Digital communications Year 7

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:-

- Understands the concept of the Anglo Network, E-Safety and good folder management
- Can identify/evaluate how multi-media products appeal to their target audiences
- Can utilise a variety of web development techniques for different purposes
- Can evaluate the strengths and weaknesses of a multi-media product
- Can reflect upon and evaluate project work and identify areas of improvement
- Able to describe and analyse different data sets and produce meaningful results

What does excellence look like?

- Justify the web development techniques selected to meet a specific purpose
- Utilise an appropriate range of html/ CSS tools in combination to produce a fully functional website
- Demonstrate in a complex manner, the use of various modelling skills, including data types, functions and conditions

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
- Software now installed in various locations around the school for students to utilise
- Homework tasks revolve around practicing and enhancing skills learnt in the classroom

Knowledge, understanding & Skills

- Understand the concept of E-Safety and health and safety in a computer room. Understand the Anglo network including the VLE and email system
- Identify the target audience for a range of multi-media products
- State the process of producing a working website
- Identify the different strengths of weaknesses of existing websites
- Create a range of web pages utilising a number of different techniques
- Able to identify different data, apply the correct data types using the right formulae and functions.

How will we assess impact?

- Recapping knowledge with plenary and starter activities
- Peer and self-assessment
- End of half term socrative assessments

Project 2 | Digital Communications | Computer Science

Students will learn:-

- How to identify whether a device is input, output or storage
- How to identify different types of secondary storage, their use and the need for secondary storage
- How to identify components of a computer system & their roles
- How to convert binary and understand how it relates to different software types
- Can understand, design, create and refine algorithms to meet specific needs
- How to follow a given brief to find a solution to a problem using various programming techniques

Knowledge, understanding & Skills

- Able to differentiate between inputs, outputs, processing and storage. Understand how a basic computer system works
- Can physically look inside a computer and understand the different component of a computer and how these function
- Understand how to convert between binary and denary numbers
- Design basic algorithms to solve specific problems
- Understand different programming skills and know where to apply them to get the best possible results to a given problem

What does excellence look like?

● Able to explain how different data types are represented in binary – images and text
● Understand why programmers utilise the hexadecimal counting system
● Describe how the flow of information within the internal components of a computer system
● Understand the function of basic flow chart symbols

How will we assess impact?

- Recapping knowledge with plenary and starter activities
- Baseline testing in the first half term
- End of unit testing
- Peer and self-assessment

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 reinforcing the basic content of each lesson – for example getting students to identify internal computer components and explain their function
- KS3 resources on binary and computer components available through the BBC bite size pages

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International Opportunities

Within the curriculum

- Students are shown real-life examples of models and multi-media products and how what they study links into future careers all around the world
- Students shown examples of machine learning and the evolvement from low level programming to high level programming.