



# Holy Trinity Church of England (Aided) Primary School

## Curriculum Rationale

### Computing

#### *The Best for Every Child - a Unique Child of God*

*See how much the Father has loved us! His love is so great that we are called God's children — and so, in fact, we are*  
(1 John 3:1)

#### **Intent**

Computing is changing the lives of everyone. Through teaching Computing at Cookridge Holy Trinity we equip children to participate in a rapidly-changing world where work and leisure activities are increasingly transformed by technology. At Cookridge Holy Trinity we have various aims to ensure our children are competent with modern technology:

- Competence in coding for a variety of practical and inventive purposes, including the application of ideas within other subjects.
- The ability to connect with others safely and respectfully, understanding the need to act within the law and with moral and ethical integrity.
- An understanding of the connected nature of devices.
- The ability to communicate ideas well by using applications and devices throughout the curriculum.
- The ability to connect, organise and manipulate data effectively.

#### **Implementation**

It is essential to have continuity and progression throughout the Computing curriculum so that it provides structure, purpose and meaning.

#### **KS1**

Key Stage 1 builds on the Foundation Stage by ensuring that all children continue to develop their confidence when it comes to technology.

#### **Year 1**

The basics of Computing are essential and year 1 begin by making sure all children know how to log onto their laptop and where to save their work in the Autumn Term. They explain what Microsoft Word is used for and also teach the children how to use Paint. E-Safety is taught all the way through the year but there is a big focus on what risks are online and allowing them to understand that there are age restrictions for certain websites, games etc. Year 1 also use the Bee Bots to code and work through some of the activities on Kodable. The Bee Bots are used to teach simple programming commands. Their coding skills are also taught using Scratch Jr where they are introduced to basic algorithms and they experiment by creating their own. The final area year 1 work on is the use of Textease to create simple tables and graphs with a focus on their Science topic of plants.

#### **Year 2**

Year 2 ensure they build on the work of year 1 by continuing to use similar software. They recap Textease by creating simple graphs alongside their Maths lessons. There is more of a focus on independency to this and teachers ensure children can do this on their own. They continue to build on Microsoft Office skills, in particular Word and make sure that the children can retrieve and save their work independently. Whilst coding, year 2 continue to use the Bee Bots and add direction to the basics they were taught. They begin to create more complex algorithms on Scratch Jr to ensure they will be ready to recognise the blocks when using Scratch in year 3. Again, with every year group, E-Safety is taught throughout the year but the focus in year 2 is building on the knowledge from year 1 about what is acceptable for children of their age and teaching about apps such as YouTube Kids. They also use our school website to write an online blog.

## **KS2**

Key Stage 2 build on both the foundation and KS1 stage of school and continue to ensure children are keeping E-Safe but also enjoying the use of technology.

### **Year 3**

Year 3 act as the stepping stones during the transition from KS1. They ensure that all children are computer literate and begin by using Textease and Paint to link with their English and Maths work. The basics of Microsoft are also taught to those children who need advancing to the next stage of creating graphs. They also work on typing skills to ensure children are using both hands by using various programs and websites. They learn some more advance features of Word (building on from KS1) such as editing text, changing font size/colour/style and how to use various punctuation linked with the English curriculum. E-Safety is also built upon as they look at the importance of emails and secure passwords and are made aware of online risks such as commenting which links to PSHE. D-Side also visit in Autumn 2 to teach more regarding E-Safety. Coding is taught using Scratch and this allows the children to move from Scratch Jr confidently. They focus on the basics such as what a sprite is, how to move it and use sound. They also begin to use certain conditions to trigger events. As well as Scratch, Pro Bots are introduced- again building on the use of Bee Bots from previous years to teach all about direction/shape but using a more specific algorithm.

### **Year 4**

In year 4 the use of Microsoft Office is embedded fully. New programs such as Publisher and PowerPoint are introduced and Word/Excel skills are continued to be developed. The work the children do is all linked to specific areas of the curriculum with a poster/brochure being created on Publisher; graphs being created with data about the Titanic on Excel and PowerPoints being designed (and presented) about Italy. Coding is taught through Scratch and extends the knowledge of year 3. They create games using motion, sound and conditions but also use the IF and THEN condition to allow sensing. E-Safety is taught throughout the year with a focus on how online services work and looking at helpful websites to stay safe. They are also taught how to blog safely linking to their Egyptian topic.

### **Year 5**

Year 5 are tasked with choosing the correct program to type up/design/present various types of work. They use their work on New York to create a brochure (Publisher) and are shown how to design this to look authentic, again building on prior knowledge. They also use their Excel knowledge in Science to create line graphs for how far the planets are away from the sun, which also links with Maths. E-Safety is also taught continuously throughout the year with a focus on blogging/vlogging. Children are taught what is acceptable to post and how certain comments are not appropriate. D-Side visit to build on this teaching with keeping secure online. Whilst searching on websites, they are also taught how results are ranked to know why certain events come up before others. Coding is again using Scratch and all they have learnt in years 3 and 4. They aim to independently create a Maths game using the commands and operators. They also use this to create mathematical patterns and shapes. Aside from all of this, they also look at networks and how they are established so children understand why the internet is as it is.

## **Year 6**

Year 6 ensure that what has been taught in each year group is consolidated but also built upon. Children who are confident are challenged and their learning is also sent home through Learning Logs for them to continue developing. Coding is again on Scratch and finishes off the Chris Quigley Essentials milestones by the children creating their very own version of 'Crossy Road'. Boolean operators are included along with variables to allow children to have an authentic game that is eventually published onto the Scratch website. Microsoft Office is also used with children choosing the correct programs to type up research on WWII and they are encouraged to do their own research using the internet and filtering their results accordingly- a skill they learnt in year 5. Excel knowledge is also recapped and built on as they use simple formulae to speed up input and also cell adjustment is taught to create pixel art. E-Safety, as in every other year group, is taught and is aimed at the use of social media; D-side also come in and build on this. Year 6 also use the program Sketch-Up to design their own ski resorts. This program teaches real-world skills that use Computer Aided Design (CAD) just like an architect would. Stop/Start motion is also taught to enable children to produce their own clips. Emails, blogging are used for Enterprise Day. A new topic will be added next year where children will be taught about how the inside of a CPU works and also how the internet works.

## **Whole School Computing 2021-2022**

Cookridge Holy Trinity provides children with a variety of memorable, experiential opportunities to consolidate knowledge, learn new skills and gain joy and wonder in Computing. The VR headsets have enabled children to visit places that they might not be able to visit and also places that are impossible. iPads are used regularly in each year group and aid with learning. Some of our SEN children have found the use of technology has really helped with their confidence and they feel they can partake in lessons more often without feeling anxious about not finishing their work. Whilst on residential, iPads and our 360 camera is taken to allow children to retain their memories and use them for work. The 360 camera was very successful to help our children with other needs understand what it is like to visit places (such as Peat Rigg) before they have been as we can upload images to the VR headsets.

This year we have also implemented the use of NetSupport to give staff more confidence whilst they teach Computing. It gives them control over all of the laptops that the children are using and allows them to demonstrate by modelling on each child's screen.

## **Impact**

By the time pupils leave Holy Trinity they will have the skills to explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. Computing skills are a major factor in enabling children to be confident, creative and independent learners.