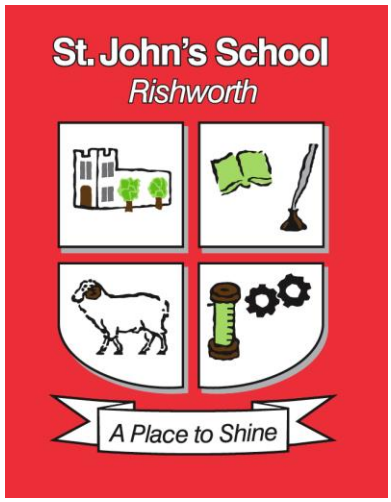

COMPUTING POLICY

Reviewed by Head	15th July 2021
Next Review	Summer 2023

The Vision of St John's CE Primary School, Rishworth

Matthew 5:16 (NRSV)

"Let your light shine before others, so that they may see your good works and give glory to your father in heaven."

Following Matthew 5:16, people shine through success, honesty, independence, neighbourliness and enjoyment. We believe children learn best when they're happy and have the confidence to respond to challenges, within a caring Christian environment where adults lead by example. We value the partnership with families and the community whilst striving to give our best.

The School's Aims are:

♦To maximise the academic attainment of each child

♦To maximise the personal, social, spiritual and physical development of each child

The pupils, staff, parents and governors of St John's have worked together to create **our core values:**

Success. We aim to provide excellent learning opportunities to ensure the best possible progress and attainment for all children whatever their needs and abilities.
Honesty. We aim to develop children's understanding of the importance of honesty in all relationships and as part of self-reflection in a Christian environment.
Independence. We aim to develop the self- confidence in all our children that enables them to think and work independently, so striving for excellence in all areas of the curriculum.
Neighbourliness. We aim to ensure that every child becomes a compassionate and respectful member of the school, local, national and global communities.
Enjoyment. We aim to be a safe, friendly and welcoming environment where children have exciting and creative learning experiences that help develop an enjoyment and love of learning.

INTRODUCTION

Through teaching Computing, we equip pupils to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. We enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for pupils to be able to use information in a discriminating and effective way. Computing skills are a major factor in enabling pupils to be confident, creative and independent learners.

INTENT

Self - We want our pupils to be digitally literate and be able to apply their skills in a range of computing scenarios.
Others – We want our pupils to be able to use their skills to cooperate safely with others in the digital world and appreciate the work of leaders in the field of computing.
Wider World – We want to equip our pupils with confidence in their computing skills to enable them to adapt to emerging technologies in the global market place.

AIMS

The aims of Computing are to enable pupils:

- to develop Computing capability in finding, selecting and using information;
- to use Computing for effective and appropriate communication;
- to monitor and control events both real and imaginary;
- to apply hardware and software to creative and appropriate uses of information;
- to apply their Computing skills and knowledge to their learning in other areas;
- to use their Computing skills to develop their language and communication skills;
- to explore their attitudes towards Computing and its value to them and society in general. For example, to learn about issues of security, confidentiality and accuracy.

TEACHING AND LEARNING STYLES

Pupils at St John's are taught through Computing lessons which are timetabled by class teachers. Teachers in the school all have access to personal laptop computers on which to prepare lessons. Interactive White Boards are available in all classrooms (including the library and KS2 teaching space). Teachers and pupils make use of these in order to promote high quality learning.

The school is equipped with 30 networked chromebooks, and 20 ipads all with broadband internet connectivity. Pupils use these machines to research and present information in all subject areas. Pupils in KS2 work through collaborative online workspace (google classroom).

All classes have a timetabled lesson each week for the development of Computing skills. Pupils are taught skills in whole class groups using the IWB. They are provided with opportunities following the whole class input to practice the skill for themselves. Their level of attainment is assessed through the integrated task following each series of skills sessions.

