Moat Farm Infant School

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What Computing Looks like at Moat Farm Infant School

School Vision, Values and Moto

Our staff and Governors will...

• Work in partnership with our families, the local community and external agencies for the benefit of our children.

• Provide a curriculum that is relevant, exciting, challenging and responsive to the needs of all children and enables them to flourish, make choices and take risks

• Be committed and dedicated to inspiring young learners with high quality teaching and learning environments and a focus on developing essential life skills.

• Provide a safe environment where children have a voice, are listened to, feel safe and are happy.

• Be good role models, provide high expectations and enable all children to reach their full potential.

• Empower children to share responsibility for their learning and behaviour.

• Create an ethos of inclusivity, respect and tolerance where views, faiths, cultures and races are valued and children are engaged with the wider community.

• Be committed to professional development in order to continually improve our practice.

Our Children will ...

• Feel safe, valued, included and empowered and have a positive self-image and attitude.

• Be able to make appropriate choices for behaviour, to understand the consequences of their own and others' behaviour and learn to distinguish

right from wrong.

• Be willing to try their best and take responsibility for their own learning so that they are able to fulfil their potential.

• Feel part of a community through the establishment of supportive and positive relationships with their peers and other adults.

• Be able to understand and express their ideas, feelings and beliefs in the knowledge that they will be listened to and respected.

• Communicate effectively and think creatively, solve problems, work collaboratively and persevere even when things get tricky.

• Be able to read and write with fluency and accuracy for a range of purposes and enjoyment and to work mathematically with confidence and understanding.

• Have dreams and aspirations, be open to possibilities and be all that they can be.

• Be physically and emotionally healthy and keen to learn.

• Be independent, confident, resilient and curious.

School Values

A value is a principle that guides our thinking and our behaviour. At Moat Farm Infant School, every child is valued for who they are and what they contribute to school. Values are intended to support the personal, social and spiritual development of every pupil in school.

Our school has 6 core values:

❖ Collaboration

To show we can collaborate we need to:
work together
listen to each other
share and take turns

❖ Respect

When we are respectful we:
listen to others
show good manners
treat everybody fairly

❖ Creativity

To show we are creative, we need to:
have our own ideas
use our imagination
ask questions
try new things

❖ Perseverance

To show we persevere we need to show:
we don't give up
we try our very best

we are not afraid to make mistakes
we learn from our mistakes, even when things are difficult

- ## Caring

To show we are caring we need to care for:
ourselves
others
the environment
things around us

- ## Reflectiveness

When we reflect we:
stop and think
use what we already know
ask questions
think about our learning

A new value is taught every half term.

Our school motto is 'At Moat Farm Infants every day; we learn, achieve, have fun and play!'

Aims

Intent

At Moat Farm Infant School, we teach Computing using the aims and objectives from the National Curriculum. The aim of Computing is to teach children how to use technology in a range of ways and to understand how to use technology safely. This equips children to use computational thinking and creativity to understand and change the world.

The core of computing is computer science, in which pupils are taught the principles of information and how digital systems work, and how to put this knowledge to use through programming. We ensure that all children understand how to use the internet safely and how to safeguard their own personal data when using websites and apps. We have invested in a range of computer devices including class books, Bee-bots and we continue to review the programs and apps that we use across school. Computing has deep links with mathematics, science, and design and technology and can support learning across these subjects. We use the class books to enhance our teaching of coding and to enable children to use their research skills in a practical way.

Implementation

At Moat Farm Infant School, children are regularly reminded about online security and behaviour. They participate in E-safety lessons half termly which uses resources from Purple Mash. Parents are invited to attend an E-safety assembly in which children share key messages and educational videos are shown. The children have access to class computers, class books and programmable robots (Bee-bots). Year 1 and Year 2 children have computing sessions which focus on algorithms (coding) and problem solving (debugging). These topics are often taught through the use of Purple Mash on class books, providing opportunities for children to access these same resources at home. Children are taught from an early age to create and debug simple programs, to move a remote-controlled device or to plot a sequence of actions. In Year 2, children are encouraged to research using the internet on the class books and represent their work using a range of methods e.g. bar chats, tables, word documents etc.

