

SUBJECT KS3: Year 8



CARDINAL
NEWMAN
CATHOLIC SCHOOL

8.5 Topic HTML and website development

Students will have the opportunity to learn create using a web authoring package like Adobe Dreamweaver, they will:

- Write HTML code to create a simple web page and display it in a browser
- Create a simple navigation system using HTML
- Use a design to create a template for a web page using HTML
- Create their own multi-page website
- Insert text, images, multimedia and hyperlinks on their web pages



SUMMER
8.5

8.4 Topic: Introduction to Python

This unit focuses on getting pupils to understand the process of developing programs, the importance of writing correct syntax, being able to formulate algorithms for simple programs and debugging their programs.

They will learn to:

- Run simple Python programs in Interactive and Script mode
- Write pseudocode to outline the steps in an algorithm prior to coding
- Write programs using different types of data (e.g. strings and integers)
- Correctly use different variable types (e.g. integer and floating point), assignment statements, arithmetic operators
- Distinguish between syntax and logic errors and be able to find and correct both types of error
- Describe the purpose of pseudocode in designing algorithms
- Use comments to document their programs and explain how they work
- Write an error-free, well-documented program involving sequence, selection and iteration, but with some help given

SUMMER
8.4



8.3 Topic Computational thinking

This unit introduces students to the world of computational thinking and logic. With the help of many unplugged activities, students get to understand the power of problem solving and the different methods that Computer Scientists use to tackle problems. Students will consider the strands of abstraction and decomposition before moving on to solve logic problems and practice logical thinking. Logic gates are considered along with algorithms. Finally the area of pattern recognition is studied with many practical examples.

SPRING
8: 3

8.2 Topic Spreadsheets Modelling

Students will be learning to work with Excel, at the end of this Unit all pupils should be able to:

- Give examples of how computer models are used in the real world
- Format a simple spreadsheet model
- Use simple formulae and functions
- Name cells in a spreadsheet model
- Use a simple spreadsheet model to explore different "what if" scenarios
- Create a basic pie chart to display results
- Use conditional functions in calculations
- Use conditional formatting

SPRING
8.2



Topic 8.1 - Cybersecurity)

Students will look at the use of the internet in detail, they will learn the following:

- Name the major Acts concerning computer use
- Describe briefly some of the dangers of putting personal data on social networking sites
- Describe briefly ways of protecting online identity and how to report concerns
- Identify some of the signs of fraudulent emails and respond appropriately
- Adhere to Copyright Law when using written text, downloading music etc.
- List some of the Health and Safety hazards associated with computer use
- Describe how to safely dispose of an old computer

AUTUMN
8:1

OUR LEARNING
JOURNEY