SCHEME OF WORK FOR COMPUTING

The school uses the Purple Mash on-line platform and scheme of work to support the teaching and learning of Computing. The content of this curriculum is categorised into the following areas:

1. Coding and Computational thinking
2. Spreadsheets
3. Internet and Emailing
4. Art and Design
5. Music
6. Databases and graphing
7. Writing and presenting
8. Communications and networks

All pupils have a purple mash and google account and the teacher monitors their work in their class folders. This enables the co-ordinator to monitor the progress of pupils throughout the school.

The schemes of work are based on the same design: pupils are taught a range of skills in the first lessons. They are then provided with a context or *integrated task* related to studies in another area of the curriculum in which to use the skills they have been taught. The integrated task can be modified by the teacher to reflect the pupils' interests at the time but must have the appropriate level of challenge in relation to Computing skills.

COMPUTING in EYFS

In the EYFS there are no assessment criteria for computing or computing technology. Nevertheless, Reception children will experience the enjoyment of technology and programs whilst also using this to explore elements of their other learning and recording their ideas as part of creative and critical thinking.

OTHER AREAS OF THE CURRICULUM

Computing is used to teach and learn in all areas of the curriculum. The school has separate policies for each subject and these refer to how teachers can use Computing for teaching and learning in each area. This policy makes reference to English and maths as examples.

English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, pupils learn how to edit and revise text. They have the opportunity to develop their writing skills by communicating with people over the Internet, and they are able to join in discussions with other pupils throughout the world through the medium of video conferencing. They learn how to improve the presentation of their work by using desk-top publishing software.

Mathematics

Many Computing activities build upon the mathematical skills of the pupils. Pupils use Computing in mathematics to collect data, make predictions, analyse results, and present information graphically. They also acquire measuring techniques involving positive and negative numbers, and including decimal places.

TEACHING COMPUTING TO PUPILS WITH SPECIAL EDUCATIONAL NEEDS

At St John's we teach Computing to all pupils, whatever their ability. Computing forms part of the school curriculum policy to provide a broad and balanced education to all pupils. Through our Computing teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each pupils' different needs. Assessment against the National Curriculum allows us to consider each pupils' attainment and progress against expected levels.

ASSESSMENT AND RECORDING

Teachers assess pupils' work in Computing by making informal judgements as they observe them during lessons. On completion of a piece of work, the teacher marks it and comments as necessary. At the end of a unit of work s/he makes a summary judgement about the work of each pupil in relation to the National Curriculum expectations. We use this as the basis for assessing the progress of the pupils and to pass information on to the next teacher at the end of the year.

The Computing subject leader monitors pupils' work on their purple mash and google classroom accounts. This demonstrates the expected level of achievement in Computing for each age group in the school.

RESOURCES

All teachers in the school have a laptop for professional use. Teachers sign a form which outlines their responsibilities with regard to the security of their machine.

7 teaching spaces have interactive white boards for whole class teaching in all lessons.

The school has 30 chromebooks, 20 iPads and 6 HP slates for use by teachers and pupils.

MONITORING AND REVIEW

The monitoring of the standards of the pupils' work and of the quality of teaching in Computing is the responsibility of the Computing subject leader. The Computing subject leader is also responsible for supporting colleagues in the teaching of Computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The Computing subject leader gives the head teacher an annual summary report in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. The Computing subject leader has specially-allocated time for carrying out the vital task of reviewing samples of the pupils' work and for visiting classes to observe the teaching of Computing.

