Anton Infant School

Computing

Progression Overview

Intent

At Anton Infants School, we aim to introduce children to the exciting world of computing in a way that sparks their curiosity and creativity. Our vision is to provide a foundational understanding of digital literacy that is both engaging and age-appropriate, helping our young learners develop the skills they need to navigate and thrive in an increasingly digital world.

By the end of their time with us, we aim for children to have a positive attitude towards technology and a basic understanding of how it can be used to enhance their learning and creativity. We want our students to feel confident in their ability to use technology safely and to be excited about the possibilities it offers for their future learning and development.

Implementation

To effectively implement our computing curriculum, we focus on creating an engaging and supportive environment that introduces young learners to the fundamentals of technology. Our implementation strategy aims to ensure that computing education is delivered in a way that is age-appropriate, integrated into the broader curriculum, and aligned with our educational goals.

Key Components of Implementation:

1. **Curriculum Design:**
   - **Structured Framework:** Develop a clear and structured computing curriculum that outlines key learning objectives and progressive skills for each year group. The curriculum will cover essential areas such as digital literacy, basic programming, and internet safety.
   - **Age-Appropriate Resources:** Select and use resources and tools that are suitable for young learners, including interactive software, educational apps, and tangible coding toys.
2. **Teacher Training and Support:**
   - **Professional Development:** Provide ongoing professional development for teachers to ensure they are confident and skilled in delivering computing lessons. This includes training on the latest technology, instructional strategies, and best practices for teaching computing.
   - **Collaboration and Sharing:** Encourage collaboration among teachers to share ideas, resources, and experiences related to teaching computing. Establish a network for support and innovation in the classroom.
3. **Classroom Environment:**
   - **Tech-Enhanced Learning Spaces:** Equip classrooms with availability to appropriate technology, such as interactive whiteboards, tablets, and computers, to facilitate hands-on learning. Ensure that all devices are accessible and maintained in good working order.

| | o | **Interactive Learning:** Design activities that are interactive and engaging, allowing children to explore and experiment with technology in a safe and supportive environment. |

Intended impact

The impact of our computing curriculum at Anton Infant School is reflected in the growth of our students' digital literacy, creativity, and responsible use of technology. Through engaging and age-appropriate activities, we aim to see significant progress in the following areas:

1. **Enhanced Digital Literacy:** Students demonstrate an increasing comfort and proficiency with basic digital tools and devices. They show an ability to navigate simple software and applications, understand fundamental functions of technology, and use these skills to support their learning across subjects.
2. **Creativity and Problem-Solving Skills:** Children exhibit improved problem-solving abilities and creativity through their interactions with technology. They are able to engage in imaginative projects, such as creating digital art or simple coding tasks, and approach challenges with a sense of curiosity and resilience.
3. **Understanding of Online Safety and Responsibility:** Students show a growing awareness of online safety practices and responsible digital behavior. They are able to recognize the importance of privacy, understand basic rules for safe internet use, and demonstrate respectful behavior in digital environments.
4. **Integration of Computing with Learning:** Computing skills are effectively integrated into other areas of the curriculum. Students use technology to reinforce and extend their learning in subjects like literacy, numeracy, and science, making connections between digital skills and broader educational goals.
5. **Confidence and Enthusiasm for Technology:** Children develop a positive attitude towards technology and exhibit enthusiasm for using digital tools. They approach new technology with confidence and are eager to explore and learn from technological resources

National Curriculum Subject Content for Computing

EYFS: - *technology was removed from the new framework in 2020*

KS1 pupils should be taught to:
- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Progression of skills in Computing

	Reception	Year 1	Year 2

Computer science		Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that a computer program turns an algorithm into code that the computer can understand.	Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code.
		Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich and can write their own simple algorithm, e.g. Colouring in a Bird activity. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code.	Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps.
		When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program.	Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause-and effect sentence of what will happen in a program.
Information technology		Children can sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count.	Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children can edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.
Digital literacy		Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.	Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish example template. Children make links between the technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.
		Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.	Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content.