Computing Curriculum and Knowledge Map

St Ralph Sherwin Catholic Multi Academy Trust

Communication and Collaboration (Y6)

I can describe how data is transferred across the internet and know why this would be useful – basic
I can identify different ways of working together online - advancing
I can draw conclusions on different methods of communicating on the internet and explain that communication on the internet may not be private - advancing

Programming A (Y6) - Variables in Games

I can define a 'variable' as something that changes – basic
I can explain why a variable is used in a program - advancing
I can recommend ways that other projects could be improved through the use of variables - deep

Programming B (Y6) - Sensing Movement

I can create a program to run on a controllable device - basic
I can compare selection on a program to conditions in the real world - advancing
I can prove the importance of the order of conditions in 'else...,if...' statements and recommend ways to modify a program to meet a different outcome - deep

Python Programming (KS3)

I can define Python as a text-based programming language and describe what it is used for
I can create simple programs with Python that respond to user input
I can investigate applying known commands from code-based programming to Python

Key stage 3

- Children will revisit these concepts and learn how to use this knowledge to solve problems using computer technology.
- use two or more programming languages, at least one of which is textual, to solve a variety of computational problems.
- understand simple Boolean logic [for example, AND, OR and NOT] and its use in programming;

Programming B (Y5) - Selection in Quizzes

I can define selection and create a program that uses selection to produce different outcomes - basic
I can identify ways to debug my program - advancing
I can recommend ways to improve a program – deep

Systems and Searching (Y5)

Describe the roles of computer systems in our lives – Basic
Create a web search to find specific information and refine this – Basic
Explain that a search engine follows rules to rank results – Advancing

YEAR 6

Python Programming (KS3)

I can define Python as a text-based programming language and describe what it is used for
I can create simple programs with Python that respond to user input
I can investigate applying known commands from code-based programming to Python

Communication and Collaboration (Y6)

I can describe how computers use address to access websites – basic
I can describe how data is transferred across the internet and know why this would be useful – basic
I can compare different methods of communicating on the internet - advancing

Programming A (Y6) - Variables in Games

I can define a 'variable' as something that changes – basic
I can create a project on Scratch that uses a variable – basic
I can identify ways to improve a program, adding variables independently - advancing

Programming B (Y6) - Sensing Movement

I can create a program to run on a controllable device – basic
I can describe the importance of the order of conditions in 'else...,if...' statements - basic
I can explain that selection can control the flow of a program and identify examples of conditions in the real world – advancing

Programming B (Y5) - Selection in Quizzes

I can define selection and say how it is used in computer programs - basic
I can create a program that uses selection to produce different outcomes – basic
I can identify ways to debug my program - advancing

Systems and Searching (Y5)

Describe how computers can be connected together to form systems – Basic
Create a web search to find specific information and refine this – Basic
Explain that a search engine follows rules to rank results – Advancing

Year B

YEAR 5

3D Modelling (Y6)

I can create a 3D model by manipulating objects – basic
I can identify objects to combine in a design that meets a given purpose - advancing
I can propose improvements to my own 3D model and modify it - deep

Introduction to Vector Graphics (Y5)

I can create a desired effect using different tools to help me – basic
I can identify that vector drawings consist of layers and that I can manipulate these to develop my own - advancing
I can draw conclusions about the skills that I have used to create a vector drawing and why I have used this skill - deep

Introduction to Spreadsheets (Y6)

Create a formula which includes a range of cells – Basic
Explain how to apply a formula to calculate the data I need to answer questions – Advancing
Select suitable ways to present data – Deep

Introduction to Vector Graphics (Y5)

I can create a vector drawing using the line and shape tools – basic
I can create a desired effect using different tools to help me – basic
I can identify that vector drawings consist of layers and that I can manipulate these to develop my own - advancing

YEAR 6

3D Modelling (Y6)

I can create a range of 3D shapes on a computer – basic
I can create a 3D model by manipulating objects – basic
I can identify objects to combine in a design that meets a given purpose - advancing

Video Production (Y5)

I can Name features used in different videos – Basic
I can Create digital media (video) using a range of techniques – Basic
I can Consider the impact of the choices made when making and sharing a video - Advancing

Flat-file Databases (Y5)

I can Describe how information can be recorded – Basic
I can Describe how to navigate a flat-file database to compare different views of information – Basic
I can Organise information based on a real-world database - Advancing

Web Page Creation (Y6)

I can Describe how to find copy-right free images and know why I should use these – Basic
I can Identify and suggest edits to my website to improve user experience – Advancing
I can Justify the need for navigation paths on a website - Deep

Introduction to Spreadsheets (Y6)

I can Create a dataset in a spreadsheet by applying an appropriate format to a cell – Basic
I can Create a formula which includes a range of cells – Basic
I can Explain why data should be organised to answer questions using a spreadsheet - Advancing

Web Page Creation (Y6)

I can Name the different types of media and common features used on websites – Basic
I can Describe how to find copy-right free images and know why I should use these – Basic
I can Identify and suggest edits to my website to improve user experience – Advancing

Flat-file Databases (Y5)

I can Describe how information can be recorded – Basic
I can Label a field, record and value in a database – Basic
I can Identify which field and value are required to answer a given question – Advancing

Video Production (Y5)

I can list the features of effective videos – Basic
I can create digital media (video) using a range of techniques – Basic
I can explain how to improve a video through reshooting and editing - Advancing

Year A

YEAR 5