Computing

Intent

A love of learning and the success of every child at the heart of all we do
The aim of our Curriculum is for all our pupils to leave The Topsham School as citizens of the future, with the skills needed to succeed in every part of their lives.
At The Topsham School we offer a high-quality computing education that equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through information and communication technology – at a level suitable for the future workplace and as active participants in a digital world. *National Curriculum 2013*

Implementation

A love of learning and the success of every child at the heart of all we do
The aim of our Curriculum is for all our pupils to leave The Topsham School as citizens of the future, with the skills needed to succeed in every part of their lives.
High Quality Planning

Substantive Knowledge and Experiences in Computing
- To ensure progression and continuity over the time a pupil is at primary school, they will engage with the three themes of Computing; Digital Literacy, Computer Science and ICT
- Projects could be linked to other areas of the curriculum, perhaps using themes from the school's 'creative curriculum' to suggest related computing topics.

National Curriculum September 2013.
- ➢ can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- ➢ can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- ➢ can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- ➢ are responsible, competent, confident and creative users of information and communication technology.

Disciplinary knowledge and Critical thinking skills in Computing

Adapted from A Curriculum Framework for Computer Science and Information Technology
https://www.computingatschool.org.uk/

Computing is a practical subject, in which invention and resourcefulness are encouraged. The ideas of computing are applied to understanding real-world systems and creating purposeful products. This combination of principles, practice and invention makes computing an extraordinarily useful and intensely creative subject, suffused with excitement, both visceral ('it works!') and intellectual ('that is so beautiful').

Computing at School/ NAACE.
https://www.computingatschool.org.uk/
➢ Pupils will learn computer science far more effectively by writing programs to show to others.
➢ Pupils will learn to use information technology more effectively if they're doing something creative, such as making a presentation, website or video, especially if this is to be shown to others.
➢ Pupils will develop a richer digital literacy if they document what they know and learn for others through blog posts, audio recordings or screencasts.

Metacognition: Developing and supporting Positive Attitudes to Learning Computing

The curiosity, creativity and courage that we will encourage should endure as they move on through education and into adult life. To fully exploit the opportunities that current and future technology offers them, pupils will draw on the understanding of computing provided to them, as well as confidence gained through working on a range of meaningful projects throughout their primary education.

Through this we provide a consistent approach to planning for our curriculum which builds on prior learning, supports children see connections, challenges and facilitates higher level thinking skills and supports children understand how they learn and what they need to do themselves to achieve and succeed.

High Quality Teaching and Learning in EVERY subject

Assessment for Learning	Appropriate Pitch: age and stage appropriate for all children	Appropriate Match including high expectations and challenge for all	Subject Knowledge including modelling and teaching subject specific vocabulary and promoting READING	Promotes and develops Metacognition

A successful Computing lesson will include:

- Primary teachers will equip pupils with high level skills in using ICT, preparing them to apply these across the curriculum.
- To offer a broad and balanced curriculum that prepares pupils to 'use computational thinking and creativity to understand and change the world' (National Curriculum)
- The role of the teacher extends beyond setting the challenge and providing support in projects, to helping pupils understand the ideas that lie at the heart of the creative work in which they're engaged, and to helping pupils make the connection between these concepts.

Through this we create a supportive learning ethos for both teachers and children and enable all stakeholders to have a clear and consistent understanding of how we teach and support children achieve and succeed our curriculum intent.

T	O	P	S	H	A	M
Trust and Respect	Opportunities for all	Partnerships	Success	Health and Happiness	Aspiration and Attitudes to learning	Motivated

Children will become responsible, competent, confident and creative users of information and communication technology.

Through this, we create a safe, secure learning environment where all stakeholders have shared and consistent understanding of our Values and positive behaviours expected within our school that support everyone learn, succeed and achieve.

High Quality, Enabling Environment

Working wall showing progression of sequence	Tiered Vocabulary used as part of display	Learning Powers clearly linked to learning sequence of Working Wall	Children independently access high quality resources

Evidence of children's learning will be held online through the programs that we use. There will also be evidence through Google classroom, and in other curriculum books if children use hardware to support their learning in other subjects.

Through this we provide an exciting, inclusive learning environment that promotes and makes learning visible to both teachers and children, enables independence and celebrates the learning process

Impact

Monitoring and Supporting High Quality Planning and Timetabling
Planning sequences to be looked at to ensure computing is visible and prominent throughout the school.
Continue to use Scomis as hardware support for all staff.
Computing Leads to be available to offer support with teaching/ hardware.

Through this we aim for planning to be consistent across the school, at the appropriate pitch for each stage and phase and offer equal opportunities for ALL children to make progress through the year.

Monitoring and supporting High Quality Teaching and Learning
Digital Literacy - Natterhub - sequences and data about each pupil is held online
ICT - Evidence through planning across the school that hardware is accessed.
Computer Science - Purple MASH- sequences and data about each pupil held online.

Through this we aim to ensure teachers have the skills, subject knowledge and confidence to teach all areas of the curriculum and so ensure the progress and success of ALL children in every area of their learning

Monitoring and Measuring Progress through assessment and published data
Digital Literacy - Natterhub - sequences and data about each pupil is held online
ICT- Evidence through planning across the school that hardware is accessed.
Computer Science- Purple Mash - sequences and data about each pupil held online.

Revisiting these areas in each year will ensure both continuity and progression for pupils, and make it easier to plan any individual units of work. There should be a clear sense of what pupils have already experienced, and what subsequent steps in learning are likely to involve.

Through this, we understand the needs of ALL of our children and use this information to identify next steps and match learning need to ensure children make progress

All subject leaders create an action plan at the start of the year that is linked to the School Improvement plan and is reviewed and updated throughout the year. It is a working document and designed to reflect the needs of the children. Reading and the teaching of vocabulary are threaded through all subjects planning and teaching