Biscovey Nursery and Infants' Academy

Teaching and Learning Principles

Subject: Computing

'With strong roots we learn and grow together'

School Vision:

At Biscovey Nursery and Infants' Academy we aim to ensure that all children can develop the skills they need to become happy and confident learners who, with guidance and support, can reach their full potential.

Our curriculum ensures that we deliver a range of topics across the age phases which develops sequential learning where pupils know more and can do more, ensuring that they are ready for their next stage in education.

Our nurturing ethos endeavours to support all children and their families. Through this approach we are able to work together so meeting the needs of all learners in our school.

We pride ourselves on delivering beyond the academic curriculum developing a child's individual character. Our core values run through all areas of school life and learning which allows the whole child to develop into a confident and caring young individual. The Biscovey child shows respect, and through self-belief and courage approaches learning with an inquisitive mind.

School Mission Statement:

Biscovey Nursery and Infants' Academy has developed a curriculum and approach to learning with the following principles at the heart:

- For children to know how to be treated and how to treat others.
- For children to happy, confident learners
- For children to reach their full potential
- A nurturing ethos which supports children and their families.

Subject Intent:

Technology is everywhere and will play a pivotal part in students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely.

At Biscovey Nursery and Infants' Academy, we have developed a curriculum that is:

Engaging: Computing is a practical subject where invention, resourcefulness and problem solving are encouraged. It provides the opportunity to understand one aspect of how the world works. Children will use a range of programs that are designed with children in mind, using characters

and games to build the foundations of programming. Many children are drawn to technology and enjoy applying their computing knowledge within other subject areas at school.

Enriching: Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. Computational thinking makes us better problem solvers. Pupils who can think computationally are better able to conceptualise, understand and use computer-based technology, and so are better prepared for today's world and the future.

Unique: The nature of computing is that it sequential. You cannot move forwards in skills or knowledge without first being clear on the learning that comes before it. Therefore, the teaching and learning of computing will be individual for every child, they must consolidate understanding before moving on. Teaching will be adapted to suit the needs of every learner, which may include understanding computing principles without the use of a computer to begin with.

Subject Implementation:

The computing curriculum can be broken into three strands; Computer Science, Information Technology and Digital Literacy.

Computer Science is understanding how digital devices run programs using information input by humans. In Key Stage 1, it includes learning about coding and fixing 'bugs'. We use Discovery Education Coding to teach the initial understanding of how to code and program. Programming apps such as Kodable, Scratch Junior and A.L.E.X. are used to embed this understanding.

Information Technology is learning how to use technology purposefully. Children will learn to use apps and programs to aid their learning and learn skills such as typing, scrolling, capturing and editing photos.

Digital Literacy is the ability to utilise their knowledge and skills to become confident, creative, competent digital citizens. A large part of digital literacy is learning to be safe online and this will be referenced continually throughout the teaching of Computing and at any time that children are using technology. Safer Internet Day and Anti-bullying Week also provide specific opportunities to talk about how we can manage the risk of being online.

The teaching of the Computing curriculum will be a combination of discrete Computing lessons that teach particular skills alongside using technology to demonstrate learning within other subjects. For example, using the internet on an iPad to research The Great Fire of London. The learning of algorithms starts with an understanding of how to write a specific set of instructions so the foundations of programming will be taught though a Literacy lesson about instruction writing. Computing also has deep links with mathematics, science, PSHE and design and technology.

Subject Impact:

By the end of Key Stage 1, we aim for every child to be able to:

- understand how digital devices can be programmed using code
- write code for a digital device to follow and fix a code that has an error

- become responsible, competent, confident and creative users of information and communication technology
- use technology safely and respectfully

Evidence of the teaching and learning of the Computing curriculum will be kept on Tapestry, through observations. Teachers will use assessment for learning strategies to track children's progress and provide additional opportunities to consolidate learning where necessary.

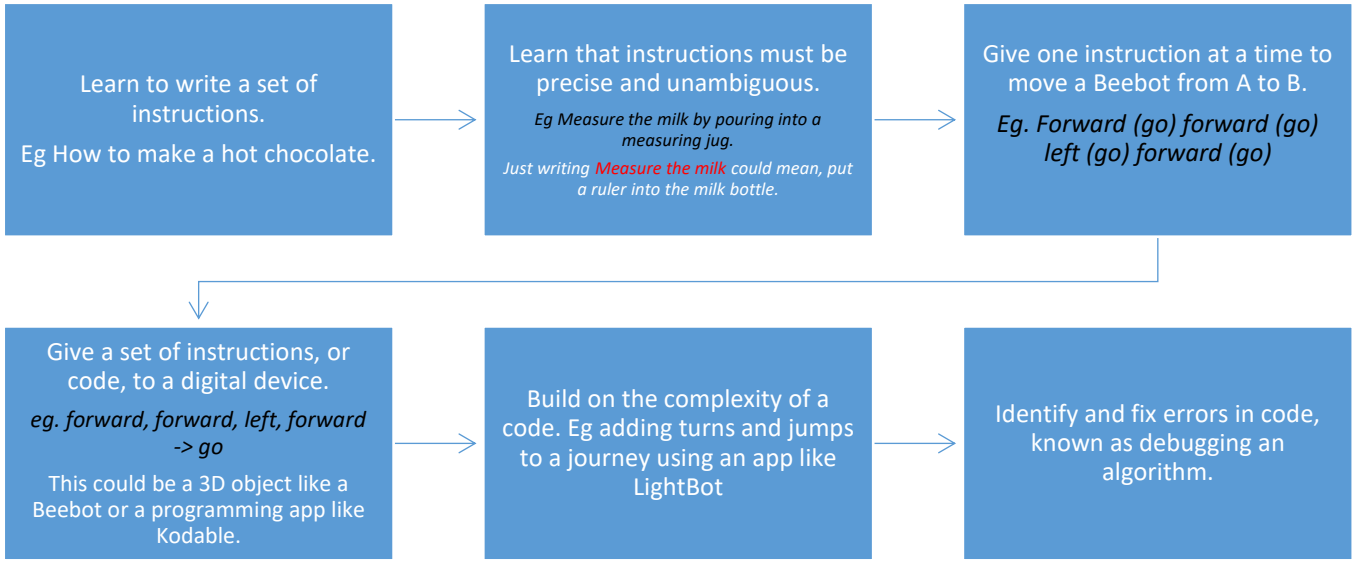
Skills Progression:

At Biscovey Nursery and Infants' Academy, we use the objectives from the National Curriculum to ensure good coverage and challenge for all. We carefully track the objectives to ensure that new learning builds on prior knowledge and consolidates understanding showing sound progression across the depth and breadth of the subject.

Within lessons and topics, we ensure sufficient time is given to recall prior learning so that children are able to see and develop links within their learning.

For further information, please see the subject overview grid and the skills progression document.

An example to consider could be when studying algorithms:



Teaching and Learning Expectations:

- High quality texts will form the heart of all topics
- Lessons will promote a love of learning
- Activities/questions will promote curiosity
- There will be highly effective cross curricular links between subject areas.
- Regular opportunities for AfL through a range of activities
- Recall of prior learning - quizzes, topic maps, verbal discussion

Working Walls/Displays:

- Key words
- Examples of work linked to topic
- The Aspire e-vision statement in every classroom

Monitoring/Assessment:

- Exit Points (eg: quizzes, performances, online assessments)
- Pupil Conferencing
- Learning Walk/Lesson Observations
- Scrutiny of observations added to Tapestry