

## Intent for Computing/ICT September 23

### Curriculum Objectives

- To give the pupils at Newbridge an opportunity to enable pupils to find, explore, exchange and present information.
- To develop pupils ability to understand and use information in an effective way.
- Pupils often present with very little Computing knowledge from primary school and we want pupils remember and understand more in computing so they can leave computer literate incorporating digital skills.
- ICT skills allows pupils to be more confident and independent learners.
- The curriculum gives pupils the fundamental principles and concepts of computer science logic, algorithms and data representation. Also basic programming skills needed to help problem solving.
  - The intention is to prepare pupils to live safety in an increasingly digital world.

## Implementation of Computing

### Curriculum Structure

This scheme was created to provide students with a broad and balanced understanding of a range of software applications. This displayed using a **Curriculum road map** to show their ICT journey and explained to each class group.

#### SCHEME OF LEARNING

This scheme is designed to be linear. Year 7 is designed to flow straight through into year 8 allowing progress to be shown over time.

Each lesson is complete with:

- Start activity
- Objectives - with success criteria and bigger picture
- Scenarios
- Activities - with differentiation which, will need to be adjusted to meet the needs of individual learners or groups of learners.
- Plenary

Projects were designed to be broken up allowing students to explore a range of software applications per term. Students then continuously revisit software applications gaining an in-depth understanding of their functions and features. Research suggests that students learn better when revisiting topics over and over as oppose to learning a topic for an extended period of time. This scheme of work follows the same strategy.

It is sometimes up the teacher to direct the learning and ensure that students are progressing each time they revisit an application but also demonstrate the ability to do skills over and over again.

For example, a student who demonstrates the ability to perform IF statements in Excel will be expected to complete this skill again the following term. This helps to reinforce learning.

Pupils are taught to draw and design projects in 3D using google sketch up software from year 7 to enable cross curriculum links.

## **YEAR 7**

Project based activities with a heavy weighting of ICT. This is designed to provide students with the foundation to learn using a computer, learn digital literacy and learn basic office applications. Some projects do include a Computing topic which will be from the statutory national curriculum for KS3 Computing.

## **YEAR 8**

The weighting of ICT to Computer Shifts to approx. 60:40 in favour of ICT. However, this curriculum includes other elements such as graphics and app development designed to make the subject interesting and engaging as well as continuing to learn the fundamentals of ICT. Students will be introduced to Python Programming at the end of the year when they are more mature.

## **YEAR 9**

The curriculum has a broad content giving pupils the opportunity to gain computing knowledge. The design of the lessons and topics are advertising aspects of the computing curriculum which could be suitable at Key stage 4 options. The subject is encouraged to ensure students are in the best position to pick the right subject for them.

## **ASSESSMENT**

Assessment is designed to be productive and constructive to the students as possible. Assessment sheets are completed on a regular basis by the teacher.

These assessment booklets are to be used formatively, providing students with regular updates on the skills that they are mastering as well as highlighting skills that they are yet to develop.

The assessment sheets are designed to paint a picture of progress as students continue to meet skills lesson on lesson.

Summative assessment is done online through Socrative. Students login at the end of each project and complete a series of questions.

The Socrative tests are bespoke and are designed to match the topics covered in that project (factor in that changing software packages may have had adverse effects on the assessment questions and may need to be adjusted prior to the tests being completed)

Socrative will grade students immediately and send the results back to the teacher that started the session.

A clear scheme of work that provides coverage in line with national curriculum. Teaching and learning should facilitate progression within digital literacy, information technology and computer science.

#### Access to computing resources

Children will have the opportunity to explore and respond to key issues such as digital communication, cyberbullying, online safety, security, plagiarism and social media.

The importance of online safety is shown through displays within the learning environment.

Parents and carers are informed about any online security issues and support from school is provided if needed.

Each subject is differentiated by teacher and TA support in lessons. Each project content allows pupils to develop their skills and develop knowledge and understanding of computing. This is developing the pupil's practical and fine motor skills within the school context of pupil's ability. All pupils are supported with literacy school targets with writing frames, key words and spelling when completing evaluations on each project. This is completed using ICT skills and also spell checker software.

Collaborative learning, on occasions pupils will be involved in team tasks to help and support one another.

## Impact of the Curriculum

The learning projects underpin ICT/Computing.

Pupils attend this subject area with very little knowledge or practical skills learned from primary education. The pupils progress in this subject is formative during each learning activity using observations and individual support. Year 7 targets are set to embed the making objectives and technical knowledge using a scaffolding theory to build on previous knowledge. Summative assessment is recorded and analysed each half term or end of a specific project. At Key Stage 4 pupils can study ICT at GCSE level with WJEC qualification.

- Pupils will have clear enjoyment and gain confidence and then apply this knowledge across the other curriculum areas.
- Pupils will be confident users of technology, both at home and in school
- Pupils will have knowledge of the implications of technology and digital systems. This is important in a society where technology and digital trends evolve rapidly.
- Pupils will be able to apply the British values of democracy, tolerance, mutual respect, rule of law and liberty when using digital systems.
- Pupils will remember more about Computing.
- Pupils can develop skills and attributes beyond school and into adult life.