Impact

Our Computing curriculum and opportunities aim to improve outcomes for children in this area of study and also enhance their work and progress across all subjects where technology is used. Children become digitally literate and are ready to confidently use technology at home and at school. Children also have access to a range of devices and remote-controlled toys and resources so that they can explore simple technologies independently and use them in their learning and play. Children across school are encouraged to use technology where appropriate to support their learning in all subjects and to share their work on relevant platforms. By the time they leave Moat Farm Infant School, children will have gained key knowledge and skills in the three main areas of the computing curriculum: computer science

(programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully).

By the end of Year 1 80% of children achieved the expected standard in computing.

By the end of Year 2 92% of children achieved the expected standard in computing.

Teaching and Learning

The teaching of Computing is a process in which all teachers are involved. E-safety sessions are taught to Reception, Year 1 and Year 2 children half termly using appropriate videos to support teaching and learning. In EYFS children are able to explore educational apps on I-Pads and through the use of the interactive whiteboard. Children are also given opportunities to explore other forms of technology including bee- bots, talking tins and cameras. In KS1 children will learn about coding, algorithms and debugging. Where possible computing is linked to other subjects such as in geography for map work, In english when sending emails and for research projects. To ensure pupils retain computing knowledge there are elements of retrieval practise planned into sessions enabling children to practise key skills. Pupils are given opportunities to work in different ways, including group work, paired work, individual work and whole class work.

Monitoring and Review

Monitoring of planning is undertaken by the subject leader on a regular basis. Head Teacher and SLT undertake lesson observations, in accordance with the School Monitoring Plan, of computing teaching across the school. The work of the computing subject leader also involves supporting colleagues in the teaching of computing, being informed about current developments and providing a strategic lead and direction for the subject in the school.

Health and Safety

The staff and Governing Body of this school are committed to establishing and maintaining an environment where children feel secure, are encouraged to talk, and are listened to. We will ensure that children know that there are adults in the school who they can approach if they are worried and that the principles of confidentiality are made clear to children and young people. Children's wishes and feelings are always taken in to account when determining what action is taken and included in any referrals. The school promotes a positive, supportive and secure ethos, giving pupils a sense of being valued and understanding that their voice will be heard.

It is important to allow children to do what they can for themselves, but depending on age and circumstances (i.e. a child who is hurt, who needs instruction in the use of a particular instrument/piece of equipment, safety issues such as the need to prevent a child hurting themselves or others), it may be necessary for some physical contact to take place. Children are taught how to stay safe online through E-safety sessions and any concerns reported to adults are logged on My Concern and addressed by the class teacher. Children are taught to use computing equipment safely e.g. sitting down when using iPads.

Inclusion and Equal opportunities including SEND

Moat Farm Infant School is an inclusive school. We teach children, whatever their ability. Computing forms part of the school curriculum policy to provide a broad and balanced education to children. Through our teaching of computing, we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. We assess against the National curriculum (Key Skills) and SEND Key skills which allows us to consider each child's attainment and progress towards their expected levels.

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – organisational, teaching materials, teaching styles and differentiation. This will enable some additional action to be taken to enable the child to learn more effectively.

Our SEND hub provision enables children to explore technology.

Other Curriculum Area Links

At Moat Farm Infant school, we make cross curriculum links when appropriate. Our Computing curriculum where possible is linked to other subjects such as Geography, English and Science.

Enrichments and Links Made Within the Community

Our Computing curriculum is designed to make links within our local community. Throughout EYFS and KS1 pupils will take part in a range of enrichment within our community:

- Using and applying taught skills.
- Using Computing vocabulary confidently and referring to vocabulary displayed on E-Safety/ Computing displays in school.
- Parent workshops
- Homework linked to computing
- Safer internet day

