Computing at Tetney

Computing: The Curriculum.

Computing plays a central role within the curriculum at Tetney and is fundamental to our wider trust mission of creating aspirational and knowledge-rich pupils. Pupils will secure an understanding of the use of technology as well as staying safe and making the correct choices. The Computing Curriculum is sequenced coherently so useful knowledge builds through three distinct strands; computer science, information technology and digital literacy in our lives with e-safety underpinning all of these strands. As a result of the accumulation of essential knowledge pupils' cultural capital and understanding of computing, disciplines will be substantial and will provide a secure foundation that will enable them to succeed in the next stage of their education.

At the end of Foundation at Tetney

Pupils will have the opportunity to explore through play technologies and solve problems and produce creative outcomes. (Beebots, J2e)

At the end of Key Stage 1 at Tetney

Pupils will recognise the benefits of technology and be introduced to the internet. They will understand the importance of keeping personal information private. Pupils will widen their understanding of computing and how it used. Pupils will create, explore and analyse different multimedia software. They will continue to build on their programming knowledge by creating instructions and identifying and correcting mistakes. Pupils will be introduced to algorithms and begin to predict errors and resolve these.

At the end of Key Stage 2 at Tetney

Pupils develop further understanding on the internet by using it safely, respectfully and responsibly. Pupils will communicate and collaborate with others on the internet and recognise how they can protect themselves from harm. Pupils will select, use and combine a variety of software to design and create a range of media. Pupils will use programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Pupils will use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. An accumulation of programming knowledge means that pupils will design, write and debug programs that accomplish specific goals.

Pedagogy: How the Curriculum is Taught.

Within the computing curriculum there are 8 key principles underpin how the curriculum is taught:

1. Lead with concepts. Pupils will acquire knowledge through key concepts, terms and vocabulary. They will be given opportunities to build and share understandings.
2. Work together. Pupils are encouraging collaborate with others which could include paired programming, group tasks and peer instruction.
3. Teach new concepts by first unpacking complex terms/vocabulary and ideas, exploring these ideas in familiar contexts.
4. Model. Pupils will be modelled the process and practise, from debugging to live coding.
5. Building connections Pupils should use a variety of activities to consolidate knowledge and understanding of the function and structure of programs, such as debugging and coding to build connections with new knowledge.
6. Create projects – pupils to have the opportunity to apply and consolidate their knowledge and understanding. Design is an important, often overlooked aspect of computing. Pupils can consider how to develop an artefact for a particular user or function, and evaluate it against a set of criteria.
7. Misconceptions will be addressed and awareness of common misconceptions alongside discussion, concept mapping, peer instruction, or simple quizzes can help identify areas of confusion.
8. Pupils will have the opportunity to apply their concrete computing knowledge across the curriculum.

Assessment

We use a range of ways to access computing at Tetney:

- Retrieval practice at the beginning of every lesson.
- Assessment for learning is used within each lesson through skilful use of questioning and live feedback
- Pupil voice to support the evidence that pupils know and remember more over time.
- Computing tasks to facilitate pupils to independently apply appropriate knowledge and understanding to new concepts.

Cultural Capital

Tetney offers pupils opportunities to apply their computing knowledge across the curriculum and other wider contexts. We use a multi-faceted approach to enrichment within computing:

- Extended School Day Enrichment Programme held every Thursday (computing club).
- E-Safety Week.

Career Professional Development

We develop strong subject knowledge amongst all staff which is achieved through CPD and wider external sources. Moderation and sharing of knowledge between staff ensures the quality of computing provision is securely effective and consistent across school.

Computing Curriculum Overview:

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	E-Safety (in continuous provision linked to topics.)					
Year 1	Multimedia- Introduction to word processing		Technology in our lives		Programming – Instructions and correcting them	
Year 2	Multimedia-Word processing		Benefits of technology		Programming- Sequencing instructions	
Year 3	Multimedia – Graphics and sound		Communicating and using a search engine safely		Programming – Testing and evaluating a program	
Year 4	Multimedia – Adding and using media		Technology – Sources of Information		Programming – Creating and using shortcuts	
Year 5	Multimedia- Spreadsheets		Technology – Online posting and use of websites		Programming – Extending programs	
Year 6	Technology – Building a website		Technology – Communicating online		Programming – Deconstructing and refining	