and inclusiveness and making sure that the product has useful accessibility features for users with different needs.

Able to evaluate their strengths and weaknesses of their user interface offering realistic ideas for improvement.

How will we assess impact?
- Recapping knowledge with plenary and starter activities
- End of unit testing
- Peer and self-assessment
- Written

How is homework used to enhance learning?
- Lesson resources are all available through the shared area
- After school and lunchtime clubs available on specific dates if students need to come back to complete project work.
- Homework tasks are focused on analysing a range of user interface and where they would be appropriately applied.

Project 2| Digital Communications | Computer Science

Students will be:-

- Able to sequence print statements, variables and inputs for a given task
- Able to identify and resolve a variety of basic programming errors
- Able to use condition statements with appropriate use of indentation
- Able to abstract code into separate functions that can be run when called
- Able to use while loops to literate specific lines of code
- Able to pass arguments between functions or use global variables

Knowledge, understanding & Skills

- How what they have learnt from scratch can be applied to text based coding
- State the definitions of variables, iteration and conditionals
- Use python to create and test simple programs
- Able to utilise more advanced programming features like functions or iteration within programs
- Able to troubleshoot basic syntax errors
- Understand the need for logical thinking in planning out the functionality of their programs

What does excellence look like?

● Able to pass information between various sections of their programs and adjust data types if necessary
● Create a non-linear program with multiple pathways
● Able to troubleshoot more advanced problems – for example identifying logical errors in their work

How will we assess impact?

● Recapping knowledge with plenary and starter activities
● End of unit testing
● Peer and self-assessment
● Written evaluation of project work

How is homework used to enhance learning?

Lesson resources are all available through the shared area

● After school and lunchtime clubs available on specific dates if students need to come back to complete project work

● Requirement for students selecting computer science as a GCSE to utilise codecademy tutorials

● Python installed in various locations around the school for students to continue their projects

● Homework centred around understanding the history of coding and solving basic programming problems

International Opportunities

Within the curriculum

- Discussing how a various types of user interfaces may be designed to meet user needs and looking at what other changes might need to be made to include users of different accessibility needs and demographics. For example, looking at changes made to global user interface so they can be released to the Chinese market.