Teaching and learning of: Computing

INTENT

Technology is becoming an even bigger part of everyday life and will continue to develop and impact on young children's lives in many ways. At Hook-with-Warsash C of E Academy, we aim to provide children with the computing skills, knowledge and understanding that will help to prepare them for the rapidly changing and evolving world of technology. We aim to create confident, curious and creative users of technology who understand both the benefits and risks of digital tools/software and the need to use it safely and responsibly. We ensure we cover National Curriculum objectives throughout the school allowing children to develop their skills in all 3 strands of computing (Digital Literacy, Information Technology and Computer Science). The curriculum is based on sequential skills which has informed our medium term plan. Our curriculum provides opportunities for children to be exposed to a wide range of technology including different software on laptops and iPads as well as through other devices such as Beebots. We apply a DARES (Design, Apply, Refine, Evaluate, Share) approach where applicable. This means our teaching ensures children understand the whole process and are given the appropriate time and resources to support their learning and understanding.

Underpinned by

Knowledge	Mastery	Vocabulary
The curriculum is based on sequential skills which has informed our medium term plan. We cover National Curriculum objectives throughout the school allowing children to develop their skills in all 3 strands of computing (Digital Literacy, Information Technology and Computer Science). We apply a DARES (Design, Apply, Refine, Evaluate, Share) approach where applicable across the school allowing children to embed their computing skills, knowledge and understanding. Each lesson recaps and then builds on prior learning allowing children to make connections.	We aim to develop a mastery approach to computing through acquiring a deep, long-term, secure and adaptable understanding of the subject. There are certain principles and characteristics which characterise this approach. They are: • An expectation that all pupils are capable of accessing computing lessons. • An expectation that all pupils can achieve success in computing. • Challenge is through encouraging high quality outcomes, allowing an element of choice, as well as encouraging children to develop their problem solving skills and extend their independent thinking rather than moving onto new content. Individualised support helps to support those who need consolidation.	Pupils will be exposed to and become confident in their understanding and use of computing vocabulary. Computing vocabulary is shared, clarified and modelled within each unit. Pupils are then actively encouraged to use the vocabulary accurately in their verbal and written work.

INPLEMENTATION

The teaching of computing at our school is taught every half term with each year group covering the 3 strands of computing throughout the year. This allows children to build on their skills and knowledge from previous lessons or years in order to progress further. There is progression throughout the year groups with children having to navigate software or outcomes involving increasing complexity the further up the school they are. In each half term, children are first exposed to the software through 'Tinker Time', allowing them to explore it. They are then given time in following lessons to plan what they will do to achieve their outcome, use the software to produce their project, modify it by making any changes or improvements to get the best results possible, evaluate it by reflecting and considering how effectively they achieved their goal, and finally share it either in the class or on Seesaw (our online virtual learning platform). Throughout the whole process, we encourage pupils to be critical thinkers, problems solvers and computational thinkers. They often work in pairs with support given from teachers where necessary but some children are further challenged to work independently.Throughout computing lessons, pupils will be exposed to a range of vocabulary such as 'algorithm' and 'debugging' and will be encouraged to use this where applicable. Although we have specific computing lessons in each year group, technology is also integrated into a wide range of learning throughout the school. For example children use the internet as a research tool in different subjects, use iPads to take pictures of their work, and even share their achievements on Seesaw inside or outside of school. Also where possible, computing lessons have a cross curricular approach. For example in Year 3 children use Microsoft Word to help produce an English outcome, in Year 4 children create French digital posters, and in Year 5 children create Scratch maths games. Discussions are regularly held with children about how to use equipment and technology safely and responsibly so that they have a better understanding of this. Internet Safety is of utmost importance in the school and it plays an integral key part of every unit. Each year we celebrate Internet Safety Day through different workshops and activities for children as well as providing training for parents and staff so we can all remain up to date with current issues or advances in the digital world.

SEND / Disadvantaged

The computing curriculum is adapted to meet the needs and styles of all learners. A variety of teaching and learning strategies are used to ensure that all pupils can achieve, including:

- Partner work
- Breaking down the steps involved
- Now/Next cards
- Visual reminders
- Catch up cards or instruction support sheets
- Appropriate algorithm blocks given for the child to then order
- Sentence frames during the written aspect e.g. evaluation

EYFS

Throughout the EYFS, children are exposed to computing and technology and prepared for it in later years in a number of ways. For example:

- Following verbal instructions (preparing them for algorithms in later years)
- Exploring how things work
- Showing resilience and perseverance when faced with a challenge
- Developing their understanding of right and wrong
- Using the touch screen on the Interactive Whiteboard e.g. with games or phonics
- Reinforcing 'sensible screen time'

Feedback, Questioning and Discussion

Feedback is given at the point of teaching and may be written or verbal and in a manner which moves learning forward or helps to embed learning. Questioning and discussion play a vital role in helping children progress with their learning. Mistakes are dealt with in a positive manner in order to develop resilience and confidence.

	• Task design/outcome adapted for specific individual needs • Social stories as required • Communication with parents about specific online concerns • Reinforcing 'sensible screen time'	• Safely beginning to explore and experiment with technology e.g. using Chatterpix on the iPads and using Beebots in the summer term	

IMPACT			
	When children leave Hook-with-Warsash C of E Academy, they will feel equipped with the computing skills and knowledge to understand and navigate the ever-changing digital world they live in. They will appreciate how technology impacts their daily lives and what the benefits and risks of it are. They will have developed strategies for knowing how to keep safe online and be able to apply these throughout their lives especially when new situations arise. Pupils will have been exposed to a wide range of software and will be excited and inspired about sharing their learning with others.		
	Pupil Voice	**Evidence in knowledge and skills**	**Breadth and depth**
	Pupils will be given opportunities to feedback on their experiences in computing through discussions and reflection on their work in class. Success is judged on whether pupils are positive, confident and actively engaged in computing and able to recall prior learning and identify progress.	Progress is clear throughout the lessons when children build on their skills. There is progression throughout the year groups with children having to navigate software or outcomes involving increasing complexity the further up the school they go. Children will build on learning from previous year groups.	The curriculum is designed so that each year group covers all 3 strands of computing in a range of ways. Children build on previous skills and understanding learnt. Deeper understanding is shown when pupils are more independent in achieving the outcome, can challenge themselves to add in extra features that the software offers or tackle more challenging and complex problems set around the knowledge they have developed. Also they may be more efficient when using the technology and be able to justify their choices e.g. fewer steps required or being able to choose the most appropriate method/algorithm.