SMSC and British Values in Computing

KS1

Spiritual	Moral
S1 – Set of values principles and beliefs - e-safety principles S2 – Respect for themselves and others - treating each other on line how we would treat people face to face, cyber-bullying, feedback to each other about our work S3 – Increasing ability to reflect - Reflecting on likes and dislikes - reflect on work produced electronically and improve following peer feedback S4 – An expressive and/or creative impulse - purple mash – paint programs, coding S7 - Sense of empathy with others - cyber bullying, e-safety Hector's world S10 - Understanding of feelings and emotions and their impact - cyber bullying, e-safety Hector's world Computer science is the core of computing where pupils are taught how digital systems work. Children are taught key skills and can use their own imagination to create their own content. Children then share, evaluate and reflect upon their designs and experiences. In Information Technology children use their computer science knowledge to create programs, systems and produce content. They gain a sense of enjoyment and fascination in learning about themselves and the world around them. They use their creativity to produce content related to all curriculum areas, through text and images.	M1 – Ability to distinguish right from wrong - cyber bullying, e-safety Jessie and Friends and Hector's world, e-safety principles M2 - Confidence to act consistently in accordance with their own principles - cyber bullying, e-safety, Jessie and Friends, Hector's world, knowing how to report inappropriate material M3 - Respect for others needs/feelings - cyber bullying, e-safety, Jessie and Friends and Hector's world M6- Think through the consequences of their own and others' actions and movements - cyber bullying, e-safety, Jessie and Friends and Hector's world M7 - Ability to make responsible and reasoned judgements on moral dilemmas - cyber bullying, e-safety, Jessie and Friends and Hector's world Digital Literacy is the evaluating and reflecting on the use of software and the internet. It will prepare children for the future workforce and allows them to make the right choice when selecting technological tools and information. Children consider how to stay safe at home and how we use the computers safely at school. Children learn how to log on with a private password and discuss why it is important to have a children's log in. They consider the moral questions such as; How can you keep safe whilst using the internet at home, school and in public places? Can I trust everything that I find out about on the internet? How secure are the images that are posted onto the internet?

	Parents have the option to attend an e-safety assembly/lesson which offers advice and guidance between right and wrong when using the internet, in order to keep themselves and their children safe. Newsletters are issued with e-safety information.
Social	Cultural
SO5 – Shares views and opinions with others - group work SO7 – Exercises responsibility - cyber bullying, e-safety Hector's world SO8 – Shows respect for people - group work, peer feedback, cyber bullying SO9 – Adjusts to a range of social contexts by sensitive behaviour - group work, peer feedback SO10 – Relates well to others' social skills and personal qualities - group work, peer feedback SO11 – Works successfully as a member of a group - group work, peer feedback Computer science - Children are encouraged to cooperate with each other and listen to each other's ideas and opinions. They evaluate how things work and how they could change instructions to make them work more effectively. Children work collaboratively to direct a robot and to predict how something will work. They work as a team to create an algorithm to get a begot (programmable toy) across the world. Children learn the skills of creating a program and detecting where there is a problem and how they are going to resolve it.	C6 Use language and understand images - use and understand computer based technical vocabulary Digital Literacy Children learn how to research safely to find out about the past and the wider world. They explore their year group themes by watching video clips, images and reading information to find out more about their own heritage and that of others. In Information Technology children use their computer science knowledge to create programs, systems and produce content. There are cross-curricular links using IWB, I-pads and class books. The children watch video clips in science, history and RE, use interactive tours to view a church, Google Maps to compare their local environment with the wider world. They use search engines to research topics e.g. Sikhism before creating a poster.

SMSC and British Values in Physical Education

EYFS

Spiritual	Moral
S1 – Set of values, principles and beliefs - e-safety principles S2 – Respect for themselves and others - treating each other on line how we would treat people face to face, cyber-bullying, feedback to each other about our work S4 – An expressive and/or creative impulse - purple mash – paint programs, S7 - Sense of empathy with others - cyber bullying, e-safety Hector's world S10 - Understanding of feelings and emotions and their likely impact - cyber bullying, e-safety Hector's world Foundation Stage Using technological devices in role-play to imagine real life experiences where adults may use ICT. Using paint programs to create pictures and images.	M1 – Ability to distinguish right from wrong - cyber bullying, e-safety Hector's world, e-safety principles M2 – Confidence to act consistently in accordance with their own principles -cyber bullying, e-safety Hector's world, knowing how to report inappropriate material M3 - Respect for others needs/feelings - cyber bullying, e-safety Hector's world M6 - Think through the consequences of their own and others' actions and movements - cyber bullying, e-safety Hector's world M7- Ability to make responsible and reasoned judgements on moral dilemmas cyber bullying, e-safety Hector's world Foundation Stage During self-initiated children have access to a range of technological devices including computers, I-pads, listening stations and cameras. Children are taught to know the right and wrong way to use these technological items.
Social	Cultural

