



Computing

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The aim of this policy is to set out the school's vision, aims and strategies for the teaching and learning of Computing at Friezland. It is the basis for the development of Computing in our school for the next three years. This policy is regularly reviewed against the Local Authority's and national guidance, and updated as necessary. It should be read in conjunction with other relevant school policies such as the Safeguarding and the E-Safety policies.

Curriculum Intent Statement:

'A Family Committed to Making a Difference'

At Friezland Primary School we aim to develop well-rounded, resilient individuals who demonstrate mutual respect and tolerance and who have a positive impact on their community and the wider world. Our Curriculum is designed with this in mind. We aim to encourage a life-long love of learning and develop skills for life through the delivery of exciting, challenging and stimulating experiences within and beyond the classroom.

Our intention for the teaching of computing at Friezland is that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the computing and whole school curriculum but overall in the day-to-day life of our school. We believe that technology can provide: enhanced collaborative learning opportunities; better engagement of pupils; easier access to rich content; support understanding of new concepts and can support the needs of all our pupils.

Our overall aims for computing at Friezland are to:

- Provide an exciting, rich, relevant and challenging Computing curriculum for all pupils.
- Enthuse and equip children with the capability to use technology throughout their lives
- Instil critical thinking, reflective learning and a 'can do' attitude for all our pupils, particularly when engaging with technology and its associated resources.
- Teach pupils to become responsible, respectful and competent users of data, information and communication technology.
- Teach pupils to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- Equip pupils with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.
- Use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school.
- Provide technology solutions for forging better home and school links

Curriculum

Friezland's computing curriculum is based on a 2-year cycle and spans from Year 1 to Year 6. It is designed to fulfil the requirements of the KS1 & KS2 Programmes of Study, and to provide learning experiences that engage, enthuse and motivate all of our learners. We use the Purple Mash Scheme of Work which ensures the progression of skills and knowledge as well as incorporating technology wherever possible in a cross-curricular approach. Elements of the Computing curriculum are also embedded through our PHSE curriculum such as online safety.

Subject leadership

Friezland's Computing Co-ordinator, R Hill, in conjunction with the head teacher, leads the provision of Computing within the school. The Computing Co-ordinator is responsible for:

- developing a computing curriculum which allows substantial progress to be made across the school
- leading teaching and learning
- monitoring and evaluating standards of Computing teaching and learning across the school
- managing the resources, which support curriculum delivery
- implementing arrangements for assessment in Computing and overseeing the recording and reporting of pupil progress.
- managing the professional development needs of other teachers involved in the delivery of Computing

Teaching & Learning

Computing is taught through discrete lessons and also in a cross-curricular manner. Units of work are mapped out and the technology and resources for each are based on Purple Mash, with the additional use of technologies such as ipads, microphones and Beebots. Our curriculum is based on a 2-year cycle for mixed age classes and ensures that children are provided with opportunities to revisit topics and build on their skills in order that all children are supported and also challenged. We use 8 topics to organise our curriculum as follows:

- Coding and computational thinking
- Spreadsheets
- Internet and Email
- Art and Design
- Music
- Databases and Graphing
- Writing and Presenting
- Communication and Networks

In terms of embedding computing learning across the curriculum, at Friezland we believe that teachers should be flexible and adapt planning to incorporate computing skills where possible. The Co-ordinator will also highlight opportunities for this and identify any necessary resources. We believe an immersive classroom enhances the children's learning and that the use of individual netbooks and iPads in classrooms enables independent learning. It encourages research and allows for the creative use of computer technology in all subjects. Digital projectors, interactive whiteboards and visualisers are positioned in all classrooms and are used as a teaching and learning resource across the curriculum.

Assessment

Assessment in computing is primarily to inform and support teaching and learning, enabling the class teacher to refine planning to best meet learner needs. During lessons, the class teacher, where appropriate, will unobtrusively record evidence of particular competences as they emerge in the course of teaching and learning. Pupils' work will be recorded in various ways including in online portfolios, photographs and in a whole class learning journal which will be an additional source of ongoing evidence of progress. Children's progress and attainment will be measured against the Key Assessment criteria for computing (appendix 1).

For reporting purposes, each year, and in line with the reporting arrangements for all other subjects, the pupil's individual achievement with respect to the objectives in the Key Stage 1 & 2 Programmes of Study (see appendix) will be communicated to parents. Our standard school wording for progress will be used: Working towards, Achieved, Working at Greater Depth.

For the purposes of transition, we have well-established lines of communication with receiving secondary schools and an opportunity to share pupil's attainment in Computing and any additional comments.

