Computing and Internet Safety at Ludlow Primary School

Our Curriculum Drivers at Ludlow Primary School			
Confident Communicator	Citizen of the World	Growth Mindset	Healthy Body Healthy Mind
Our Core Values			
Independence	Happiness	Honesty	Kindness

When Ludlow Primary School was created in 2019 from the amalgamation of Ludlow Infant and Ludlow Junior School, we had the exciting opportunity to consider our school community's needs and create a curriculum specifically tailored for them.

We have devised four drivers that run through our school curriculum. They are tailored to our pupil's specific needs and take account of the opportunities and challenges in the context of our school community and our pupils' lives.

These join with our core values to help children explore and develop their programming skills, allowing them to discuss their coding creations as well as equip them with the skills required to become the computer programmers of the future.

What Computing looks like in our school:

▤ Opportunities to inspire children to explore computing using different skills and programs developed around the world.

▤ A variety of both discrete computing lessons using Purple Mash and cross curricular development of skills acquired.

▤ Children working individually, in pairs and groups to work on the different strands of the computing curriculum.

▤ Exciting and enjoyable practical lessons to engage children and foster their curiosity about computing.

▤ A progression of the key computing skills used across the school.

This is our philosophy:

▤ Children learning through exploring different programs and techniques whilst acquiring and developing their own skills.

▤ Children developing an awareness of different techniques used in various programs and computing designs and building up a knowledge of how to incorporate this learning into their own computing creations.

▤ High quality modelling, scaffolding and discussion of different skills and techniques leading to children recreating high quality programs, coding spreadsheets etc.

This is the knowledge and understanding gained at each stage:

By the end of EYFS pupils will:

▤ Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

## By the end of Key Stage 1 pupils will:

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

By the end of Key Stage 2 pupils will:

Pupils should be taught to:

- ⊟ design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- ⊟ use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- ⊟ use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- ⊟ understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration
- ⊟ use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- ⊟ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- ⊟ use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact
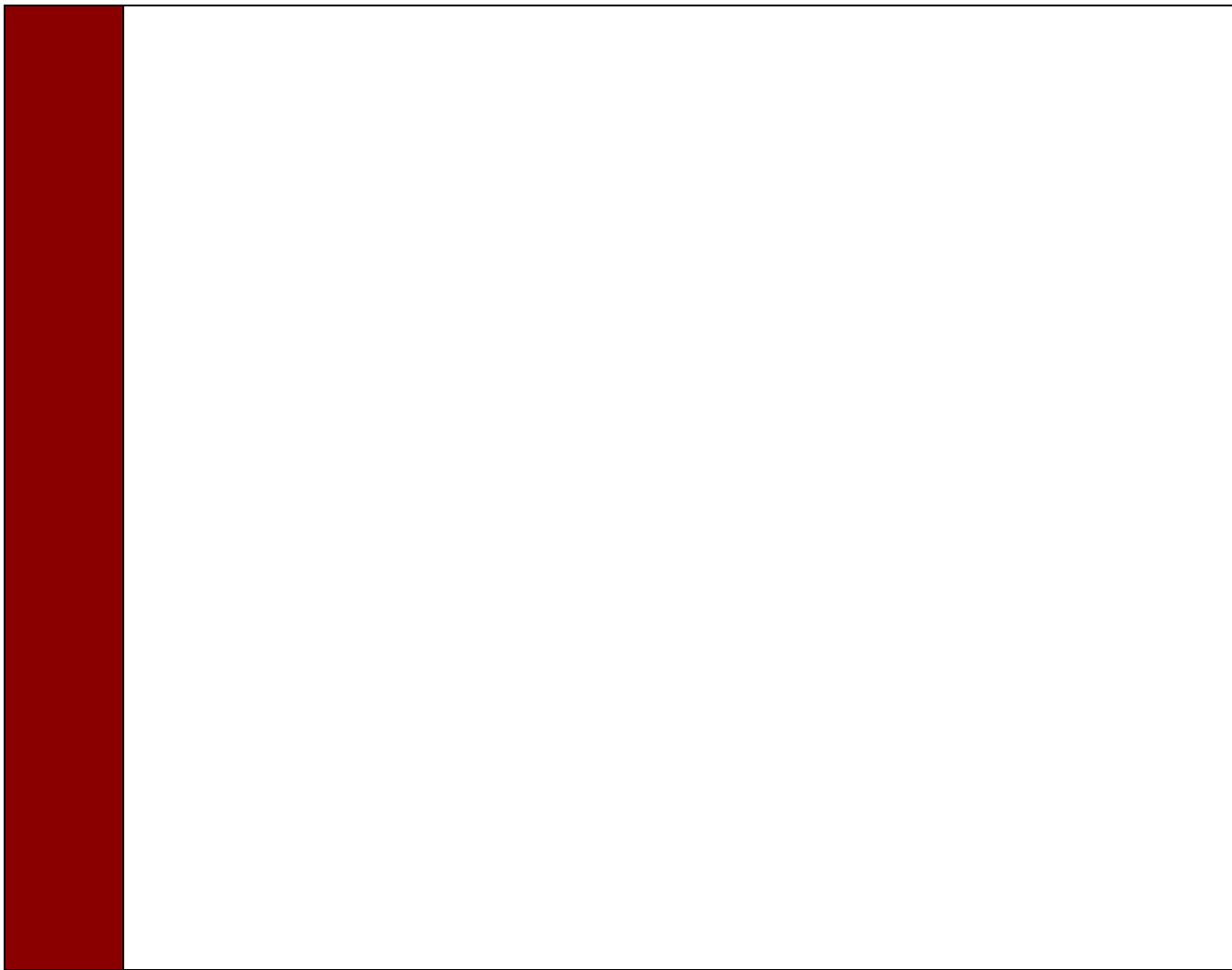
This is how it works:

- Computing and internet safety are provided as a discrete lesson using the Purple Mash program focusing on showing a progression of skills acquired and developed. The new skills which are acquired can then be used to support learning across the curriculum.
- These skills are revisited repeatedly through a range of themes during children's time in school to ensure the learning is embedded and skills are successfully developed.
- By the time the children leave Year 6, they will have explored and discussed a range of different skills needed to code, create spreadsheets or animations etc. The children will then have a chance to recreate and reimagine these into their own computing designs.
- Where appropriate, links will be made across the curriculum to create a more deep and meaningful computing education.

