COMPUTING AND IT POLICY

At St James Primary School we have aspirations for every single child to succeed. Our children learn through a creative and inspirational curriculum that enables all children to live "life in all it's fullness" (John 10:10) to enjoy life and purpose underpinned by Christian values and a love of learning.

Dream, believe, learn, achieve.

At St James Primary School we aim to promote equality of opportunity for all our pupils regardless of particular characteristics. When planning our curriculum, staff take due regard to ensure no child feels discriminated against due to their particular characteristic.

Our curriculum is made up of the planned activities that we as a school deliver in order to promote learning, personal growth and development. It includes not only the formal requirements of the National Curriculum, but also an exciting range of opportunities to enrich the experience. We aim to teach our children to grow into positive, responsible role models who can work and co-operate with others whilst developing the knowledge, skills and understanding within subjects as well as a positive attitude to use throughout their lives.

Intent

At St James, we believe that a high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Pupils are taught the principles of information and computation; how digital systems work and how to put this to use in programming.

Children at St James will become digitally literate, allowing them to use and express themselves through the use of information technology as active participants in an ever-changing digital world.

Staff at St James will cultivate a safe environment where children will become confident and responsible users of information and communication technology.

Implementation

Children will develop computing skills that will allow them to enjoy and appreciate computing. They will be able to choose relevant and appropriate applications in a range of different situations with confidence to achieve a desired outcome. Pupils will develop practical skills and be able to apply these to the solving of relevant and worthwhile problems, understand the capabilities and limitations of computing and the implications and consequences of its use. Computing skills are recognised as supporting all areas of the National Curriculum.

To help ensure pupils have the opportunity to develop a wide range of skills, experiences and competencies with technology, the curriculum has been broken down into key areas:

- Reporting Concerns
- Digital Digital Content (Word Processing)
- Understanding Algorithms (Programming, Coding etc)
- Data Handling (Spreadsheets, Databases)
- Information Technology, Logical Reasoning and Networks (How computers work and are used in the wider world)
- Creating Creativity (Filming, Painting, Photography)

Adaptive Teaching

Leaders within school ensure the highest ambition for all pupils and create opportunities to experience success This is done by adapting lessons whilst maintaining high expectations by using: scaffolding, explicit instruction, cognitive & metacognitive strategies, flexible groupings, and use of technology (Mould, K. 2020 EEF). Teachers ensure the balancing of input of new content so that pupils master important concepts, i.e., 5-part teaching model, and make effective use of teaching assistants.

Online Safety:

St James has a separate Online Safety policy which covers the four identified areas: Content, Contact, Conduct and Commerce. Furthermore, Online Safety lessons are an integral part of computing lessons in all year groups.

Long term memory

Knowledge empowers and nourishes children, it belongs to the many, not the few. A knowledge rich curriculum has the power to address issues of social disadvantaged and leaders at St James CE Primary have high ambitions so that all pupils can take full advantage of opportunities, responsibilities and experiences in later life.

Learning can be defined as alteration in long term memory, with this being the case leaders have implemented strategies taken from cognitive science to enhance and support pupils in the transfer of new knowledge into their long-term memory.

Teaching staff have drawn on research focussing on Cognitive Load Theory, and teachers understand that pupils working memory is limited and that new content should be introduced to pupils in small and manageable steps to avoid overloading the working memory.

Research from Oliver Caviglioli has also been considered and leaders utilise strategies of dual coding to support pupils in integrating new knowledge into long term memory. By providing simple images to pupils when new content is introduced, they can use both visual and auditory strategies to process the information, forming a greater link with long term memory. Spaced retrieval is also a strategy employed by teachers to enhance pupils' retrieval and in turn secure knowledge into long term memory. Lessons typically begin with a daily retrieval opportunity and additional retrieval sessions are planned over the year.

Learning is a long-term process and teachers utilise four main strategies to support pupils in being successful and confident learners. The agreed strategies are:
- Knowledge organisers
- New content in small, manageable steps
- Images to support new learning
- Spaced retrieval

Teaching & Learning

Each teaching session in computing follows the agreed school policy of teaching and learning, and is planned to support pupils' long term memory development. There are 5 stages in each session:

Activate- teachers activate the appropriate schema and make long term links to learning that occurred in the past.

Vocabulary – teachers explicitly teach vocabulary that pupils need a deep understanding of to support their learning.

Retrieve – pupils complete a retrieval task relating to more recent learning such as self-testing key information from their knowledge organisers.

Teach – The teacher presents new information clearly and in manageable chunks.

Apply – pupils apply their learning by demonstrating their skills gained.

Impact

Children at St James leave school with a sound understanding of the digital world. This will form a solid foundation, which will prepare them for life in an ever-evolving digital age. They will leave as confident, critical thinkers enabling them to be effective in their reasoning and problem-solving. They will be able to articulate information and ideas directly related to the world in which they live, whilst remaining safe from online threats.

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