Equal Opportunities

Provision is made for all pupils regardless of ability, disability, special Educational need, medical condition, gender, faith or ethnicity and reasonable adjustments are made in a range of ways. All children have a right to be treated equally and the school will take measures against those who do not abide by this ethos. We place particular emphasis on the flexibility technology brings to allowing pupils to access learning opportunities, particularly pupils with SEN and disabilities. With this in mind, we ensure additional access to technology is provided throughout the school day and in some cases beyond the school day where appropriate. Every opportunity is taken to recognise and celebrate pupils' abilities in Computing.

Monitoring & Evaluating

Policy and practice is monitored and evaluated on a regular basis in accordance with the school development planning cycle. The provision will be monitored by the subject co-coordinator in conjunction with the Headteacher and Governing Board. Monitoring may take the form of lesson observations, planning or work scrutinies. Feedback will be given to all staff along with recommendations to inform future policy, planning and practice. Professional development of the coordinator will be maintained to ensure that new initiatives and curriculum updates are fed back to staff and incorporated into regular practice.

Data Protection Statement

The procedures and practice created by this policy have been reviewed in the light of our Data Protection Policy. All data will be handled in accordance with the school's Data Protection Policy.

Data Audit for the Computing Policy					
What?	Probable Content	Why?	Who?	Where?	When?
Pupil assessment data	Name D.O.B. Teacher Assessment data	Monitor a child's progress and identify next steps Well-Being of Your Child	All Staff (as necessary)	Staff electronic records Data is deleted / shredded as necessary	Held on File throughout a child's time at school Key data is passed onto a new School when moving on Some data is archived until the child is 25 (e.g. SEND pupil)

As such, our assessment is that this policy:

Has Few / No Data Compliance Requirements	Has A Moderate Level of Data Compliance Requirements	Has a High Level of Data Compliance Requirements
	✓	

This policy will be reviewed every three years or sooner if legislation / school assessment systems change.



Key Assessment Criteria

Computing



YEAR 1 computer user	YEAR 2 computer user	YEAR 3 computer user
<p><u>Algorithms and Programming</u></p> <ul style="list-style-type: none">• I create a series of instructions.• I plan a journey for a programmable toy.	<p><u>Algorithms and Programming</u></p> <ul style="list-style-type: none">• I use a range of instructions (e.g. direction, angles, turns).• I test and amend a set of instructions.• I find errors and amend (debug).• I write a simple program and test it.• I predict what the outcome of a simple program will be (logical reasoning).• I understand that algorithms are used on digital devices.• I understand that programs require precise instructions.	<p><u>Algorithms and Programming</u></p> <ul style="list-style-type: none">• I design a sequence of instructions, including directional instructions.• I write programs that accomplish specific goals.• I work with various forms of input.• I work with various forms of output.
<p><u>Information Technology</u></p> <ul style="list-style-type: none">• I create digital content.• I store digital content.• I retrieve digital content.• I use a website.• I use a camera.• I record sound and play back.	<p><u>Information Technology</u></p> <ul style="list-style-type: none">• I organise digital content.• I retrieve and manipulate digital content.• I can navigate the web to complete simple searches.	<p><u>Information Technology</u></p> <ul style="list-style-type: none">• I use a range of software for similar purposes.• I collect information.• I design and create content.• I present information.• I search for information on the web in different ways.• I manipulate and improve digital images.
<p><u>Digital Literacy</u></p> <ul style="list-style-type: none">• I use technology safely.• I keep personal information private.	<p><u>Digital Literacy</u></p> <ul style="list-style-type: none">• I use technology respectfully.• I know where to go for help if I am concerned.• I know how technology is used in school and outside of school.	<p><u>Digital Literacy</u></p> <ul style="list-style-type: none">• I use technology respectfully and responsibly.• I know different ways I can get help if I am concerned.• I understand what computer networks do and how they provide multiple services.• I discern where it is best to use technology and where it adds little or no value.

YEAR 4 computer user	YEAR 5 computer user	YEAR 6 computer user
<p><u>Algorithms and Programming</u></p> <ul style="list-style-type: none"> • I experiment with variables to control models. • I give an on-screen robot specific instructions that takes them from A to B. • I make an accurate prediction and explain why I believe something will happen (linked to programming). • I de-bug a program. 	<p><u>Algorithms and Programming</u></p> <ul style="list-style-type: none"> • I combine sequences of instructions and procedures to turn devices on and off. • I use technology to control an external device. • I design algorithms that use repetition and 2-way selection. 	<p><u>Algorithms and Programming</u></p> <ul style="list-style-type: none"> • I design a solution by breaking a problem up. • I recognise that different solutions can exist for the same problem. • I use logical reasoning to detect errors in algorithms. • I use selection in programs. • I work with variables. • I explain how an algorithm works. • I explore 'what if' questions by planning different scenarios for controlled devices.
<p><u>Information Technology</u></p> <ul style="list-style-type: none"> • I select and use software to accomplish given goals. • I collect and present data. • I produce and upload a podcast. 	<p><u>Information Technology</u></p> <ul style="list-style-type: none"> • I analyse information. • I evaluate information. • I understand how search results are selected and ranked. • I edit a film. 	<p><u>Information Technology</u></p> <ul style="list-style-type: none"> • I select, use and combine software on a range of digital devices. • I use a range of technology for a specific project.
<p><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • I recognise acceptable and unacceptable behaviour using technology. 	<p><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • I understand that you have to make choices when using technology and that not everything is true and/or safe. 	<p><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • I discuss the risks of online use of technology. • I identify how to minimise risks.

