RAEDWALD ACADEMY TRUST

KS3 and KS4 ICT and Computing curriculum

Origins of the curriculum

KS3

The ICT and computing taught across the Raedwald sites is derived from the National curriculum. Students are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, students are equipped to use information technology to assist them in all of their lessons across subjects and create programs and documents to suit their needs. Computing fundamentals taught at KS3 also ensures that pupils become digitally literate and are able to use and express themselves and develop their ideas through information and communication technology. Students across the trust will benefit from learning these skills as they will have sufficient skills to enable them to use ICT in all of their subjects to enhance their learning, in addition to the wide range of topics covered, enabling them to access a range of KS4 qualifications across the three strands of IT use.

The fundamental areas in our ICT and Computing curriculum are;

- The key fundamentals of programming
- How to recognise reliable digital sources
- How logic is used in computing and real life context
- How to use technology safely, responsibility and
- Securely protecting their online identity
- How computational abstracts model real-world problems
- Solve problems using a programming language
- How hardware and software communicates and the language used to do this
- How designs and features change depending on the target audience

All Students will be taught how to use assistive technologies as part of the ICT and computing curriculum such as screen readers (Dyslexia) , screen colour changers (Irlens) and voice recognition software (Dyslexia), font enhancers (vision impairment). Technology can then be used across subjects to enhance learning and tailor the curriculum to each student's individual needs.

The offer above is a full time offer and will be adapted to suit students on temporary part- time timetables until such time they can continue to attend settings on a full time basis.

KS4

Students will be given the opportunity to study at least one of the 3 strands of ICT at KS4 at a variety of levels; these opportunities will be offered based on students KS3 attainment, aptitudes for particular ICT strands and post 16 requirements**.**

These strands will be offered as below:

Functional Skills ICT

The Functional Skills ICT qualifications are designed to give learners the skills to operate confidently, effectively and independently in education, work and everyday life. Completion of this course prepares students for adulthood with a good level of IT functionality and digital literacy.

The core fundamentals of the functional skills qualification are Functional Skills ICT at Levels 1 & 2, is to ensure that each individual is:
• confident and capable when using ICT systems and tools
• able to find and select information
• able to develop, present and communicate information in both everyday life and work

Assessment is 100% online practical examination
Examination board: Pearson Edexcel

GCSE ICT

Cover a variety of contexts that use ICT as part of a modern society. The course helps to improve your ability to use ICT based systems to address real world challenges and solve problems. Students will be able to understand current and emerging technologies and assess the potential risks associated with the use of ICT. They will learn how to adopt safe and secure practices to reduce the risk of fraud, system failures and online dangers.

Assessment is 100% written examination

Creative media

This qualification assesses student's use of creative digital media through practical projects. Students will be taught to research, plan and review their products against a client's criteria. Students will be challenged to create digital assets for a variety of target audiences using a variety of hardware and software. This

qualification uses a hands on approach that encourages independence and exploration. Students could use this qualification to enter careers such as website design, graphic designer, animator, advertising.
Assessment will be by way of one written examination and three digital projects.

Examination board: OCR

Computer Science

This qualification builds on the programming skills set out in the KS3 curriculum and is part of the Governments Ebacc subjects. Students will be taught to analyse problems in computational terms, including writing, designing and debugging programs. Students will understand the main components that make up a digital system and be able to describe how they communicate. Students will be able to apply mathematical skills to the relevant areas of computer science such as binary and hexadecimal. This qualification will be assessed by way of 100% written examination.

Examination board: OCR

Assessment and outcomes

We assess pupils to be able to see what students have understood and what gaps in knowledge needs to be addressed. This informs planning.

Ultimately, good assessment will add value to pupil outcomes by helping teachers and leaders to understand what is having good impact and what needs to be refined or addressed for individual pupils.

Initial lessons completed by students will be used to capture what the students know within the subject and used as a baseline. This information is used to inform future planning to ensure students make progress within the subject.

Students will be provided with a KS3 work booklet that takes them through the complete 3 year curriculum. Students' work will be assessed in a variety of forms ranging from Self, Peer, Formative and Summative.

At both KS3 and KS4 the assessment is ongoing and individual teachers' record current working grades at the end of each half term. At KS4 these grades are judged against the relevant exam criteria. The majority of the work will be created digitally and as such much of the progression will be visible by viewing previous versions of students work.

ICT and Computing and the wider curriculum

Cultural Capital

Within the Trust we believe that it is important for all students to develop cultural skills, knowledge and behaviours that will allow them to thrive in society and the world of work. The ICT and Computing curriculum sets out to develop our learners' cultural capital to make them ready for their next stage in their lives. This is achieved in many ways including teaching students real life skills related to using the internet, using spreadsheets for accounts, how to communicate with others and so on. Students will be taught key ICT skills to improve social disadvantages. Ensuring all our pupils have had the opportunity to use current technologies, visit sites where current technologies are used and understand the role of STEM in all industries.

SMSC

ICT and Computing enables students to make sense of the world around them and we strive to enable each of our students to explore the connections between their ICT skills and every-day life. All scenarios provided are related to real world problems, and require them to think about the audience for the problem they are solving. Judgements on what is appropriate for that audience are required to be through and this method of study will help students develop improved reading and comprehension skills.

British values

The ICT and Computing curriculum promotes the British values of resilience through problem solving and understanding of complex skills. Students are encouraged to learn from their mistakes and are supported to improve their understanding. Within ICT and Computing students are taught that to become better at what they do, they need to practice and listen to others.

Careers

There are many career opportunities within ICT and Computing. It is important to create an understanding of the real world in ICT and Computing and allow our students to look beyond school and develop those much needed skills that are transferable to the next steps of education and beyond. Students will be given the opportunity to visit STEM centres, take part in local and National STEM competitions.

Reading

Every opportunity is taken within the classroom to allow students to develop their reading. Students are actively encouraged to read and are supported to understand key words. Within lessons, staff promote high standards of literacy, articulacy and the correct use of standard English. Displays engage students to support them with the understanding of key command words. The use of e-readers will enable all students to access definitions for key vocabulary used within lessons and in wider society.