COMPUTING

POLICY

Adopted by Thomas Hickman School

Adopted by Governors Full GB:	**November 2024**
Date of next review:	**September 2025**

Introduction

This policy document sets out the school's aims, principles and strategies for the delivery of the Computing Curriculum.

There is a separate Curriculum Plan, Skills Progression document and National Curriculum link document that maps out our software use.

There is also a separate E-Safety policy.

E-Safety

There is a separate e-Safety policy that all staff should be familiar with. It is also available on the school website

Please remember that pupils should not have access to the Internet unless **directly** supervised by a school staff member.

Staff Roles

SLT – Headteacher and Deputies

- Overview of Safeguarding and e-Safety issues (including Filtering and Monitoring)
- Overview of Strategic development and budget for COMPUTING across the school

Computing Lead – Simone Schwartzel

- Computing Curriculum
- Technical liaison
- Computing strategy across the school
- Resource and Budgeting
- Supporting staff with teaching and learning – team teaching, informal observations, etc

COMPUTING Resource Manager – Jason Brown

- Day to day technical support
- Printing support
- Printing Supplies
- Computing Resource and asset management

Technical Support – Eduthing

- Technical support
- Updating the server and infrastructure
- Setting up new hardware and software

ADMIN office

- School website updates

Computing Curriculum Framework

As part of THS' Flying Start curriculum, the school has developed a high-quality computing education that equips pupils to use computational thinking and creativity to understand and change the world.

Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

The curriculum content can be divided broadly into three main areas:

- **The Computer Science,**
- **Digital Literacy and Information and**
- **Communication Technology.**

Curriculum Objectives

As per the 2014 National Curriculum, students should be taught to:

1. **Computing Systems and Networks:**
    a. Understand the components of computer systems.
    b. Learn about networks, including the internet and safe online practices.
2. **Programming:**
    a. Develop skills in designing, writing, and debugging programs.
    b. Use a range of programming languages and environments.
3. **Data and Information:**
    a. Understand how data can be collected, represented, and analysed.
    b. Emphasise the importance of data security and privacy.
4. **Digital Literacy:**
    a. Develop skills to use technology safely, respectfully, and responsibly.
    b. Cultivate critical thinking when evaluating digital content.

Please see separate Computing and Computing Scheme of Work and Progression document for more details on subject content, skills and learning intentions for Computing and ICT. The National Curriculum link document maps out our software use and how it is aligned with NC requirements.

Vision Statement

Our mission is to harness technology, wielded through the power of Chromebooks, in all facets of learning. Our goal is to illuminate the path for SEND access and to awaken the minds of all pupils, instilling within them a passion for critical thinking, and a deep-seated understanding of subject-specific knowledge. Through this journey, we shall forge a bond between knowledge, skills, attitudes, and values, bringing forth a bespoke method of teaching our curriculum that is both fluent and flexible, weaving a tapestry of wonder and possibility.

Aims

1. **To develop students' computational thinking and problem-solving skills.**
2. **To provide a safe and responsible understanding of online technologies and digital citizenship.**
3. **To encourage creativity through the use of technology in a range of subjects.**
4. **To ensure progression and continuity in Computing education across all year groups.**
5. **To engage and empower students in their learning experience through real-world applications of technology.**

In accordance with the Department for Education (DfE) digital standards, the computing subject policy aims to provide a robust framework for the effective teaching of computing across the curriculum. The policy emphasises the necessity of developing students' computational thinking, ensuring they acquire essential skills in programming, data representation, and information technology.

Central to the policy is the commitment to fostering a safe and responsible digital culture within the classroom. This encompasses teaching pupils about online safety, digital citizenship, and the ethical use of technology. Furthermore, the policy supports the integration of computing across other subjects, thereby promoting interdisciplinary learning experiences that enhance problem-solving skills.

Regular assessment and evaluation of both student progress and teaching effectiveness will be conducted, ensuring alignment with DfE standards. Through these measures, schools will prepare students not only to excel academically but also to thrive in an increasingly digital world.

- Medium Term Plans for the Computer Science and Digital Literacy Strands of the Computing curriculum can be found on the Server: R:/Teachers/Computing
- Lessons will be taught using Teach Computing Scheme of Work which can be accessed online.
- One coding lesson per year will be taught using Discovery Coding
- Online Safety will be taught in Autumn 1 using a full set of Twinkl Lesson Plans saved in R:/Teachers/Computing

Planning for Cross Curricular Computing

The Computing Scheme of Work can be used to inform or create content for FOS, Science, PSHE, RE, PE, Art and DT using Google classroom as a platform to store work and utilizing ipads and Chromebook to record work.
These lessons might take place in the Computing suite, in class using laptops, iPads and other computing equipment or elsewhere (e.g. trips, playground etc.)

Expected pupil outcomes

- The Computing plans suggest a range of pupil outcomes. These outcomes form the basis of pupil work scrutiny by SLT and the Computing lead
- Cross-curricular Computing outcomes can be planned for in the relevant subject or FOS plans – e.g. a travel brochure in Canva for a geography unit.