This is what adults do:

- Plan inspiring, progressive lessons which work on developing or acquiring skills across the computing curriculum.
- Create a positive learning environment where children feel comfortable discussing and sharing their own and others work and suggesting positive feedback and ways to improve.
- Regular monitoring of progress, listening to pupil feedback and planning audits.
- Raising the profile of computing within the school using computing skills across the curriculum and running extra-curricular coding/computing clubs.

This is how we support:

- Work might be differentiated so that all children are able to meet the learning objective in activities suitable to their own individual needs.
- Offering a range of equipment and resources so that all children can make progress during a lesson e.g. computing crash courses.
- Small group/1:1 adult support given where required.
- We use teacher and self-assessment to quickly identify any child who requires additional support developing specific skills.
- These pupils will then receive additional support or resources to use in order for them to successfully meet the learning objective.
- Purple Mash computing crash courses can be used to reteach any content children may need additional support with.

This is how we challenge:

- Lessons will be differentiated.
- Additional activities to stretch the learning within the lesson and further develop certain skills or techniques.

This is how ensure all children can access the curriculum:

- Children who have SEN or EAL needs are introduced to specific subject relevant language prior to the lesson.
- Seating children alongside good role models to support one

another or working in groups to enable children to discuss their processes and programming.

- By providing equipment and resources relevant to each individual child, e.g. crash courses, relevant vocabulary necessary understanding the process, support from an adult etc.

This is what you might typically see:

- Happy and engaged learners.
- Children posing questions about the computing curriculum which they want to research.
- A range of different activities including practical lessons, research lessons, showcase of inventions and evaluations of designs.
- Children able to self-reflect on their progress, finding both areas of success and evaluating areas of possible improvement.
- Confident children who are willing to persevere with skills they are developing.

This is how we know how well our pupils are doing:

- Feedback from teachers and peers.
- Monitoring of progress.
- Book scrutiny, pupil perceptions and planning audits.
- Targeting both Teacher and TA support during lessons to ensure progress of all children.

This is the impact of the teaching:

- Children who enjoy computing.
- Children who can confidently discuss their learning and progress in computing.
- Reflective learners.
- Children who are able to showcase their developing skills across the computing curriculum.
- Children who are prepared to share the learning they have acquired in a variety of ways.
- When children leave our school, they will be safe and competent users of computing technology with a solid understanding of how technology works.
- Children will have developed skills to enable them to express themselves and be creative in using digital media and be equipped to apply their skills in Computing to different challenges moving forward.

What is Cultural Capital?

Cultural Capital can be defined as powerful knowledge. Knowledge is one of the key ingredients a child will draw upon to be successful in society, their career and the world of work.

Cultural Capital gives a child power. It helps them to achieve goals, become successful and rise up the social ladder without necessarily having wealth or financial capital.

In Computing, this powerful knowledge can be split into two categories: powerful subject knowledge and powerful personal knowledge.

Powerful Subject Knowledge

- The computing curriculum

- The Online Safety curriculum, including elements of privacy and security, online bullying, and online relationships.

- The knowledge of how and why children need to understand the elements of staying safe online.

- Knowledge of important discoveries and inventions in the field of computing and their importance on society.

Powerful Personal Knowledge

- Online safety policies and provision.

- Understanding what opportunities are available to children outside of school which they enjoy and participate in to allow children to become life-long learners.

- Extra-curricular clubs related to computing and online safety.

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SMSC links in Computing at Ludlow Primary School

Spiritual, Moral, Social and Cultural (SMSC) development is the over-arching umbrella that encompasses personal development across the whole curriculum. In computing at Ludlow Primary School, links to SMSC are made across the curriculum and lessons to create a child centred approach to learning the computing skills and knowledge.

Spiritual

- Pupils use imagination and creativity to design and create their own programs.
- Reflecting on their own designs and creations and those of their peers.
- Questioning pupils throughout the lessons – Why, What, Where and How?
- Letting children explore and discover their own learning within the computing curriculum.

Moral

- Promoting paired/group work in lessons.
- Respect the equipment when using and placing back into the trolleys.
- Listening to and valuing the feedback from both teachers and peers.
- Recognising that the internet and computing programs can have both positive and negative effects.

Social

- Creating a sense of community in both lessons and extra-curricular clubs.
- Encourage pupils to both recognise and respect social differences and similarities.
- Encouraging extra-curricular activities.
- Promoting group work in lessons.
- Encouraging discussion throughout the computing and online safety curriculum.
- Provide opportunities for peer mentoring within lessons.

Cultural

- Consider the history behind the topics studied e.g. the history of the world wide web.
- Use examples of different computer scientists and their achievements.
- Link learning back to examples of where this could be used in the 'real world'.
- Consider the careers that could be accessed from the learning children are gaining.
- National computing and internet safety events are acknowledged.