

Subject Leader Report: Computing



'Our Vision is for every child to love learning, be compassionate and achieve now and in the future. Working together with our communities, we will give our children roots to grow and wings to fly.'

Our Aims in computing:

At Portsdown Primary School, we believe technology should be used to support and enhance children's learning. We know computing will play a huge part in our pupils' future and therefore it is essential we provide children with confidence in technology for a rapidly changing world. Our teaching of computing will enable the children to develop creativity, computational thinking and the ability to change the world.

Children in Portsdown will learn the 3 core principles of computing:

	This includes:
Digital literacy	• online safety • understanding the use of technology around us in our everyday lives.
Information technology	• creating and using different medias • data handling and presenting data using different types of technology
Computer science	• programming

Planning and Teaching

At Portsdown, our computing lessons are planned, taught and assessed with the children's starting points in mind. We are using and are continually adapting the DFE's Teach Computing scheme to enable all of our children to be successful in computing. When teaching online safety to the children, we also use and adapt Project Evolve activities and evidence within class floor books.

The use of Project Evolve enables children to have weekly online safety lessons lasting 15-20 minutes. Children are also introduced to topics covering the 3 core principles, each year groups sequence of topics are individual depending on the skills and knowledge they are being taught.

Substantive and Disciplinary Knowledge

Substantive	Definition
Computer Science	The technical design. The design of new software, the solution to computing problems and the development of different ways to use technology.
Information Technology	Technical knowledge. The design, use and understanding of hardware and software; computers and electronic systems for information.
Digital Literacy	The technical skills. The ability to use information and communication technologies to find, create, evaluate and communicate information.

Disciplinary	Definition
Code	Using and writing codes to produce instructions and algorithms; to solve problems; to test and use logic and sequences against inputs and outputs.
Connect	Being able to safely, efficiently and confidently digitally connect with others.
Communicate	Being able to safely, efficiently and confidently use apps and information technology to communicate ideas.
Collect	Being able to safely, efficiently and confidently find, evaluate, store, sort and use appropriate data.

Assessment

Through our carefully adapted lessons and teaching we would like:

By Year 6 Portsdown children should be able to:

- Know how create and use passwords, keep their identities safe online and seek support from relevant adults when reporting concerns. (Online safety)
- Know the how a physical computer works and understand the purposes and processes of the internet. (Technology around us)
- Confidently use a track pad, mouse and keyboard and use a range and combination of media to achieve a desired outcome (creating media)
- Plan, select effective tools, collect, analyse and present data appropriately using different types of technology (data handling)
- Break problems into smaller steps, explain the steps created, create an algorithm and continually test and debug using variables, inputs and logical reasoning to support (Programming)
- Become confident with using a computer independently to perform a variety of tasks.
- Enjoy computing.

We have carefully designed a set of skills using the 3 core principles for each year group that links closely to the aims of the National Curriculum. These are used to support staff in assessing the children in their classes, challenging children and differentiating to meet the needs of the individuals. At the end of each unit, teachers are able to refer back to the skills and these can be used to identify the children's next steps and any children who may need additional support. These are recorded to show how the children are progressing with computing throughout the year using a scale of working below the expectations, working at or working above.

At Portsdown, we then take the set of skills and identify the key areas of learning to consider what skills we would like the children to know by the end of Year 3 and Year 6 enabling us to check the teaching and lessons are appropriate and achievable for our children.

Monitoring the Quality of Teaching and Learning

Monitoring of computing is achieved through various ways, these include pupil interviews, saving work into a shared area on the system (KS1), Google Classroom (KS2), floor books, end of unit evaluations to teachers and regular emails informing staff of next units and any support that can be offered. The monitoring of computing enables us to look at next steps for the students and changes that need to be made to the current lessons. We are also able to identify any key areas we still need to work on or that children are not retaining or linking to their everyday lives.

Wider Enrichment Opportunities

Children are given the chance to explore their learning of Computing Science through participating in the Lego League. They are able to work as a team to develop their social skills as well as problem solving through Lego Education Spike kits. Children in Year 6 also have the opportunity to visit the local technical college to use the 3D printers and apply their learning in using 3D model making software.

Targets for 2025 – 2026

- To provide wider opportunities for all children in school – finding alternative enrichment activities than used previously.
- To continue developing the use of Google Classroom to evidence learning and support children to discuss their previous learning.
- To adapt the Computing curriculum to involve practical and engaging learning such as Lego League kits.

Targets for 2026– 2027

- To provide strong foundations in Early Years Computing through the use of technological devices to practise skills in Discovery Times.
- To develop the teaching and learning in parallel classes to ensure consistency for all children, especially focussing on lessons with challenging hardware and software such as Crumble Kits, Micro bits and Scratch.
- To further develop E-safety teaching and learning through the use of Project Evolve assessments and consolidating gaps in learning.