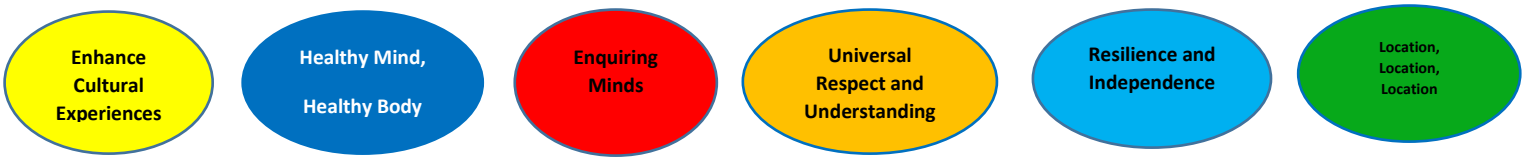
Computing Curriculum



Curriculum Statement:

At Richard Durning's Endowed Primary School, we believe that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school. We believe that technology can provide: enhanced learning opportunities, better engagement of pupils, easier access to rich content, support conceptual understanding of new concepts and can support the needs of all our pupils. Pupils are encouraged within Computing to develop a confident and safe approach with an understanding of its capabilities for the world we live in. We ensure computing and ICT experiences in school contribute to children developing effective and transferable life skills. At Richard Durnings we have adopted a scheme of work which provides immense flexibility, strong cross-curricular links and integrates perfectly with the teachers and children within our school.

Intent:

- To develop a wide range of fundamental skills, knowledge and understanding of computing through a progressive scheme of work ensuring knowledge and skills are embedded in long term memory.
- To be responsible, competent, confident and creative users of computers and technologies available.
- To analyse problems and have resilience in debugging and writing their own computer programs.
- To think critically, using their knowledge, own ideas and choose their way to try things.
- To be digitally literate within and beyond the expectations of the curriculum.
- To express themselves through information computer technology.
- To be confident with the associated vocabulary for all taught areas of computing.
- To use vocabulary linked the taught area and add to knowledge journals building up sticky knowledge.
- To be confident within Esafety at and age appropriate levels and to know and understand what to do should something occur both in and out of school.

- To use Computing tools to find, explore, analyse, exchange and present information responsibly, creatively and with discrimination.
- To enable children to become autonomous, independent users of ICT, gaining confidence and enjoyment from their ICT activities
- To use tools to find, explore, analyse, exchange and present information responsibly, creatively.
- To provide EYFS children with opportunities to explore and navigate technology suited to their age.

Implementation:

- Discrete lessons taught – weekly/blocked.
- Each year group follow an agreed scheme of work which is taken from Purple Mash. This is built up from different units which are aimed at individual year groups, we are able to follow mixed age planning over a two year cycle.
- Repeat fundamental skills to ensure they are embedded within long term memory.
- Use available resources.
- Provide a vocabulary rich environment to facilitate additional opportunities for children to understand and develop understanding.
- Adaptations are made to ensure the plan is progressive in developing pupil capability. This ensures that the unit is set in a context, builds up focussed steps and develops in progression.
- Training for staff and governors which is relevant to their needs and ultimately positively impacts on the pupils.
- Class display with progressive vocabulary, changed at regular intervals – matched to the taught unit.
- Use knowledge journals with children to ensure sticky knowledge of vocabulary linked to each unit (adding to long term memory)

Impact:

The impact of Computing at Richard Durning's:

Our Computing curriculum is high quality, well thought out and is planned to demonstrate progression throughout year groups. As children make progress against the curriculum and keep up with the expected standard they are deemed to be making good or better progress.

In addition, we measure the impact of our curriculum through the following methods:

- Children reflect at the end of each lesson against the aims and lesson objectives.
- Children will use Pupil Voice when questioned by the Subject Leader and be confident in expressing what they have learnt.
- Summative assessment is completed at the end of each unit to inform leaders of the progress or skills that need to be developed.
- Computing is monitored throughout all year groups using a variety of strategies such as work scrutiny, lesson observations and pupil/staff voice.
- An overall reflection on standards completed from data taken at the end of each unit and average progress for each child calculated at the end of the year.
- As a result of these, teaching and planning is modified accordingly to ensure that children make their best progress and attainment.
- Staff are able to adapt the scheme of work to include other areas of the curriculum such as Topic based learning and differentiate accordingly taking into account pre learning and knowledge.
- All children will have increased knowledge of computing vocabulary linked to all aspects of the curriculum.
- All children will build sticky knowledge which they will build on throughout the key stages (adding to long term memmory).