Possible pupil outcomes might include:

- work produced individually or collaboratively in "Classroom" on Google for Education
- a digital document in an assignment in Google Classroom.
- a completed paper table stuck into the topic book
- a photograph stored in Classroom
- a printed poster or leaflet on display
- an annotated photocopy of a screenshot of an online activity in their books

Recording and saving work

All children have a unique username and password, in order for them to access all of the Gsuite apps, and join "Classrooms" that teachers have created. Their work will automatically be saved in the cloud which is fully GDPR compliant.

Cross curricular strands

- Pupils record their Cross-curricular computing work in their class books where appropriate, as well as saving digital versions of files in their own on their Google Classrooms.

Printing work

- Printing is available at the teacher's discretion.
- Printed work is be stuck into the FOS/Science/Art books where possible, or put on display.

Monitoring

- Teachers to record assessment/ pupil outcomes in Insight.
- Work is monitored in Google Classrooms
- Children will also take part in discussion groups or surveys posted on the streams of Google Classroom where Computing Lead will be able to gauge progress and lesson coverage.
- Staff will receive feedback on monitoring.

Assessment

- There are end of term group expectations for Computing, based on the NC and Teach Computing Lessons, pupils are assessed to be WTS, EXS or GDS against these on Insight.
- Teachers monitor pupil progression and curriculum coverage across each topic and through the learning objectives in the scheme of work
- There are also opportunities for pupil reflection and self-assessment built into planning and teaching

Teaching and Learning Strategies

1. **Interactive Lessons:**
    a. Use of varied teaching methods, including direct instruction, group work, and hands-on activities.
2. **Adaptive Teaching:**
    a. Tailor lessons to meet the diverse needs of learners, enabling all children to access the curriculum effectively.
3. **Assessment for Learning:**
    a. Continuous assessment practices inform teaching and ensure understanding of concepts, and summative assessments to be completed using Insight statements.
4. **Cross-Curricular Integration:**
    a. Embed Computing skills in other subjects to enhance learning outcomes.

Teaching strategies might include:

- Creating a "Classroom" in Google Workplace and creating questions, tasks and forms for children to access, respond to, collaborate with other students and hand in for assessment.
- Using the computer or appropriate presentation technologies (i.e. ipad casting, interactive whiteboard, visualiser etc) to demonstrate to a group of pupils or the whole class
- Leading a group or class discussion about the benefits and limitations of COMPUTING in the wider world as well as the classroom
- Working with individual, pairs or groups to support and scaffold practical activities and teach Computing skills

Pupils might engage in:

- Individual, paired or group work developing Computing concepts and skills using non electronic media.
- Collaborative and co-operative activities in groups.
- Guided discussion and evaluation of work-in-progress and finished work.
- Evaluating their own and others work and giving written and verbal feedback
- **Pupils working individually (independently or supported by an adult)**
- **Group and paired work with devices such as data loggers, digital cameras, robots etc**

Vocabulary

- Pupils are taught the correct subject specific and technical vocabulary consistently across the school and are given opportunities to consolidate their understanding

Special Educational Needs

- The SENDCO and Computing Lead jointly advise teachers with regards to suitable computing support, which can be provided to individual pupils with particular educational needs, including high ability pupils.
- Where appropriate external specialists are used to assess a child's specific needs.
- The SENDCO, Computing Lead and class teacher will work together to ensure that appropriate devices and Computing resources are available to all pupils on the SEND register

Early Years

- Within the EYFS pupils are introduced to a range of technological devices (i.e. computers, iPads, remote controlled toys, sound recording devices, etc) and basic vocabulary.
- The use of Busy Things to support Cross Curricular links and develop computing skills.
- They are also encouraged to explore a variety of carefully selected software programs to support the full range of the Early Learning goals and the Foundation Stage curriculum.

Safeguarding

- The school follows the Child Protection, E safety, and Keeping Children Safe in Education policies
- The computing subject policy is integral to fostering a safe and effective digital learning environment for students. Our approach to filtering and monitoring aligns with the recommendations outlined in the Department for Education (DfE) guidance on Keeping Children Safe in Education. Rigorous filtering systems are implemented to restrict access to inappropriate content, ensuring that online resources are suitable for educational purposes.
- Additionally, robust monitoring mechanisms are in place to track students' online activities, thereby safeguarding them from potential risks associated with Internet use. Regular training sessions are provided for staff to recognise and respond to the emerging challenges of digital safety.
- Furthermore, we promote awareness among students regarding online behaviour, empowering them to act responsibly and report any concerns. By adhering to these guidelines, we strive to create a secure and supportive digital landscape conducive to effective learning and development.
- Class teachers and the technical support team are responsible for checking that there are no obvious breaches in health and safety
- The school ensures that all monitors are height appropriate and safely placed, that chairs are appropriate, that work surfaces are sufficiently large, that there are no trailing electrical wires or devices, and that rooms are well ventilated.
- Thomas Hickman School ensures that all equipment is given annual electrical checks by the Local Authority electrical testing officer.

