Computing Policy

DUKE OF NORFOLK CE PRIMARY SCHOOL

Approved by:	Full Governing Body	Date:
Last reviewed on:	October 2024	
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Contents

1. Computing Curriculum Intent

1.1 Aims of this Policy

This policy aims to:

This document reflects the Duke of Norfolk Primary School's values and philosophy in relation to the teaching and learning of Computing. It sets out a framework within which both teaching and non-teaching staff can operate and gives guidance on planning, teaching and assessment.

The policy should be read in conjunction with the Curriculum Map, the Vocabulary Map for Computing, the Wokingham Computing Schemes of Work, the Acceptable Use of ICT Policy: Pupils and Online Safety Policy.

Our Computing policy covers all of the statutory expectations as set out in the National Curriculum for England 2016 (DfE). It also reflects requirements for inclusion and equality as set out in the Special Educational Needs and Disability Code of Practice 2014 and Equality Act 2010, and refers to curriculum-related expectations of governing boards set out in the Department for Education's Governance Handbook. In addition, this policy acknowledges the requirements for promoting the learning and development of children set out in the Early Years Foundation Stage (EYFS) statutory framework.

1.2. A.S.K and Our Computing Curriculum

SMSC Statement

At the Duke of Norfolk CE Primary School, we recognise that the personal development of pupils spiritually, morally, socially, and culturally, plays a significant part in their ability to learn and achieve. We therefore aim to provide an education that not only provides pupils with the required knowledge and skills in Computing, we provide opportunities to explore and develop their own values and beliefs, spiritual awareness, high standards of personal behaviour, a positive, caring attitude towards other people, an understanding of their social and cultural traditions and an appreciation of the diversity and richness of other cultures. We use the acronym **A.S.K** (**Attitude, Knowledge and Spirit**).

Computing provides opportunities to promote the following:

Spiritual development: Through helping pupils to reflect on their own life and beliefs through the teaching of the curriculum and supporting them in their creativity.

Moral development: Through helping pupils to understand the use and misuse of information online and considering their own online footprint and its effect on others.

Social development: Through helping pupils to work in groups to find solutions by using the strengths of each member of their team. This also builds a respect for the opinions and ideas of their peers.

Cultural development: Through exploring the effects that computing has had on our culture and wider community, particularly through social media developments. Pupils understand the possibility to communicate across borders using the internet and will reflect on the benefits and dangers of this.

1.3. Intent of Our Computing Curriculum

At the Duke of Norfolk school, we have high expectations of all learners and we provide a high-quality computing curriculum. The aim of our computing curriculum is to support our children to be creative, independent and

reflective. In key stage 1, children are developing their foundational knowledge of computer science and are starting to become digitally literate. In key stage 2, children build upon their knowledge and understanding to ensure that they leave our school with a good understanding of their own impact on our digital world. Computing skills and knowledge build progressively from EYFS to KS2, ensuring that children are able to build mental models to secure their understanding.

Our aims are also underpinned by the National Curriculum aims, which state:

The national curriculum for Computing aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others

1.4. Computing Curriculum Organisation

How the Computing curriculum is organised:

- The curriculum for Computing is specifically designed for children to build on prior knowledge and skills, and although working on a two-year cycle, is split into phases to ensure that the progression remains chronological.
- Curriculum mapping for Computing is split into 7 themes. These themes are:
  - Programming – Coding and Controlling Devices
  - Keeping Safe in the Digital World
  - Keeping Safe Online
  - Multimedia
  - Digital Imagery
  - Music and Sound
  - Data Handling – Collecting, Analysing, Evaluating and Presenting Data
- Three strands should be covered per year. However, there are seven strands in total but some of the strands could be taught through other subjects, or else two short strands could be covered in one term. This allows sufficient time to cover the statutory content of Computing along with enrichment opportunities.
- Whilst the Nursery and Reception cover the Statutory EYFS Framework, mapping for Computing makes clear the foundations that are to be laid in this vital stage. Where possible, these link to the Seven Areas of Learning and Development.

2. Computing Implementation

2.1. Planning

Planning for each unit of work is done on the school's agreed format for Medium Term Planning. This planning format makes explicit the links between prior and subsequent learning, sets out the pedagogical approach, makes clear how learning will be differentiated, and the vocabulary to be secured.

