Curriculum Leadership – Subject Vision

Subject / Curriculum Area: **Computing**

Vision
At Dovers Green we want the use of technology to be the cornerstone of our education. We aim to provide an engaging, relevant curriculum that will enable children to be resilient learners and fluent users of technology. Staff will be enabled, through access to technology, to ensure meaningful learning takes place with clear progression.

What does your subject area offer the Dovers children?
An opportunity to explore different technology and use this in different ways. An opportunity to understand coding and how some technology works.
How does your subject enhance the curriculum?
It gives the children a different way of recording their learning. It gives children further opportunities to problem solve.
What use is it to children later in life?
Children will have a good understanding of the IT skills they will often need in further education or in jobs. It also supports them with problem solving/debugging helping with their acceptance of 'marvellous mistakes'.
What are the main skills and knowledge (overarching objectives) you want teachers to focus on?
Children need to be able to: • Explore how things work. (EYFS) • Understand what algorithms are; how they are used as programs on digital devices; and that programs work by following precise 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.

Curriculum Leadership – Intent, Implementation and Impact

Subject/Curriculum Area: **Computing**

"Technology is best when it brings people together."- Matt Mullenweg

Computing prepares children for a future where we know technology will be present and even further developed than it is now. It gives them the opportunity to explore and be challenged in a safe space where their peers can support and guide them. It allows them to develop their problem solving techniques and respond to problems as they arise. Through the study of computing, children combine rehearsal of skills through an 'unplugged curriculum' as well as the practical skills.

Intent
What is being taught? EYFS: In Early Years the curriculum no longer requires children to be taught about technology, however at Dovers green we feel these are still key skills and knowledge that they children need. The children have access to a variety of technological devices (i.e. IWB, iPads, walkie-talkies and metal detectors, code-a-pillar) to engage with independently during learning time. The children are taught how to use the resources available to them during adult focus activities. They are also introduced to the Code-a-Pillar. As the children's knowledge of resources develop we provide them with further resources to prepare them for the Key Stage 1 curriculum in Summer Term, providing them with opportunities to use coding with the BeeBot and Coding Mats. Year 1: In Autumn term the children learn about technology that we use in school and that they use at home. They begin to discuss the uses of these technologies. We plan for the children to visit a local library to see how they use technology. In Spring term the focus is Information Technology children learn to access Microsoft Word on the iPads as well as saving their learning. This is also some children's first opportunity to use a keyboard. In Summer Term the focus is on coding, with the children developing their understanding of algorithms and how to write them. Year 2: In Autumn term the focus is on coding, with the children further developing their understanding of algorithms and how to write them as well as how to debug them. In Spring term the children learn about technology that we use in school and that they use at home. They begin to discuss the uses of these technologies. We plan for the children to visit the local area to identify different uses of technology.. In Summer Term the focus is Information Technology children revisit their learning using Microsoft Word on the iPads as well as saving their learning. They then explore a new app which supports them to create, edit, save and manipulate their digital content. Throughout the year iPads will also be used to support learning through researching, recording learning and sharing learning. We also have a dedicated time to think about digital literacy - in particular online safety. Each year we mark Safer Internet Day and complete activities linked to it and watch videos from 'ThinkUKnow'.

How does it cater for PP/SEND and higher attainers?

SEND
At Dovers Green Quality First Teaching is at the core of everything we do and when planning Computing lessons teachers will be aware of barriers to learning that an individual child has and will plan accordingly to ensure that these barriers are removed so that all children have the opportunity to know, apply and understand the knowledge, skills and processes being taught. This may include additional TA support, pre-teaching of key skills and/or vocabulary, additional scaffolding of work including modification of any recording sheets and equipment and the use of visual prompts. It may also include breaking down the learning into achievable steps for children to complete one at a time. Children are also encouraged to build their resilience by 'giving it a go' before asking for support from a peer or an adult, this is reinforced with our Marvellous Mistakes ethos.

COIN unit
Children in our COIN unit who are in EYFS and Year 1 are taught through objectives taken from the EY curriculum as this is more appropriate for them. When the children get to Year 2, if and when it is appropriate for them they are taught through objectives taken from the Year 1 curriculum. They are supported through additional TA support, pre-teaching of key skills and/or vocabulary, additional scaffolding of work including modification of any recording sheets and equipment and the use of visual prompts including Clicker. Like the SEND children in mainstream.

Mastery
What is Mastery?
A child's ability to skilfully **apply** their learning in more in-depth ways is called **Mastery.** Mastery is not just knowing a fact, but it is using that fact in increasingly more complex situations to extend their learning. Mastery also enables children to work in ways which show a deeper understanding of a given task.

What is Mastery in Computing?
In the Computing curriculum Mastery is when a child enjoys the challenge of computing tasks and shows resilience when they encounter a problem, thinking of different strategies to solve it. A child would demonstrate enjoyment, enthusiasm and a passion for the subject. They would also reflect on their previous learning and apply this in new and cross-curricular situations. When discussing their learning they demonstrate and effectively use the correct language linked to computer science.

How would a child's Mastery of Computing present itself?
Information Technology: Show greater understanding of which program is best to record their learning and give some reasons why.
Digital Literacy: Showing greater articulation during explanations of uses of technologies, providing their own examples to demonstrate their understanding.
Computer Science: Showing greater patience and perseverance when debugging problems.

Implementation

Learning in Computing follows a whole school overview that has split the Key Stage 1 National Curriculum into age appropriate skills for each year group. Teachers have been shown the resources and technology that are available to deliver the curriculum, this includes unplugged schemes of work.

Technology in Early Years is available to use during continuous provision and opportunities are planned in specifically i.e. taking photos of their models.

In Key Stage 1, Computing in the classroom happens in block weeks each term and technology is also used to record their learning in other subjects. Block weeks are an effective way to teach Computing in the classroom because it allows the children to become fully immersed in that subject for a sustained amount of time. It is also easier to plan a sequence of lessons and to adjust and adapt them in the moment for that week depending on how the children's knowledge and understanding develop through the week. Block weeks also allow all subjects to have an equal amount of teaching time through the year.

Although Development Matters for EYFS no longer covers technology, the children still have plenty of opportunity to access technology. They also learn about Digital Literacy to ensure they are staying safe online.

Across the Key Stage the curriculum skills have been differentiated according to guidance from training and ensures all the skills are covered and revisited across the two years. Guidance is taken from school computing organisations such as 'Schools Computing', 'STEM' and 'NCCE' to review what is being taught as well as for developments in the subject.

The implementation of Computing is monitored according to the monitoring cycle and includes book looks, talking to children and lesson observation. Assessment data is analysed twice a year and this informs future planning. Support and guidance are also provided to staff with planning or resources as and when required.

Impact

Assessment of children's learning in Computing is an ongoing monitoring of children's understanding, knowledge and skills. This assessment is then used to inform differentiation, support and challenge required by the children. Summative assessment is conducted twice a year by class teachers to inform the subject leader of progress or skills and knowledge still to be embedded. This also informs part of the end of year report for children. Data is recorded on Target Tracker by Key Stage 1 once they have taught aspects of the Computing curriculum.

EYFS children's attainment is completed at the end of the year using an assessment grid created specifically for Early Years.