Based on the latest Ofsted framework, schools are expected to demonstrate:

- **Quality of Education:** An engaging curriculum that is well-structured and leads to high-quality learning outcomes.
- **Behaviour and Attitudes:** An environment where students feel safe and secure, allowing them to focus on learning.
- **Personal Development:** Activities that promote students' personal growth, including their understanding of e-safety and digital citizenship.
- **Leadership and Management:** School leaders must ensure a clear vision for the Computing curriculum, enforce compliance with the National Curriculum standards, and promote continuous professional development for staff.

Computing Systems and Infrastructure

Staff email/School Calendar

- All staff should have a staff email account. This account should be used for all professional business. Personal emails accounts should not be used for work related correspondence.
- Please see the Jason Brown if you need an email account or are having problems accessing your mail.
- The mail portal also allows access to the school calendar. Staff need to regularly check the calendar for school events. This is also required when booking trips and visitors to the school.

Technical Support

The school buys technical support from Eduthing. A technician visits the site once a week, but they can be contacted via itsupport@eduthing.co.uk or 02037509796

Logging Technical Faults

- Any technical issues or problems should be logged using via itsupport@eduthing.co.uk or calling 02037509796
- It is helpful to add as much detail as possible, including exact error messages and screen shots
- If your technical issue is urgent, please call 0203 750 9796. Speak to Jason Brown or the Computing Lead.

The School Network

The school computers are on a server-based network. There is also wireless access throughout the school. You are also able to access Google Shared Drive which is cloud based and requires no additional software for remote logging in.

Google Workspace

- Staff Shared Area:

Only staff can see this folder. It contains shared staff resources. The structure has been set up to make resources and information easily available.

Network folders

- My Documents:

Each user has their own My Docs folder that only they can see

- Staff Shared Area:

Only staff can see this folder. It contains shared staff resources, In the General, Teachers Only and Whole School Share folders. The structure has been set up to make resources and information easily available.

Network usernames and logins

Pupil network usernames

- In the computing suite, children to log in with their class login. Y1, Y2, Y3… no password
- Each child has their own Google username and password, which need to be used when children use the Computing Suite and when logging on to Chromebooks.
- Logins for children in your class are saved in the Computing Folder R:/Teachers/Computing
- Email the Computing Lead for new usernames for children joining the school.

Staff Network usernames

- All staff should have their own log in. Staff should not share their login with colleagues.
- Don't leave your classroom computer logged in to your own account when you are not in the classroom.

Spaces and Devices

COMPUTING Suite

- The school has two Computing suites.
- The door can be opened using the code 1756.
- Any computers that are not working should be reported to the Computing Lead.
- At the end of lessons, children should log off the computers and switch them off at the end of the day.
- If your class is the last class to use the Computing suite the computers should be shut down. Please also ensure that you leave it as you would like to find – ensure children tuck all the chairs in etc.

Computing Suite timetable

- Teachers are able to book time slots using the Bookings Doc, in the Shared Drive.

Chromebooks

- Teachers are able to book time slots using the Bookings Doc, in the Shared Drive.
- Please do not remove any Chromebook from the trolley for an extended period of time and ensure that all Chromebook are replaced in their own drawer, and plugged in for the next class to use.

- Pupil Chromebooks are for pupil use only and should not be used by staff
- Chromebooks should be kept on the correct trolley and shelved according to their numbers.
- The Chromebook trollies that are kept in classrooms should be plugged in to recharge when necessary, but **Chromebooks should not be kept plugged in continuously**
- Chromebooks should be logged off properly at the end of a session and replaced in the trolley to charge

Staff Laptops

- There are a number of old staff laptops that can be used in school for PPA, meetings etc. – See Jason Brown for more details.
- A Device Loan Form will be completed for all new laptops (See Jason Brown)

iPads

Each Year Group has a class iPad

In EYFS the children's iPads should be charged and ready for the children to use

Computing Curriculum resources

Data Logging (Year 4)

There are a set of 6r data loggers with build in sound, temperature and light sensors

- They are mentioned in the Science, Computing and Geography curriculum
- They can be used independently to measure sound, temperature and light
- They can also be used connected to a computer where the software will record the data as it is logged live and display it as a graph, table or meter on screen.
- Data collected can be printed, exported as a spreadsheet etc.

Robots

There are two sets of 6 Bee-Bot robots with a charging tray in EYFS classrooms

Crumble

There are 15 full crumble sets for children to use for coding as per year 5 curriculum.

Microbits

There are of 30 full sets for children to use for coding as per year 6 curriculum.

Cross Curricular Computing Resources

Digital cameras for pupil use

- There is a set of 5 digital cameras for pupil use
- See the Computing Lead if you would like to use them

Headphones

- There are 40 headphones available to use in the Computing Suite in the cupboard in the suite closest to the library.

This Computing Policy will be reviewed annually to ensure it remains relevant and effective in meeting the needs of our students and the expectations of the inspectorate.