EYFS use a different planning format due to the inter-related nature of their curriculum, but this planning makes clear the Computing objectives for easy monitoring.

Planning is shared across the phase to that children access the same learning, and teachers share the planning workload.

Planning is stored on SharePoint and the shared server for easy access and monitoring.

2.2. Resources

- Class set of iPads (30) with up-to-date software. These are stored centrally and are accessed via key entry by staff.
- Set of laptops (16) with up-to-date software. These are stored centrally and are accessed via key entry by staff.
- Both the computing lead and IT support staff audit our resources and ensure that devices are updated regularly.
- The computing lead ensures that the resources allow for the curriculum to be taught effectively and that all relevant apps are downloaded and accessible.
- Staff have access to an EXCEL document where they can report any issues with the resources and this is checked weekly.

2.3. Teaching and Learning

Teachers will ensure that mental models are made in computing lessons to link prior knowledge to new learning. They will use assessments to pitch the learning appropriately to all learners, providing support and challenge where needed. Teachers will link abstract computational theories to real life examples to support children in their understanding. By using curriculum maps and the Wokingham Computing Schemes of Work, lessons will be concept led to allow children to learn and retain key pieces of knowledge and skills. Children will be encouraged to be independent and to learn how to be responsible users of the hardware available in school (iPads and laptops).

We recognise the fact that we have children of differing ability in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through providing scaffolds to support children to meet the learning outcome which might include differentiated tasks or resources, adaptations of the expected outcome and/or support from peers or adults. Sometimes we may need to or break down the learning outcome to smaller steps or visit an earlier cognitive step on the curriculum map (see below).

2.4. Inclusion

Teachers set high expectations in Computing for all pupils. They will use appropriate assessment to set ambitious targets for all, based on our curriculum maps, and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEND
- Pupils with English as an additional language (EAL)

Teachers will plan lessons so that pupils with SEN and/or disabilities can study Computing, wherever possible, and ensure that there are no barriers to every pupil achieving. For example, the Computing curriculum is mapped so that learning steps can be broken down to match a child's cognitive stage however, as some topics in a strand can vary significantly (e.g., the **Multimedia** strand covers topics such as **combining text and sound** and **creating a non-linear, multimedia presentation**), we will use our expertise and knowledge of the child to plan accordingly. There are different ways we may do this, depending on the needs of the child.

- It might be most appropriate to break the composite learning aim into smaller steps. An example is the Year 5/6 aim to **'Understand the importance of keeping personal information safe and understand privacy settings'** which could be broken down to one particular aspect such as **'passwords'**.
- It might be more suitable to track back through the strand to find an appropriate aim for children to work on. Using the same example from Year 5/6 to **'Understand the importance of keeping personal information safe and understand privacy settings'** teachers may select aims from a previous phase, which although they may be under a different 'topic', can be adapted to fit in with the current class topic. For example, **'be aware of the school rules for accessing the internet'** from phase 1 could easily be applied to privacy and security in phase 3.

Where there are physical barriers, appropriate adaptions will be made to ensure children can access the learning.

Teachers will seek advice and support from the SENDCo when necessary.

Teachers will also take account of the needs of pupils whose first language is not English. Computing lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part and achieve.

Further information can be found in our statement of equality information and objectives, and in our SEN policy and information report.

2.5. Assessment and Recording

- Teachers should use regular formative assessments to assess children's progress in Computing throughout each topic. Formative assessments should be used to inform teaching and ensure pupils have understood the concepts taught or whether they should revisited; as well as to support pupils to self- evaluate and self- improve.
- Summative assessments are used across year groups at the end of each topic, this will be presented in many different ways, such as a presentation or discussion on the skills they have learnt e.g. children could use Scratch to play games they have created in a coding unit of work.
- Children's progression in computing is monitored throughout the year and reported on to parents in end of year reports.

- Annual scrutinies will be carried out by the computing coordinator to ensure children are making progress.
- Children will record their work in many different ways, dictated in the planning documents created by the teachers.

2.6. Roles and Responsibilities

2.6.1 The governing body

The governing body will monitor the effectiveness of this policy and hold the headteacher to account for its implementation.

