School Curriculum 2020

Computing at East Ayton Primary School

Principles and Purpose

- To equip pupils to use computational thinking and creativity to understand and change the world.
- To ensure that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communications technology – at a suitable level for the future workplace and as an active participant in the digital world.
- Pupils can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Pupils are responsible, competent, confident and creative users of information and communications technology.

Entitlement & Enrichment

- Children in each year group develop their skills and understanding in three key areas:
    - Algorithms and programming.
    - Information technology.
    - Digital literacy.
- In addition to the above, the children learn to become a safe computer user by developing:
    - Their knowledge and understanding of how to stay safe.
    - The skills they need to stay safe.

Breadth & Balance

In Key Stage 1

Children are taught to:

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- Create and debug simple programs.
- Use logical reasoning to predict the behaviour of simple programs.
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of information technology beyond school.
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

In Key Stage 2

Children are taught to:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- Use technology safely, respectfully and responsibly; recognise acceptable / unacceptable behaviour; identify a range of ways to report concerns about content and contact.

The Teaching Narrative

- The teaching narrative follows that outlined in the Focus Education Assessment Criteria.

Resources

- Hardware – laptops, Learn pads, Smart Boards.

Review & Evaluate

- A yearly plan outlining the actions needed to ensure progress.
- Review and evaluation of the plan.