Computing

Intent

The curriculum for Computing at Frogmore Infant School has been developed to ensure:

- Pupils make excellent progress in the acquisition of skills and knowledge for Computing
- Computing ensures that pupils become digitally literate and they are able to use, express themselves and develop their ideas
- Through Computer Science, pupils are taught the principles of information and computing, how digital systems work and how to out this knowledge to use through programming
- Knowledge and skills are taught in a logical progression so that all pupils are able to acquire the intended skills and knowledge by the end of Key Stage 1
- Computing skills are taught within the context of a topic theme enabling rich contexts, enrichment links with other subjects, breadth of learning, high expectations and a purpose for learning
- Pupils have the opportunities to be curious, show concentration and perseverance, self-reflect, develop independence and collaborate
- Rich dialogue, subject specific vocabulary development

Schemes of Work are written for each theme drawing upon learning objectives as detailed in our Progression of Skills and Knowledge (PoSK) for Computing alongside our KnAC model. KnAC is a model of planning which provides children with rich learning contexts based on concrete experiences. This involves practical, hand on learning in which tie is invested to develop language/vocabulary, knowledge base and a sense of why this learning is important. Once children have acquired the relevant knowledge and skills they then apply these to a real life or imaginary context with a shared learning outcome. We plan opportunities across the curriculum, over time, for beautiful work to come from stages of drafting and feedback.

As a result of the impact of COVID, we have identifies missed content (knowledge, skills, vocabulary and concepts). We are using a varied approach for education recovery in computing:

- Providing opportunities to experience skills and techniques in continuous play settings
- Giving children opportunities to explore and consolidate new skills
- Adjusting the curriculum to ensure pupils use a range of computing resources and programs competently

Curriculum coverage Why this?	• Knowledge, skills and understanding for Computing document. • Schemes of Work clearly detail skills and knowledge to cover. These have been carefully selected to support progression in learning

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	• Timetabling for Computing enables pupils to redraft and build their skills and knowledge
Curriculum sequencing Why now?	• PoSK ensures that the curriculum for Computing is planned and sequenced so that new knowledge and skills build on what has been taught before and ensure pupils achieve our ambitious expectations at end of Key Stage 1 • PoSK and Schemes of Work identify small enough component steps so that all pupils can achieve our ambitious expectations at end of Key Stage 1 • Schemes of Work take account of gaps in pupils' knowledge and skills and allow sufficient time for skills to be practiced over time to ensure automaticity • Schemes of Work use diagonal sequencing to make links between subjects to support later learning
Progress Knowing more and remembering more	• Teaching builds up pupils' knowledge and skills in long term memory because progress is knowing more and remembering more and enables pupils to perform more complex tasks over time • Teachers make links with previous learning to support automaticity and independence • Teachers have a clear understanding of gaps in skills and knowledge for individual pupils and plan to address these • Teacher use assessments to check planned skills/knowledge have been remembered and pupils have a high level of automaticity/ independence
Subject knowledge	The Curriculum Leader for Computing works alongside year group teams to write Schemes of Work to: - Ensure teachers have high levels of subject knowledge - Ensure the curriculum is sequenced effectively so that new knowledge and skills build upon what has been taught and ensure pupils achieve our ambitious expectations at end of Key Stage 1 - Provide opportunities for pupils to work at greater depth - Identify professional learning needs in Computing
Ambition	• The Curriculum Leader for Computing ensures that the curriculum is ambitious for all groups of pupils and removes gaps and barriers to learning through scaffolding, adaption, learning sequence including preteaching

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Implementation

Pedagogy	• Teachers ensure that the teaching decision they take achieve the intent for Computing • Teachers ensure that short term planning for Computing: - Locates the lesson in the context of the scheme of work and the pupils' prior knowledge and understanding - Ensure lesson activities focus pupils' thinking on the learning objectives to avoid overloading pupils' working memory - Ensures sequencing of learning for the unit of work enables more cognitively challenging activities based on previous learning - Provides effective challenge - Uses outcomes from assessments to fine tune the next small stage in learning - Identifies the learning objects and success criteria for the pupils - Makes effective use of guided groups/modelling/scaffolding - Provides opportunities for metacognitive approaches - Ensures pupils have opportunities to articulate learning in their own words/writing - Provides opportunities to promote and develop reading skills
Assessment	• Teachers use non-core assessments to check planned skills/knowledge have been remembered and pupils have a high level of automaticity/independence • Teachers use assessment to identify useful feedback and to plan/adjust subsequent learning
Learning environment	The Curriculum Leader for Computing ensures that the learning environment around the school: - Demonstrates and models high expectations and standards in Computing - Models the current learning journey an displays high quality examples of current learning - Is used to develop/extend language and thinking and reasoning - Celebrate children's learning - Provides high quality and relevant resources to ensure the full curriculum for Computing can be taught
Culture	• The Curriculum Leader for Computing ensures there is a climate of high expectations where pupils' love of Computing can flourish

	• The Curriculum Leader for Computing ensures a wide range of opportunities take place e.g. half termly themes, extra-curricular clubs

Impact

The Curriculum Leader for Computing measures progress in terms of… As well as having a good understanding of computing skills, programs and online safety knowledge, we want our pupils to:

- Show increased confidence in the use of computing skills and programs
- xxx
- Work with increased independence

The Curriculum Leader for Computing evaluates the impact of the curriculum through topic reviews, moderation activities, curriculum team subject reviews, learning walks, pupil interviews, data analysis and work sampling. The Curriculum Leaders is able to:

- Demonstrate pupils reach the school's end of KS1 expectations. Where pupils are working below ARE we are able to demonstrate sustained improvement in their subject knowledge/understanding/skills in relation to their prior attainment
- Demonstrate that the planned curriculum is taught
- Discuss strengths and development needs in Computing
- Demonstrate that pupils are enthusiastic about the subject and highly motivated to learn showing curiosity, perseverance, self-reflection and independence

Recent impact analysis show a link between those pupils who are working below ARE and their limited literacy development. They also struggle with remembering sequences in algorithms. As a result additional support is in place for these pupils.