SO7 – Exercises responsibility - cyber bullying, e-safety Hector's world <u>Foundation Stage</u> Children use digital equipment to share ideas and communicate with each other and with other adults. Children learn to take turns to use the technological equipment fairly, they also share their knowledge of how to use software with each other during self-initiated time.	C6 Use language and understand images - use and understand computer based technical vocabulary Digital Literacy Children learn how to research safely to find out about the past and the wider world. They explore their year group themes by watching video clips, images and reading information to find out more about their own heritage and that of others. In Information Technology children use their computer science knowledge to create programs, systems and produce content. There are cross-curricular links using IWB, I-pads and class books. The children watch video clips in science, history and RE, use interactive tours to view a church, Google Maps to compare their local environment with the wider world. They use search engines to research topics e.g. Sikhism before creating a poster.

Computing in the Early Years Foundation Stage

Statutory Frameworks

Computing as an Educational Programme

Although Computing is not mentioned as a single subject in the Early years Foundation stage there are a wide range of opportunities for children in the Early Years to explore and use technology to be creative and problem solve.

Computing as an ELG

Children working at Reception level should know the importance of sensible 'screen time'

ELG: Explain the reasons for rules, know right from wrong and try to behave accordingly.

Development Matters

No job is more important than working with children in the early years. Development Matters has been written for all early year's practitioners, for childminders and staff in nurseries, nursery schools, and nursery and reception classes in school. It offers a top-level view of how children develop and learn. It guides, but does not replace, professional judgement. The guidance can also help you to meet the requirements of the statutory framework for the early year's foundation stage.

EYFS Development Matters 2020 Statements **Children in Reception - Prime Areas**

Communication and Language

- Understand how to listen carefully and why listening is important.
- Learn new vocabulary.
- Use new vocabulary through the day.
- Ask questions to find out more and to check they understand what has been said to them.
- Articulate their ideas and thoughts in well-formed sentences.
- Connect one idea or action to another using a range of connectives.
- Describe events in some detail.
- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.
- Develop social phrases.
- Engage in story times.
- Listen to and talk about stories to build familiarity and understanding.
- Retell the story, once they have developed a deep familiarity with the text, some as exact repetition and some in their own words.
- Use new vocabulary in different contexts.
- Listen carefully to rhymes and songs, paying attention to how they sound.
- Learn rhymes, poems and songs.
- Engage in non-fiction books.
- Listen to and talk about selected non-fiction to develop a deep familiarity with new knowledge and vocabulary.

Personal, Social and Emotional Development

- See themselves as a valuable individual.
- Build constructive and respectful relationships.
- Express their feelings and consider the feelings of others.
- Show resilience and perseverance in the face of challenge.
- Identify and moderate their own feelings socially and emotionally.
- Think about the perspectives of others.
- Manage their own needs.
  - Personal hygiene
- Know and talk about the different factors that support their overall health and wellbeing:
  - regular physical activity
  - healthy eating
  - toothbrushing
  - sensible amounts of 'screen time'
  - having a good sleep routine
  - being a safe pedestrian

Physical Development

- Revise and refine the fundamental movement skills they have already acquired:
  - rolling
  - crawling
  - walking
  - jumping
  - running
  - hopping
  - skipping
  - climbing
- Progress towards a more fluent style of moving, with developing control and grace.
- Develop the overall body strength, co-ordination, balance and agility needed to engage successfully with future physical education sessions and other physical disciplines including dance, gymnastics, sport and swimming.
- Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons.
- Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
- Combine different movements with ease and fluency.
- Confidently and safely use a range of large and small apparatus indoors and outside, alone and in a group.
- Develop overall body-strength, balance, co-ordination and agility.
- Further develop and refine a range of ball skills including: throwing, catching, kicking, passing, batting, and aiming.
- Develop confidence, competence, precision and accuracy when engaging in activities that involve a ball.
- Develop the foundations of a handwriting style which is fast, accurate and efficient.
- Further develop the skills they need to manage the school day successfully:
  - lining up and queuing
  - mealtimes

