



## **Subject coverage and progression in Computing at Reepham Primary School.**

### **Purpose and Aims**

At Reepham Primary School, we aim to build our children's digital literacy and computing skills, to ensure they can express themselves and develop their ideas through information and communication technology in this digital world. Through learning computing, our children understand the fundamentals of computer science, and how they can use computational thinking to support in problem solving. We aim for our children to become responsible, competent, confident and creative users of information and communication technology.

## Computing Progression of Skills

### Teachers will use this criteria to support their planning and assessment in Computing.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Text and Multimedia</b>	<p>Work with others and with support to contribute to a digital class resource which includes text, pictures and sound.</p> <p>Use a range of simple tools in a paint package to make/modify a picture.</p> <p>Choose specific sounds from a bank to express an idea.</p> <p>Record a short speech.</p>	<p>Generate their own work that combines text, graphics and sound.</p> <p>Edit and retrieve their work.</p> <p>Use a range of simple tools in a paint package to make/modify a picture.</p> <p>Create a simple animation to tell a story.</p> <p>Compare music from icons.</p> <p>Produce a simple presentation incorporating sounds the children have captured or created.</p>	<p>Record and present information with a range appropriate media in a printable form.</p> <p>Manipulate images using a wide range of tools in appropriate software to convey a specific mood or idea.</p>	<p>Record and present information with a range appropriate media for an onscreen presentation including hyperlinks.</p> <p>Create a simple podcast selecting and importing already existing music and sound effects and well as recording their own.</p>	<p>Use advanced tools in word processing software such as tabs, text formatting, line spacing e.t.c. to create a presentation for a known audience.</p> <p>Make a short film/animation from images.</p> <p>Create multiple track compositions that contain a variety of sounds.</p>	<p>Multimedia work shows restrained use of effects that help to convey meaning rather than impress.</p> <p>Use images they have sources or captured as part of a bigger project.</p> <p>Create and share more sophisticated podcasts and considers the effect of their podcast on the audience.</p>
<b>Communication Research and E-Safety</b>	<p>Contribute ideas to a class email to another class/school.</p> <p>Show awareness of different forms of information and explore these as a class.</p>	<p>Work collaboratively by emails to share and request information from another class or story character.</p> <p>Use a search engine to find specific, relevant information to use in a presentation.</p>	<p>Understand the need to abide by school e-safety rules.</p> <p>Use ICT sources to find questions they have posed in other curriculum subjects.</p>	<p>Share ICT work that they have done electronically by email/seesaw.</p> <p>Make use of copy and paste while learning the purpose of copyright regulations when repurposing information.</p> <p>Show an understanding that not all information on the internet is accurate.</p>	<p>Seek and respond to feedback from work they have shared.</p> <p>Independently and with due regard for e-safety, search the internet using a variety of techniques to find a range of information about a specific topic.</p> <p>Use appropriate methods to validate information and check for bias and accuracy.</p>	<p>Repurpose and make appropriate use of selected resources for a given audience, acknowledging ownership of material where appropriate.</p>

				Develop an awareness of how to stay safe when using the internet at home.		
<b>Control (algorithms)</b>	Control simple everyday devices to make them produce different outcomes.  Tinker to explore different block coding software e.g. Scratch Jnr	Control a device, on and off screen, making predictions about the effect their programming will have.  Being to understand what a bug is and what debugging means.	Children are able to type a short sequence of instructions and plan ahead when programming on and off screen.  Children begin to actively debug their algorithms.	Engage in problem solving activities that require children to write procedures, predict the outcome, test and modify.  Use simple variable in algorithms.	Use control software to control devices using output commands or to simulate this on screen. Predict, test and refine.  Use repetition in algorithms.	Independently create sequences of commands to control devices in response to sensing through designing, building, testing and evaluating.
<b>Handling Data (Modelling, simulations and logging)</b>	As a class, children use simple pictograms or painting software to develop simple graphical awareness.	Enter information into a simple branching database, database or word processor and use it to answer questions.  Play a simple adventure, making choices and observing the results, discussing how effective computers are at replicating real life events and allowing them to experience things that would otherwise not be possible.	Children use a simple database where the structure has been set up for them to enter and save information.  Make simple use of a spreadsheet to store data and produce graphs.  Use models and simulations to find things out and solve problems.	Children work as a class or group to create a data collection sheet and use it to set up a straightforward database to answer questions.  Set up and use a spreadsheet to model and explore patterns and relationships.  Know how to enter simple formulae.  Begin to use a data logger to sense physical data.	Independently solve a problem by planning and carrying out data collection by organising and analysing data involving complex searches using the database, drawing conclusions and presenting findings.  Create more complex simulations e.g. solar system simulations.  Use a data logger confidently connected to the computer or remotely.  Interpret results and use them in their investigations.	Children should be able to talk about issues relating to data protections and the need for data security in the world at large.  Set up and use their own spreadsheets to explore mathematical models, asking what if questions and changing the variables in their model.  Children are able to identify their own opportunities for data logging.
<b>Understanding Technologies</b>	Show an awareness of the range of devices and tools they encounter in everyday life.	Show an awareness of a range of inputs to a computer.  Begin to show an awareness that computers can be	Show an awareness that not all the resources/tools they are using are stored on the device they're using.	Perform a search using different search engines and check the results against each other, explaining why they might be different.	Show an awareness of the skills for effective searching (phrasing, syntax, spelling)	Explain why collaborative tools, e-mail and social media need to be used sensitively and how they can have both a positive

	Show an awareness that things they create electronically can be shown elsewhere.	linked to share information.  Use websites and demonstrate an awareness of how to manage their journey around them. What to click, where and why.	Begin to understand URLs.	Understand computer networks including the internet.  Understand that the internet provides access to the World Wide Web.		and a negative impact on our their own lives and the lives of others.
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