Progression of computing knowledge and skills 1. Coding and Computational thinking 2. Spreadsheets 3. Internet and Emailing 4. Art and Design 5. Music 6. Databases and graphing 7. Writing and presenting 8. Communications and networks	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
E-safety and E-sense	Keep my password private. Tell you what personal information is. Tell an adult when I see something unexpected or worrying online. Talk about why it's important to be kind and polite. Recognise an age	Explain why I need to keep my password and personal information private. Describe the things that happen online that I must tell an adult about. Talk about why I should go online for a short amount of time. Talk about why it is important to be	Talk about what makes a secure password and why they are important. Protect my personal information when I do different things online. Use the safety features of websites as well as reporting concerns to an adult. Recognise websites and games appropriate for my age.	Choose a secure password when I am using a website. Talk about the ways I can protect myself and my friends from harm online. Use the safety features of websites as well as reporting concerns to an adult. Know that anything I post online can be seen by others. Choose websites and	Protect my password and other personal information. Explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns to an adult. Know that anything I post online can be seen or used and may affect others. Talk about the dangers of spending too long online or playing a game. Explain the importance of communicating kindly and respectfully.	Protect my password and other personal information. Explain the consequences of sharing too much information about myself online. Support my friends to protect themselves and make good choices online, including reporting concerns to an adult. Explain the consequences of spending too much time online or on a game. Explain the

	appropriate website. Agree and follow sensible e-safety rules.	kind and polite online and in real life. know that not everyone is who they say they are on the internet.	Make good choices about how long I spend online. I ask an adult before downloading files and games from the internet. Post positive comments online.	games that are appropriate for my age. Help my friends make good choices about the time they spend online. Talk about why I need to ask a trusted adult before downloading files and games from the internet. I comment positively and respectfully.	Discuss the importance of choosing an age appropriate website or game. Explain why I need to protect my computer or device from harm. Know which resources on the internet.	consequences to myself and others of not communicating kindly and respectfully. Protect my computer or device from harm on the internet.
Programming	Give instructions to my friend and follow their instructions to move around. Describe what happens when I press buttons on a robot. Press the buttons in the correct order to make my robot do what I want. Describe what actions I will need to do to make something happen and begin	Give instructions to my friend (using forward, backward and turn) and physically follow their instructions. Tell you the order I need to do things to make something happen and talk about this as an algorithm. Program a robot or software to do a particular task. Look at my friend's	Break an open-ended problem up into smaller parts. Programming commands into a sequence to achieve a specific outcome. Keep testing my program and can recognise when I need to debug it. Use repeat commands. Describe the algorithm I will need for a simple task. Detect a problem in an algorithm.	Use logical thinking to solve an open-ended problem by breaking it up into smaller parts. Use an efficient procedure to simplify a program. Use a sensor to detect a change which can select an action within my program. know that I need to keep testing my program while I am putting it together.	Decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. Refine a procedure using repeat commands to improve a program. Use a variable to increase programming possibilities. Change an input to a program to achieve a different output. Use 'if' and 'then' commands to select an action. Talk about how a computer model can provide information about a physical system.	Deconstruct a problem into smaller steps, recognising similarities to solutions used before. Explain and program each of the steps in my algorithm. Evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm. Recognise when I need to use a variable to achieve a required output. Use a variable and operators to stop a program.

	to use the word 'algorithm'. Begin to predict what will happen for a short sequence of instructions. Begin to use software/apps to create movement and patterns on a screen. Use the word 'debug' when I correct mistakes and when I program.	program and tell you what will happen. Use programming software to make objects move. Watch a program execute and spot where it goes wrong so that I can debug it.		Use a variety of tools to create a program. Recognise an error in a program and debug it. Recognise that an algorithm will help me sequence more complex programs. Recognise that using algorithms will also help solve problems in other learning such as maths, science and design technology.	Use logical reasoning to detect and debug mistakes in a program. Use logical thinking, imagination and creativity to extend a program.	Use different inputs (including sensors) to control a device or onscreen action and predict what will happen. Use logical reasoning to detect and correct errors in algorithms and programs.
Handling Data	Talk about the different ways in which information can be shown. Use technology to collect information, including photos, video and sound. I can sort different kinds of information and present it to others.	Talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder. Make and save a chart or graph using the data I collect. Talk about the data that is shown in my chart or graph. I am starting to	Talk about the different ways data can be organised. Search a ready-made database to answer questions. Collect data to help me answer a question. Add to a database. Make a branching database.	Organise data in different ways. Collect data and identify where it could be inaccurate. Plan, create and search a database to answer questions. Choose the best way to present data to my friends. Use a data logger to	Use a spreadsheet and database to collect and record data. Choose an appropriate tool to help me collect data. I can present data in an appropriate way. Search a database using different operators to refine my search. Talk about mistakes in data and suggest how it could be checked.	Plan the process needed to investigate the world around me. Select the most effective tool to collect data for my investigation. Check the data I collect for accuracy and plausibility. Interpret the data I collect. I can present the data I collect in an appropriate way.