EYFS Development Matters 2020 Statements **Children in Reception - Specific Areas**

Literacy

- Read individual letters by saying the sounds for them.
- Blend sounds into words, so that they can read short words made up of known letter-sound correspondences.
- Read some letter groups that each represent one sound and say sounds for them.
- Read a few common exception words matched to the school's phonic programme.
- Read simple phrases and sentences made up of words with known letter–sound correspondences and, where necessary, a few exception words.
- Re-read these books to build up their confidence in word reading, their fluency and their understanding and enjoyment.
- Form lower-case and capital letters correctly.
- Spell words by identifying the sounds and then writing the sound with letter/s.
- Write short sentences with words with known letter-sound correspondences using a capital letter and full stop.
- Re-read what they have written to check that it makes sense.

Mathematics

- Count objects, actions and sounds.
- Subitise.
- Link the number symbol (numeral) with its cardinal number value.
- Count beyond ten.
- Compare numbers.
- Understand the 'one more than/one less than' relationship between consecutive numbers.
- Explore the composition of numbers to 10.
- Automatically recall number bonds for numbers 0-5 and some to 10.
- Select, rotate and manipulate shapes to develop spatial reasoning skills.
- Compose and decompose shapes so that children recognise a shape can have other shapes *within it*, just as numbers can.
- Continue, copy and create repeating patterns.
- Compare length, weight and capacity.

Understanding the World

- Talk about members of their immediate family and community.
- Name and describe people who are familiar to them.
- Comment on images of familiar situations in the past.
- Compare and contrast characters from stories, including figures from the past.
- Draw information from a simple map.
- Understand that some places are special to members of their community.
- Recognise that people have different beliefs and celebrate special times in different ways.
- Recognise some similarities and differences between life in this country and life in other countries.
- Explore the natural world around them.
- Describe what they see, hear and feel whilst outside.
- Recognise some environments that are different to the one in which they live.
- Understand the effect of changing seasons on the natural world around them.

Expressive Arts and Design

- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.
- Listen attentively, move to and talk about music, expressing their feelings and responses.
- Watch and talk about dance and performance art, expressing their feelings and responses.
- Sing in a group or on their own, increasingly matching the pitch and following the melody.
- Develop storylines in their pretend play.
- Explore and engage in music making and dance, performing solo or in groups.

Early Learning Goals

Communication and Language

Listening, Attention and Understanding

- Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.
- Make comments about what they have heard and ask questions to clarify their understanding.
- Hold conversation when engaged in back-and-forth exchanges with their teacher and peers.

Speaking

- Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.
- Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.
- Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.

Understanding the World

Past and Present

- Talk about the lives of the people around them and their roles in society.
- Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.
- Understand the past through settings, characters and events encountered in books read in class and storytelling.

People, Culture and Communities

- Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps.
- Know some similarities and differences between different religious and cultural communities in this country, drawing on their experiences and what has been read in class.
- Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and (when appropriate) maps.

The Natural World

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Personal, Social and Emotional Development

Self-Regulation

- Show an understanding of their own feelings and those of others, and begin to regulate their behaviour accordingly.
- Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate.
- Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.

Managing Self

- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
- Explain the reasons for rules, know right from wrong and try to behave accordingly.
- Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

Building Relationships

- Work and play cooperatively and take turns with others.
- Form positive attachments to adults and friendships with peers.
- Show sensitivity to their own and to others' needs.

Expressive Arts and Design

Creating with Materials

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used.
- Make use of props and materials when role playing characters in narratives and stories.

Being Imaginative and Expressive

- Invent, adapt and recount narratives and stories with peers and their teacher.
- Sing a range of well-known nursery rhymes and songs.
- Perform songs, rhymes, poems and stories with others, and (when appropriate) try to move in time with music.

Mathematics

Number

- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Physical Development

Gross Motor Skills

- Negotiate space and obstacles safely, with consideration for themselves and others.
- Demonstrate strength, balance and coordination when playing.
- Move energetically, such as running, jumping, dancing, hopping, skipping and climbing.

Fine Motor Skills

- Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases.
- Use a range of small tools, including scissors, paintbrushes and cutlery.
- Begin to show accuracy and care when drawing.