A safe computer user in Year 1 & Year 2

Knowledge and Understanding

- I understand the different methods of communication (e.g. email, online forums etc.).
- I know you should only open email from a known source.
- I know the difference between email and communication systems such as blogs and wikis.
- I know that websites sometimes include pop-ups that take me away from the main site.
- I know that bookmarking is a way to find safe sites again quickly.
- I have begun to evaluate websites and know that everything on the internet is not true.
- I know that it is not always possible to copy some text and pictures from the internet.
- I know that personal information should not be shared online.
- I know I must tell a trusted adult immediately if anyone tries to meet me via the internet.

Skills

- I follow the school's safer internet rules.
- I use the search engines agreed by the school.
- I know what to do if I find something inappropriate online or something I am unsure of (including identifying people who can help; minimising screen; online reporting using school system etc.).
- I use the internet for learning and communicating with others, making choices when navigating through sites.
- I send and receive email as a class.
- I recognise advertising on websites and learn to ignore it.
- I use a password to access the secure network.

A safe computer user in Year 3 & Year 4

Knowledge and Understanding

- I understand the need for rules to keep me safe when exchanging learning and ideas online.
- I recognise that information on the internet may not be accurate or reliable and may be used for bias, manipulation or persuasion.
- I understand that the internet contains fact, fiction and opinion and begin to distinguish between them.
- I use strategies to verify information, e.g. cross-checking.
- I understand the need for caution when using an internet search for images and what to do if I find an unsuitable image.
- I understand that copyright exists on most digital images, video and recorded music.
- I understand the need to keep personal information and passwords private.
- I understand that if I make personal information available online it may be seen and used by others.
- I know how to respond if asked for personal information or feel unsafe about content of a message.
- I recognise that cyber bullying is unacceptable and will be sanctioned in line with the school's policy.
- I know how to report an incident of cyber bullying.
- I know the difference between online communication tools used in school and those used at home.
- I understand the need to develop an alias for some public online use.
- I understand that the outcome of internet searches at home may be different than at school.

Skills

- I follow the school's safer internet rules.
- I recognise the difference between the work of others which has been copied (plagiarism) and re-structuring and re-presenting materials in ways which are unique and new.
- I identify when emails should not be opened and when an attachment may not be safe.
- I explain and demonstrate how to use email safely.
- I use different search engines.

A safe computer user in Year 5 & Year 6

Knowledge and Understanding

- I discuss the positive and negative impact of the use of ICT in my own life, my friends and family.
- I understand the potential risk of providing personal information online.
- I recognise why people may publish content that is not accurate and understand the need to be critical evaluators of content.
- I understand that some websites and/or pop-ups have commercial interests that may affect the way the information is presented.
- I recognise the potential risks of using internet communication tools and understand how to minimise those risks (including scams and phishing).
- I understand that some material on the internet is copyrighted and may not be copied or downloaded.
- I understand that some messages may be malicious and know how to deal with this.
- I understand that online environments have security settings, which can be altered, to protect the user.
- I understand the benefits of developing a 'nickname' for online use.
- I understand that some malicious adults may use various techniques to make contact and elicit personal information.
- I know that it is unsafe to arrange to meet unknown people online.
- I know how to report any suspicions.
- I understand I should not publish other people's pictures or tag them on the internet without permission.
- I know that content put online is extremely difficult to remove.
- I know what to do if I discover something malicious or inappropriate.

Skills

- I follow the school's safer internet rules.
- I make safe choices about the use of technology.
- I use technology in ways which minimises risk, e.g. responsible use of online discussions, etc.
- I create strong passwords and manage them so that they remain strong.
- I independently, and with regard for e-safety, select and use appropriate communication tools to solve problems by collaborating and communicating with others within and beyond school.
- I competently use the internet as a search tool.
- I reference information sources.
- I use appropriate strategies for finding, critically evaluating, validating and verifying information, e.g. using different keywords, skim reading to check relevance of information, cross checking with different websites or other non ICT resources.
- I use knowledge of the meaning of different domain names and common website extensions (e.g. .co.uk; .com; .ac; .sch; .org; .gov; .net) to support validation of information.