Progression Map -

Computing intent at TIS

At TIS our computing curriculum aims to provide children with the skills to live in an ever increasing digital world. Through the use of a range of hardware and software children are given the opportunity to apply their curiosity of the digital world and use their skills to create programs, systems and content. Oracy is promoted through discussions about the digital world and learning subject specific language. Computing skills are woven through all subject areas and in an integral part of all learning. Children are taught what it means and how to participate effectively and safely in the digital world, with the skills to equip them in their next stage of education. This is achieved through the direct teaching of skills and experiential learning. Children have the opportunity to apply what they learn across the curriculum allowing them to build on their knowledge and skills as they progress through the school.

(COMPUTING PROGRESSION MAP)

	EYFS	Year One	Year Two
Programming • 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	n/a	To give instructions without a computer (algorithm). (e.g toys, maps, people, sequence cards). To programme and debug a simple algorithm. (e.g beebots and beebot app).	To write an algorithm using programming software (e.g. purple mash – logo, purple mash 2DIY). To debug an algorithm.
Information technology • use technology purposefully to create, organise, store, manipulate and retrieve digital content • recognise common uses of information technology beyond school	To use technology to answer questions they have about the world around them. To use online reading platforms to increase their love of reading and have access to a variety of texts. To develop small motor skills through using a range of hardware and software. To experiment with drawing freely using a range of painting and art software.	To recognise technology around us (beyond school) and say how they helps us. To use the internet for research. To use a range of apps with support.	To use the internet for independent research. To use a range of apps independently. To use technology to communicate (e.g. email, facetime, skype, blog post) To use a range of software to create graphs, databases, stories and animation.

Progression Map -

	To practice and consolidate key skills in maths through using a range of software. To learn the vocabulary for everyday technology that effects their daily lives.		
Online Safety • 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.	Physical development ELG Know and talk about the different factors that support their overall health and wellbeing – sensible amounts of screen time. To know how to keep themselves safe online. • Self image and identity • Online relationships • Online reputation • Online bullying • Managing online information • Health, wellbeing and lifestyle • Privacy and security • Copyright and ownership	To know our school's online safety rules • Self image and identity • Online relationships • Online reputation • Online bullying • Managing online information • Health, wellbeing and lifestyle • Privacy and security • Copyright and ownership	To understand what personal information is and know where to go to for help and support. • Self image and identity • Online relationships • Online reputation • Online bullying • Managing online information • Health, wellbeing and lifestyle • Privacy and security • Copyright and ownership

Progression Map -

Points from research review of computing (relevant to infant age range)

- Studies have demonstrated that young pupils can successfully learn the core concepts of computing and more technical subject content such as programming and robotics.
- Research highlighted the main obstacle to teaching computing was a lack of teacher technical subject knowledge and the resources available to teach the intended curriculum
- There is still a gender imbalance at GCSE level, with more boys favouring the subject
- A high quality computing curriculum should have declarative knowledge (knowing that) and procedural knowledge (knowing how) which is identified, sequenced and connected.
- Computer science covers knowledge of computers and computation, including concepts such as data, system architecture, algorithms and programming. Computer science is seen as the core of computing and underpins the whole of the subject.
- Pupils learn important programming knowledge to enable them to become skilful programmers.
- The curriculum to teach pupils how to create digital artefacts is underpinned by specified declarative and procedural knowledge.
- Pupils' schemata of computing contexts is built through new and repeated encounters with contexts to build a breadth and depth of knowledge.
- Teachers should not make assumptions about pupils' prior knowledge within digital literacy.
- Knowledge and skills are clearly identified to teach pupils how to use computing devices.
- The curriculum carefully sequences knowledge related to e-safety to ensure that subject content is appropriate for pupils at each stage of their education.
- Facts and essential concepts are sequenced to enable pupils to develop expertise within the subject.
- Decisions to teach the subject in a discrete or cross-curricular way are based on how best to teach the intended curriculum.
- The choice of teaching activities is strongly linked to the intended subject content and helps achieve curriculum goals.
- Teachers use worked examples appropriately to help pupils solve problems.
- Assessment focuses on the knowledge and skills identified in the curriculum and not generic competencies.
- Formative assessment is used to identify misconceptions early.
- Teachers have access to high-quality computing CPD to develop and maintain their subject knowledge.
- Leaders and teachers use the expertise of subject communities to develop teachers' subject knowledge.
- Adequate curriculum time is allocated to computing.