Literacy

Comprehension

- Demonstrate understanding of what has been read to them by retelling stories and narratives using their own words and recently introduced vocabulary.
- Anticipate (where appropriate) key events in stories.
- Use and understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems and during role play.

Word Reading

- Say a sound for each letter in the alphabet and at least 10 digraphs.
- Read words consistent with their phonic knowledge by sound-blending.
- Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words.

Writing

- Write recognisable letters, most of which are correctly formed.
- Spell words by identifying sounds in them and representing the sounds with a letter or letters.
- Write simple phrases and sentences that can be read by others.

Computing and the National Curriculum

Purpose of study

A high-quality computing education 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

Aims

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

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Subject content- KS1

Pupils should be 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

Moat Farm Infant School Computing Curriculum Overview 2023-2024

Key:	Digital Literacy	Computer Science	Information Technology			
	Autumn 1 8 wks	Autumn 2 7 wks	Spring 1 5 wks	Spring 2 5 wks	Summer 1 7 wks	Summer 2 7 wks
Nursery	Computing runs throughout their continuous provision e.g. computers, telephones, interactive whiteboard, remote controls etc					
Reception	Technology around us- using tablets/ interactive whiteboard	Using Mini Mash- on interactive white board	Using Mini Mash/ Purple Mash- in provision	Using Mini Mash/ Purple Mash- in provision	Explore Bee Bots- in provision	Using purple mash with individual logins (tablets/ class books)
Year 1	E-Safety - Online opportunities	E-Safety- Reliable or not? Lego Builders (3 lessons) and Maze explores (4 lessons)	E-Safety- Personal Information Grouping and Sorting (2 lessons) and Pictograms (3 lessons)	E-Safety- Sharing Online Animated story books (5 lessons)	E-Safety- Playing Games Coding (6 lessons)	E-safety- being safe/ class concerns Spreadsheets (3 lessons) Technology outside of school (2 lessons)

Cross Curricular Links		Lego builders L1- Link to English instructions Play Simon says as a starter L2&L3-follow instructions on computers Maze Explores	Grouping and sorting L1- Link to science- sort living and non-living things	Animated story books L1- Link to story time- read an e-book and discuss the differences of traditional books	Coding L1- Link to daily routines – following instructions L2&3- coding on a computer	Spreadsheets L1- Introduction to spreadsheets as whole class (shorter session) L2&L3- teach together

		L1-L4 Teach as two lessons use 2Go to create an algorithm	L2- Sorting on computers Pictograms L1- Create a class pictogram at snack time? L2-Link to science- pictogram from poo experiment?	L2&L3- teach together on computers L4&L5- teach together on computers		exploring spreadsheets on computers Technology outside of school L1 &L2- Technology outside of school- Set as homework?
Year 2	E-Safety-Online Opportunities Coding (6 lessons)	E-Safety- Personal Information/ Passwords Spreadsheets (4 lessons)	E-Safety- Sharing Online/ Digital footprint	E-safety- Health Lifestyle Effective searching (3	E-Safety- Playing games Creating pictures (5	E- Safety- Making the right decisions Making music (3

Cross Curricular Links	Coding L1- Link to English understand an algorithm is a set of instructions L2&L3- Creating a programme on a computer L4&L5- Using objects and	1 E-Safety session each half term Spreadsheets L1- Reviewing spreadsheets from Y1- Morning starter activity- use some 2Calculate tools L2, L3, L4Spreadsheets on computers	Questioning L1- Link to Maths- pictograms L2- Yes/ No questions to separate information- hot seat starter activity? L3-L5- Computers	Effective searching L1-L3- searching online link to Geography- Kapow question-What is it like to live by the coast? -What is it like in Peru?	Creating pictures L1-L5- Link to Kapow art 2Paint a picture on IWB during morning starter activity/ Friday golden time?	Making Music L1-L2- Using 2Sequence on computers Presenting ideas L1-l2 Linked to Art topic: Tell a story L3- Linked to English non-fiction stories
	buttons on a programme L6- Debugging on a computer		to create a binary tree			L4- Using computers to present ideas

Moat Farm Infant School Computing Threshold Concepts and the Chris Quigley Curriculum with progression of skills

In EYFS a teacher makes assessments for each individual child against the Early Learning Goals: Personal, Social and Emotional Development.