	Add information to a pictograph and talk to you about what I have found out.	understand a branching database. Tell you what kind of information I could use to help me investigate a question.	Use a data logger to monitor changes and can talk about the information collected.	record and share my readings with my friends.		Use the skills I have developed to interrogate a database.
Multimedia	Be creative with different technology tools. Use technology to create and present my ideas. Use the keyboard or a word bank on my device to enter text. Save information in a special place and retrieve it again.	Use technology to organise and present my ideas in different ways. Use the keyboard on my device to add, delete and space text for others to read. Tell you about an online tool that will help me to share my ideas with other people. Save and open files on the device I use.	Create different effects with different technology tools. Combine a mixture of text, graphics and sound to share my ideas and learning. Use appropriate keyboard commands to amend text on my device, including making use of a spellchecker. Evaluate my work and improve its effectiveness. Use an appropriate tool to share my work online.	Use photos, video and sound to create an atmosphere when presenting to different audiences. Confident to explore new media to extend what I can achieve. Change the appearance of text to increase its effectiveness. Create, modify and present documents for a particular purpose. Use a keyboard confidently and make use of a spellchecker to write and review my work. Use an appropriate	Use text, photo, sound and video editing tools to refine my work. Use the skills I have already developed to create content using unfamiliar technology. Select, use and combine the appropriate technology tools to create effects that will have an impact on others. Select an appropriate online or offline tool to create and share ideas. Review and improve my work and support others to improve their work.	Talk about audience, atmosphere and structure when planning a particular outcome. Confidently identify the potential of unfamiliar technology to increase my creativity. Combine a range of media, recognising the contribution of each to achieve a particular outcome. Tell you why I select a particular online tool for a specific purpose. Be digitally discerning when evaluating the effectiveness of my work and the work of others.

				tool to share my work and collaborate online. Give constructive feedback to my friends to help them improve their work and refine my own work.		
Technology in our lives	Recognise the way we use technology in our classroom. Recognise ways that technology is used in my home and community. Use links to websites to find information. Begin to identify some of the benefits of using technology.	Tell you why I use technology in the classroom. Tell you why I use technology in my home and community. Starting to understand that other people have created the information I use. Identify benefits of using technology including finding information, creating and communicating. Talk about the differences between the internet and things in the physical world.	Save and retrieve work on the internet, the school network or my own device. Talk about the parts of a computer. Tell you ways to communicate with others online. Describe the World Wide Web as the part of the internet that contains websites. Use search tools to find and use an appropriate website. Think about whether I can use images that I find online in my own work.	Tell you whether a Resource I am using is on the internet, the school network or my own device. Identify key words to use when searching safely on the World Wide Web. I think about the reliability of information I read on the World Wide Web. Tell you how to check who owns photos, text and clipart. Create a hyperlink to are source on the World Wide Web.	Describe different parts of the internet. Use different online communication tools for different purposes. Use a search engine to find appropriate information and check its reliability. Recognise and evaluate different types of information I find on the World Wide Web. Describe the different parts of a webpage. Find out who the information on a webpage belongs to.	Tell you the internet services I need to use for different purposes. Describe how information is transported on the internet. Select an appropriate tool to communicate and collaborate online. Talk about the way search results are selected and ranked. Check the reliability of a website. Tell you about copyright and acknowledge the sources of information that I find online.