Woodbridge Junior School

Computing Policy

(September 2023)

Intent

At Woodbridge Junior School, our curriculum has been specifically created and adapted for the needs and interests of all our children. We want pupils to be MASTERS of technology and not slaves to it. Technology is everywhere and will play a pivotal part in students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology (especially social media) to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education. We recognise that technology can allow pupils to share their learning in creative ways. We also understand the accessibility opportunities technology can provide for our pupils. Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists. We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible. We want our pupils to be fluent with a range of tools to best express their understanding and hope by Upper Key Stage 2, children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers.

Woodbridge Junior School's Curriculum:

- **Creates vocabulary rich learning**
  In Computing, there should be subject specific vocabulary such as algorithm, coding and network.

- **Aims to raise aspirations within the community**
  In Computing, we aim to raise aspirations within the community that the children live in. We do this by encouraging children to understand how Computing impacts on themselves, the people around them and their community. We aim to give children the Computing knowledge they need in order for them to learn how to use Computing to solve real-life problems within and around their community.

- **Provides memorable and meaningful learning experiences**
  Classroom environments engage children and provide images for them to experience Computing around them and the wider world. Visitors into school provide insights into other different areas of the Computing, whilst visits outside of school (such as provide children with experiences that helps to retain knowledge.) Learning at Woodbridge Junior schools aim to provide meaningful experiences with authentic outcomes in order to help children link their understanding to real life contexts.

Scheme – Teach Computing

The intent of Teach Computing is to help pupils become independent, creative, safe, respectful and problem-solving digital citizens with a broad and transferrable skillset. Teach Computing makes computing fun for pupils, inspiring them to develop skills beyond the classroom and building an awareness of all the opportunities the subject provides.

Teach Computing demonstrates a clear progression of skills. It includes structured and exploratory activities that meet the expectations of the national curriculum for Key Stages 1 and 2. It has been designed to make sure pupils learn computing skills from the three recognised aspects of computing within each year of their primary education. This means that pupils will build upon skills and concepts they established from the previous year and develop them further in the current and subsequent year.

Implementation

Computing is taught inclusively throughout the academic year. It is timetabled in weekly and taught alongside other curriculum areas. Knowledge mats are used to help children retain information and link curriculum subjects together with reference to the quality texts used in each year group. The knowledge progression document for Computing allows the area to be monitored for across year groups and allow progression of sticky knowledge from the previous year. This development of knowledge equips children to access each year as they move through school. Retaining this information is required in order to access the Computing curriculum at an age-related level. Topic boards aid learning and help children to recall the key points of learning they need to progress in Computing. Termly assessments during the meaningful outcomes where this knowledge base can be exhibited.

We have created a comprehensive progression document for staff to follow to best embed and cover every element of the computing curriculum. The knowledge/skills statements build year on year to deepen and challenge our learners.

Information Technology

This section of the Computing curriculum is taught by teaching technology creatively and inclusively across the rest of the curriculum. It will also be taught discreetly where necessary to ensure information technology skills are embedded and retained. Learners should know that technology is everywhere, be able to identify the technology they encounter and have a growing understanding of how it works. We have broken down this part of computing into the following units: Computing Systems and Networks, Creating Media and Data and Information. When using these ideas to create content everything should link closely to digital literacy – awareness of audience and good design principles. Pupils should experience a range of different apps and software. Lower down the school, the teacher will select the programs to use but as pupils get older they should be encouraged to make their own choices. Learners also need to know how to store and organise their files online and locally so that it can easily be found again.

Computer Science

Computer science has been broken down into three strands:
Computational Thinking, **Programming** and **Computer Networks**. Computational Thinking is all about solving problems effectively with or without a computer. Computational thinking is about looking at a problem in a way in which a computer can help us to solve it. This is a two-step process:

1. First, we think about the sequence of steps (an algorithm) needed to solve a problem
2. Then, we use our technical skills to get the computer working on the problem as we implement our algorithm as code.

Programming is one application of computational thinking. Learners will write algorithms and implement these as code. They also need to be able to find mistakes and fix them (debugging.) Once learners have created a program they need to learn to evaluate and look at different ways to achieve the same goal and which method is most appropriate. As learners get older the programs they write will become more complex using a range of constructs such as sequence, selection, repetition and variables in their programs.

Key Stage 2 pupils also require knowledge of networks, such as the Internet, work and how searches are performed.

Digital Literacy

Today's children and young people are continuing to grow up and learn in an ever-developing digital world. Therefore, it is essential that they learn to balance the benefits offered by technology with a critical awareness of their own and other's online behaviour, and develop effective strategies for staying safe and making a positive contribution online. This framework describes the skills and understanding that children and young people should have the opportunity to develop at different ages and stages. It highlights what a child should know in terms of current online technology, its influence on behaviour and development, and what skills they need to be able to navigate it safely. Digital Literacy is taught using both the Teaching Computing scheme, Project Evolve and links with PSHE.

Impact

At Woodbridge Junior School, we encourage our children to enjoy and value the curriculum we deliver. We aim to measure the impact of children's achievements through a variety of methods, such as pre- and post-learning, pupil discussions, book monitoring and learning showcases. A more summative approach to measure the impact of learning involves assessing children against age-related objectives linked to the unit of Computing work. Progress of our computing curriculum is demonstrated through outcomes and the record of coverage in the process of achieving these outcomes.

We will also measure the impact of our curriculum, by constantly asking the WHY behind their learning and not just the HOW. We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. Finding the right balance with technology is key to an effective education and a healthy life-style. We feel the way we implement computing helps children realise the need for the right balance and one they can continue to build on in their next stage of education and beyond. We encourage regular discussions between staff and pupils to best embed and understand this. The way pupils showcase, share, celebrate and publish their work will best show the impact of our curriculum. We also look for evidence through reviewing pupil's knowledge and skills digitally.

Teach Computing includes different resources to capture and track pupil learning:

- Downloadable assessment grid for each activity pack to track pupil understanding of each skill.
- Printable 'unplugged' challenge sheets/cards for pupils to demonstrate their understanding of key vocabulary and the application of skills.