# Upperwood Academy Approach to

# Teaching of Computing

# Intent

At Upperwood academy Our approach to the Computing Curriculum is taught through discrete weekly lessons, where meaningful links can be made to enhance the purpose of computing, these have been considered within wider curriculum mapping. The delivery of Computing is underpinned by the HCAT accelerated learning approach to teaching and learning. The key concepts, principles and themes have been developed from the National Curriculum into a range of progressive knowledge and skills that are vital for children to explore. At Upperwood academy we believe it is important to ensure children are using software correctly and that these basic skills are embedded from a young age in order to prepare children for the future. The progressive curriculum for Computing is based upon the Teach Computing Programme which supports teachers in identifying vital skills that children need to develop to allow them to confidently use software of their choice later on in their school journey. Alongside this, opportunities for children to learn E-Safety and explore different uses of technology in the wider world are interweaved within units of work. Programming is also taught consistently throughout school and is revisited twice each year to ensure that children develop their understanding of algorithms and programming.

The Computing Curriculum is composed of five domains:

- Computing systems and networks
- Creating media
- Programming
- Data and information
- E-Safety

The Computing curriculum we offer is designed to meet the needs of all our pupils. It is rich, varied, imaginative and ambitious and meets the needs of individual learners by can easily be adapted for pupils with additional needs.

# Implementation

Computing is taught discreetly, but is also embedded across the whole curriculum and permeates many subjects, such as: Literacy and Art. It is used in many curriculum areas and has raised interest, self-esteem, creativity and aspirations of all children. The Computing Curriculum is rich and varied and provides our pupils with the skills required for life in the 21st Century.

The Accelerated Learning Cycle, based on the work of Alastair Smith, is applied in all lessons. It stems from the idea of a supportive and challenging learning environment. The cycle has active engagement through multi-sensory learning, encourages the demonstrating understanding of learning in a variety of ways and the consolidation of knowing. Our curriculum organisers support the planning and delivery of lessons to ensure children develop a deep, sequential understanding of specific knowledge and are able to apply these in a range of situations. Computing at Upperwood academy is delivered through knowledge rich and practical skill-based units of work designed by Computing and Curriculum Leaders to ensure that all children have the opportunity to study a range of concepts and develop their understanding of how to use technology

# Impact

At Upperwood Academy , formative assessment is ongoing throughout each lesson. It judges progress and enables teachers to make flexible adaptions to their planned teaching. Through this regular ongoing assessment, tasks are matched to the ability of each child through scaffolds, adult support and providing a level of challenge that is stimulating for pupils and questioning skills. Alongside formative assessment, Arbor is used as a summative assessment to assess foundation subjects. The analysis of data from Arbor, identifies any gaps or misconceptions to be addressed.

# Adaptations

At Upperwood Academy our curriculum is ambitious for all pupils, including those children with SEND. Curriculum designers and teachers have high expectations of what SEND pupils can achieve and the curriculum is not diluted or unnecessarily reduced for SEND pupils. Every pupil is different and so what works for each pupil varies. Pupil's individual needs are carefully considered and adaptations are planned to ensure the success of pupils. The way that our curriculum is designed ensures that chunks of learning are sequenced in a coherent way to enable all pupils, including those with SEND, to build on prior knowledge. Cognitive overload can be a barrier to learning which is one of the reason why we have chosen half termly curriculum drivers.

Where pupils are identified with having complex needs it may be appropriate to provide a personalised curriculum which will be based on individual needs and will retain ambition for the pupil. Where working memory is an issue for pupils, including those with SEND, we look to reduce extraneous load as much as possible as well as identifying key information when teaching. Adaptations to support individual pupils will be recorded on personal school support plans.

At Upperwood academy we do not assume that pupils with SEND learn content better through practical work as this can cause distraction and cognitive overload rather than increase clarity or accessibility. The curriculum is not narrowed for any pupils. Knowledge is taught and then pupils are provided with opportunities for scientific enquiry to test and investigate the knowledge taught. Pupils' specific needs determine the types of adaptations which are required. These adaptations are in how the subject is taught rather than the content pupils are expected to learn. Where appropriate, learning will be chunked into smaller steps and pre learning and consolidation time in planned in to support need. Time is also planned to ensure pupils with SEND are pre taught vocabulary to support their understanding. Adaptations may include supporting pupils to pay attention to key aspects as well as reducing excessive or unhelpful demands on working memory.