Pocklington CE Infant School

Progression in Computing Knowledge & Skills

What is Computing?	
Our Aims (Intent)	**We will do this through (Implementation)**
Computing at Pocklington Church of England VC Infant School intends to develop children's understanding in each of the three strands of the curriculum (digital literacy, computer science and information technology) alongside developing their knowledge of e-safety to become responsible digital citizens in the community. We give children the opportunity to 'tinker' with technology responsibly, so that they can develop their independent learning skills to begin pursuing their interests. We aim to grow responsible digital citizens who recognise and understand how appropriate online behaviour impacts the wider community. A range of technology, online information and devices are used to support learning so that children have the opportunity to make sensible decisions that build a healthy use of technology. Children will leave us with a range of transferable skills that can help them to enhance their future learning and eventually become successful in the wider community and future workplaces. Our Computing scheme of work enables pupils to meet the end of key stage attainment targets in the National curriculum and the EYFS Framework.	At Pocklington Church of England VC Infant School, in the Early Years Foundation Stage Computing is taught to prepare children for the KS1 curriculum. The children have regular opportunities to use and access technology in a safe and positive way that will enable them to begin the journey to become responsible digital citizens. Some units in EYFS will be taught using the Kapow curriculum, through adult-led opportunities as well as enhancements to provision. In KS1, Computing is taught in line with the Kapow Computing scheme to ensure that children have a solid understanding of the three strands of computing; Computer Science, Information Technology and Digital Literacy. We use a range of software programs, applications, unplugged activities and physical devices to broaden and bolster the well rounded computing experiences for all children. All three of the computing curriculum strands will be taught through digital and hands-on activities to ensure that children have a deep understanding of their yearly progression of knowledge and skills throughout EYFS and KS1. Children are encouraged to experiment and practice their skills in scaffolded and independent provision time, with a range of well resourced areas that enhance their understanding through exploration. Consideration is given to how greater depth will be taught, learnt and demonstrated within each lesson, as well as how learners will be supported in line with the school's commitment to

	inclusion. Staff have strong subject knowledge, which enables them to deliver a highly effective and robust computing curriculum. Staff are supported with ongoing coaching and CPD. This means that staff feel supported to deliver lessons of a high standard that ensure pupil progression. Computing is in blocks or on a weekly basis depending on the year group. We have regular coverage of online safety with modules in our PSHE curriculum, Heartsmart lessons, assemblies, Online Safety Day, and e-safety modules in our computing curriculum. Our pupils thoroughly enjoy the extra-curricular clubs we run related to Computing. We have a Coding club and a Press club which give children further opportunities to hone their skills.

Year 1										
	Programming 1		**Programming 2**		**Creating Media**		**Data Handling**		**Online Safety**	
Skills & Knowledge	To understand that an algorithm is when instructions are put in an exact order. To know that input devices get information into a computer and that output devices get information out of a computer. To understand that decomposition means breaking a problem into manageable chunks and that it is important in computing. To know that we call errors in an algorithm 'bugs' and fixing these 'debugging'.		To understand the basic functions of a Bee-Bot. To know that you can use a camera/tablet to make simple videos. To know that algorithms move a Bee-Bot accurately to a chosen destination.		To understand that holding the camera still and considering angles and light are important to take good pictures. To know that you can edit, crop and filter photographs. To know how to search safely for images online.		To know how charts and pictograms can be created using a computer. To understand that a branching database is a way of classifying a group of objects. To know that computers understand different types of 'input'.		To know that the internet is many devices connected to one another. To know what to do if you feel unsafe or worried online - tell a trusted adult. To know that people you do not know on the internet (online) are strangers and are not always who they say they are. To know that to stay safe online it is important to keep personal information safe. To know that 'sharing' online means giving something specific to someone else via the internet and ‘posting’ online means placing information on the internet.	
Vocab	algorithm chunks clear code decompose debug input order	organise output precise solution specific tasks	algorithm bee-bot clear debug pause predict program tinker		background blurred camera crop device camera download edit	effects image keyword online photograph search engine storage	bar chart graph database chart collect compare count data	represent pictogram pie chart process sort tally	connect emotion feelings internet safety mood personal information phone	posting respect sharing smart device strangers trust
Website	See links in each Kapow module and lesson.									
Assessment	Use teacher assessment in lessons, Kapow end of unit assessments either as a class, small groups or individually (teacher discretion).									

Year 2										
	Computing systems and networks 1: What is a computer?		**Programming 1: Algorithms and debugging**		**Programming 2: Scratch Jr**		**Data handling: International space station**		**Online Safety**	
Skills & Knowledge	To know the difference between a desktop and laptop computer. To know that people control technology. To know some input devices that give a computer an instruction about what to do (output). To know that computers often work together.		To understand what machine learning is and how it enables computers to make predictions. To know that loops in programming are where you set a certain instruction (or instructions) to be repeated multiple times. To know that abstraction is the removing of unnecessary detail to help solve a problem.		To know that coding is writing in a special language so that the computer understands what to do. To understand that the character in ScratchJr is controlled by the programming blocks. To know that you can write a program to create a musical instrument or tell a joke.		To understand that you can enter simple data into a spreadsheet. To understand what steps you need to take to create an algorithm. To know what data to use to answer certain questions. To know that computers can be used to monitor supplies.		To understand the difference between online and offline. To understand what information I should not post online. To know what the techniques are for creating a strong password. To know that you should ask permission from others before sharing about them online and that they have the right to say 'no.' To understand that not everything I see or read online is true.	
Vocab	battery desktop digital recorder electricity function Input	laptop monitor output paying till scanner screen system technology video	abstraction algorithm bug clear data decompose	error key features loop predict unnecessary	blocks CGI Computer code fluid icon imitate	loop repeat Scratch Jr	astronaut, data, experiment, galaxy, insulation, interactive map, interpret, laboratory,	planet, satellite, space, temperature, thermometer, water reservoir	accept, comment, consent, content, deny, emojis, offline, permission, pop-ups,	pressure, private information, reliable, terms and conditions, trusted adult
Website	See links in each Kapow module and lesson.									
Assessment	Use teacher assessment in lessons, Kapow end of unit assessments either as a class, small groups or individually (teacher discretion).									