The governing board will also ensure that:

- A robust framework is in place for setting curriculum priorities and aspirational targets for Computing
- Maintained schools only: Enough teaching time is provided for pupils to cover the National Curriculum and other statutory requirements
- The school is complying with its funding agreement and enough teaching time is provided for pupils to cover the requirements of the funding agreement
- Proper provision is made for pupils with different abilities and needs, including children with special educational needs (SEN) in Computing
- The school implements the relevant statutory assessment arrangements
- It fulfils its role in processes to disapply pupils from all or part of the National Curriculum, where appropriate, and in any subsequent appeals

2.6.2 Headteacher

The headteacher is responsible for ensuring that this policy is adhered to, and that:

- All required elements of Computing, including those aspects which school chooses to offer, have aims and objectives which reflect the aims of the school and indicates how the needs of individual pupils will be met
- The amount of time provided for teaching Computing is adequate and is reviewed by the governing board
- Where appropriate, the individual needs of some pupils are met by permanent or temporary disapplication from all or part of Computing
- They manage requests to withdraw children from Computing, where appropriate
- The school's procedures for assessment of Computing meet all legal requirements
- Proper provision is in place for pupils with different abilities and needs, including children with SEN

2.6.3 Subject Lead for Computing

The Computing leader will:

- Be the advocate for Computing in school
- Provide advice or guidance to staff, when necessary
- Keep abreast of local and national developments in Computing and disseminate relevant information to staff
- Provide or source appropriate CPD to all staff, or targeted groups/individuals, as required

- Set a timetable of monitoring and evaluation (see Monitoring) to monitor effectiveness of Computing and use to inform action planning and subject development
- Report findings of monitoring to SLT and Governors regularly
- Feedback monitoring to staff in a timely and professional manner
- Monitor appropriate storage and responsible use of stock
- Co-ordinate any display of Computing work
- Ensure the subject leader file is kept current
- Collect a portfolio of children's work, including photographs of, and examples of pupils' work

2.6.4 Teaching and Learning Staff

Teaching and learning staff will:

- Ensure that the Computing curriculum is implemented in accordance with this policy
- Engage actively with professional development and feedback in Computing in order to improve teaching and learning

3. Impact

3.1 Expectations

End of KS1 Expectations for Computing

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.

End of KS2 Expectations for Computing

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.

3.2 Monitoring and Evaluation

The subject leader will create an annual timetable of monitoring and share it with SLT at the start of the academic year. This will include the planned methods of monitoring, the suggested dates, and the focus of monitoring, which may be informed by the School Improvement Plan, or the Computing action plan.

3.3 Methods of Monitoring

Methods of monitoring Computing may include:

- Lesson observations (to be agreed as part of the formal Performance Management process) or informal learning walks

- Interviews or questionnaires with children
- Interviews or questionnaires with staff/parents
- Looking at books or recorded work

3.4 Purpose of Monitoring

The purpose of monitoring is so that subject leaders, SLT and Governors can answer the following questions:

- What are the standards in Computing across the school?
- Does the Computing curriculum meet our statutory requirements?
- Does the Computing curriculum keep up-to-date with local and national changes?
- Is the Computing curriculum effectively organised and applied for our context?
- Is the Computing curriculum being implemented effectively and in line with this policy?
- Where is there evidence of high-quality teaching and learning? What is enabling this?
- Where is there evidence of inconsistent quality in teaching and learning? What is the barrier?
- Do we have sufficient resources to implement Computing effectively?
- What is the current picture in Computing? What enhances provision? What are the barriers?
- What are the development priorities for Computing?
- Is assessment in Computing effective? How do we know?
- What are the priorities for staff development?
- Are resources being effectively and responsibly managed?

3.5 Recording and Reporting Monitoring

Subject leaders may report findings in their monitoring in the following ways:

- Feedback meetings with SLT
- Written report on agreed monitoring proforma
- Written feedback to teaching staff
- Collated data from surveys/questionnaires
- Newsletters to children/parents
- Updated action plans with impact evidence

Governors monitor coverage of National Curriculum subjects and compliance with other statutory requirements through:

- Meetings with subject link governor (1-2 times per year)
- Written report/Presentation to governors – annually

3.6 Policy Review

This policy was written by Olivia Cousen (subject leader) in October 2024. It will be reviewed by the subject leader annually.