In KS1 children are expected to reach emerging/developing by the end of Year 1 and developing/secure/greater depth by the end of Year 2 using Chris Quigley's Key Skills, shown below.

To code
Can I say what an algorithm is?
Can I use logical reasoning to predict the behaviour of
Can I create a simple algorithm and test it?
Can I detect and correct simple errors i.e. debugging, in programs?
To connect
Can I navigate the web and can carry out simple web searches to collect digital content?
Can I demonstrate how to use computers safely and responsibly, knowing a range of ways to report unacceptable content and contact when online?
Can I understand online risks and the age rules for sites?
To collect
Can I use simple databases to record information in areas across the curriculum?
To communicate
Use a range of applications and devices in order to communicate ideas, work and messages

Moat Farm Infant School Computing Progression of Vocabulary

EYFS	Year 1	Year 2
Digital Literacy: electronic equipment, worried, secret, help, belonging to you, work with others, give messages, question, game, program Information Technology- draw, icon, pencil tool, brush tool, spray tool, flood fill, shapes, interactive board/pen, mouse, touchpad, key, keyboard, space bar, back space (to delete), keep work (save), game, program, information Computer Science- Give a command / instruction by telling someone or something to do, programmable toy, remote control, stop, go, forward, backwards, on, off, problem/error/fault/mistake, move, button, press	Digital Literacy: email address, cyberbullying, block others, research, application Information technology: make (create), sort out (organise), save/keep your work safe (store), make changes to your work (manipulate), find where you saved your work (retrieve), log on, log off, open, look for work (search), icons, enter, delete, punctuation keys, image, show to others (present), electronic device, combine, compose, Computer Science- put in place your ideas (implement), how/when a task is finished (execute), tell a computer what to do/give an instruction, error (bug), what we think will happen, order your thinking and ideas (logical)	Digital Literacy- technology, personal information, private, communication, collaboration, cyberbullying, zip, block, flag it (screen cross code), browse, search engine, filter, email is an electronic message, piracy, plagiarism, virus, spam, safety, accuracy, copy, browser, Information Technology: create, organise, store, manipulate, retrieve, work completed on a digital device (digital content), edit, crop, audio, sound, record, zoom in/out, transition, customise motion, transition, login, search, a group of computers that can talk to each other / share (network), present, technology, italic, bold, spellchecker, copy, paste, cut, underline, multimedia Computer Science- algorithm, implement, execute, bug, find mistakes and fix them (debug), predict, logical reasoning, control, sequence, select, repetition, input, output

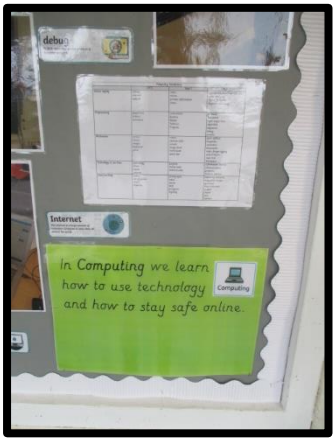
Assessment in Computing

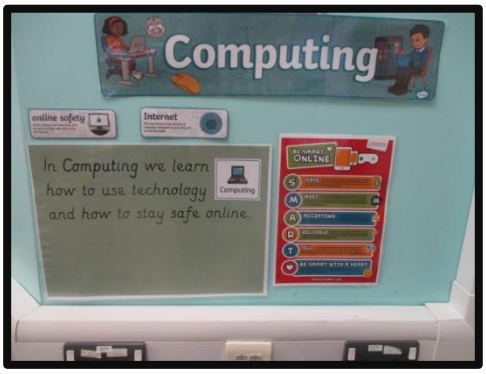
Class teachers are responsible for the assessment of children's understanding in E-safety and Computing and this information is used to inform future planning.

Formative assessment takes place during each lesson so that understanding and progress is monitored.

In KS1 Children that are falling behind have catch up sessions throughout the week.

Displays at Moat Farm Infant School





Resources for Computing

Useful Websites

https://www.topmarks.co.uk/

https://www.purplemash.com/sch/moatfarm

Floor books