Additional Details for Computing

Inclusion

- All children have a right to access the curriculum. Teachers modify their plans and lessons appropriately for each child's individual needs. With this in mind, we will ensure additional access to technology is provided throughout the school day and in some cases beyond the school day.

Resources

A range of resources are available which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential. Resources are suitably maintained and replenished when needed, which is overseen by the Computing Leader and Head Teacher. The Computing Action Plan details foreseen future resource procurement which is shared with senior leaders before the budget setting period. New resources are ordered as an ongoing process. A full audit of ICT equipment is stored in the school office. We keep resources for computing, including software, either upstairs outside the staffroom or within classrooms. The school has a set of Ipads for the

children's use and each class has a teacher Ipad, laptops and a few desktops which are used within classrooms.

Outcomes within the Computing Curriculum

Early Years Foundation Stage Outcomes:

We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following:

- Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay.
- Pupils gain confidence, control and language skills through opportunities to 'paint' on the interactive board/devices or control remotely operated toys.
- Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets.
- Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language.

Key Stage One Outcomes:

- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions
- Write and test simple programs.
- Organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

Key Stage Two Outcomes:

- Design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs.
- Use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs.

- Understand computer networks including the internet; how they can provide multiple services, such as the worldwide web; and the opportunities they offer for communication and collaboration.
- Describe how Internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Cross Curricular Teaching of Computing

English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit, present and improve their work. They can also develop their writing skills by communicating with people over the Internet and through creating story boards, comics, newspaper articles online through Purple Mash.

Maths

We use computing activities that build upon the mathematical skills of the children. Children use computing in mathematics to use Times Table Rock Stars, maths games, research, data and statistics and Interactive Resources within lessons and at home.

Foundation Subjects and PSHE

Computing makes a contribution to the teaching of Foundation subjects and PSHE. Teaching such subjects through computing enable children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse of ICT, and they also gain a knowledge and understanding computers and technology and how it can be used to enhance learning and develop our knowledge of the world we live in. For example using computing skills within a History lesson to research, gather and present a presentation on the Topic focus.

Roles and Responsibilities within Computing

Due to technology extending beyond the National Curriculum for Computing, there are key roles and responsibilities specific members of staff have at Richard Durnings Endowed Primary School.

Head Teacher's Responsibilities:

- Monitoring the implementation of the Computing Policy and its associated policies such as the Safeguarding and SEND Policies.
- Ratifying (in conjunction with the Governing Body) the Computing policy, Safeguarding policy and Computing Leader's Action Plan.
- Securing technical support service contracts and infrastructure maintenance contracts.
- Approving CPD and training which is in line with the whole school's strategic plan.
- Approving budget bids and setting them.
- Creating in conjunction with the Computing Leader, a long-term vision for Computing which includes forecasted expenditure and resources.

Computing Leader

- Raising the profile of Computing for all stakeholders.
- Monitoring the standards of Computing and feeding back to staff in a timely fashion so they can act on areas for development.
- Ensuring assessment systems are in place for Computing.
- Maintaining overall consistency in standards of Computing across the school.
- Reporting on Computing at specific times of the year to the Governing Body/Head/Staff.
- Auditing the needs of the staff in terms of training/CPD.
- Actively supporting staff with their day-to-day practice.
- Seeking out opportunities to inspire staff in developing their practice through modelling and sharing new ideas, approaches and initiatives.
- Attending training and keeping abreast with the latest educational technology initiatives.
- Using nationally recognised standards to benchmark Computing.
- Keeping an up-to-date log of all resources available to staff.

- Reviewing the Computing curriculum and developing it as needed.
- Overseeing the effectiveness of the technician.
- Working as needed with the SENCO/Head Teacher to ensure online safety provision is above adequate and all legislation is in place.

Technician

- Conducts routine scheduled maintenance/updates on systems.
- Routinely checks school filtering, monitoring and virus protection.
- Maintains network connectivity and stability. Sets up new hardware and installations.
- Fixes errors/issues with hardware and software set-up, prioritising as needed.

Admin

- Administration Staff maintains the school website content.
- Posts approved requests to the school's social media accounts.
- Supports procurement of resources and technical services.
- Supports the technician with some data management.

Health and Safety within Computing:

We will operate all ICT equipment in compliance with Health & Safety requirements. Children will also be made aware of the correct way to sit when using the computer and the need to take regular breaks if they are to spend any length of time on computers. On display for reference are specific rules for the use of Internet and E-mail.

This document is to be read alongside the schools:

- ESafety Policy
- Safeguarding Policy
- Data Protection Policy

This policy was updated July 2023