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**Our Vision**

At Montreal, we are committed to delivering a high-quality computing education which equips children to understand the digital world by using computational thinking and creativity. Computing is taught across the ‘four golden threads’ which ensure the children at Montreal grow up to understand technology, recognise its potential and limitations, know how to use it safely and are able to take advantage of technology and their tools to create their own digital content. The ‘four golden threads’ are digital technology, digital programming, digital safety and digital creativity.

By the time children leave Montreal we want every child to have the knowledge to be able to thrive in an ever-increasing digital world. We want all of our children to be know the amazing opportunities that technology can provide for us but also the risks, so that the children are equipped to safeguard themselves in this area. We want every child to be able to understand the core of computing, computer science and to be able to use information technology ensuring they are ‘digitally literate’ so that all children are able to use and express themselves and develop their ideas through information and communication technology. This ensures they are prepared for the future workplace and can be an active participant in the digital world.

**Our Aims**

* For children to understand the fundamental aspects of computer science, building children confidence in logic, algorithms, data representation and abstraction.
* For children to be creative and use technology to create their own digital content responsibly.
* For children to recognise the benefits and risk of technology and using technology safely as well as applying strategies to stay safe online.
* To enable children to use a range of technology across the curriculum, transferring computing knowledge to all subjects.
* To enable children to be able to solve problems and analyse problems in computational terms.
* To provide children with skills needed to navigate an increasingly digital world.

**Early Years**

In Early Years, computing is embedded within the Early-years foundation stage framework. Technology plays a key role in all areas of children’s development especially now with more and more technology being used everyday. Technology helps children to make sense of the world around them and their life experiences. This is also where children’s journey to becoming ‘digitally literate’ begins as technology supports children’s early communication, language and literacy. It is essential for out children to begin learning about technology at this age due to the important role technology has in the world we live in as well as our children being exposed to this technology both in and out of school and therefore need to know how to stay safe from and early age. Children at this stage are introduced to the iPad and are taught basic skills on how to use it both functionally and creativity as well as safely, they are also introduced to coding through ScratchJr. The children have access to a wide range of technology at Montreal and are encouraged to use it safely, responsibly and creatively. These include iPads, interactive whiteboards and BeeBots, using these throughout the school week allows children to explore technology through play. Children also use a variety of apps and videos to enhance their learning, which they use more independently as their confidence increases.

**Key Stage 1**

In Key Stage 1, our children build on the knowledge they have acquired in the Early Years Foundation Stage. They build on their knowledge of how to be creative with technology and develop their skills on how to make their own digital content by looking at things such as patterns, shapes, stories, lighting, shadows and photography. They learn the basics of coding through both Everyone can Code and SratchJr including how to use computational thinking, how to debug and a how to create an algorithm, they do this through creating quizzes, actions and sequences. Children also develop further knowledge on technology, data and information such as grouping data and looking at all the technology around us. They also learn the importance of online safety, which is a big focus through all year groups, and how to stay safe online including the dangers of the internet at an age-appropriate level. This includes safe sharing of information online, how to report inappropriate behaviour, what to do if something is making them feel uncomfortable and how to search and use the internet effectively and safely to enhance their learning.

**Key Stage 2**

As children enter Key Stage 2 they should already obtain a basic knowledge of computing and have a secure foundation of skills that are ready to be build upon, developed and refined. They use a range of programmes in order to create different things such as movies, infographics, stories and even podcasts. The children are also encouraged to sue their computational thinking to further create more complex algorithms whilst debugging and solving problems along the way, they do this through creating their own quizzes, commands, games and app design. Online safety continues to be at the forefront of learning and children learn the importance of a positive digital footprint, how to behave online, good choices when online, how to spot fake information, sharing information as well as safe passwords and settings. They will also learn about the responsibility of using technology and the consequences of online behaviour that is not acceptable.

### Enrichment

Our ­­­­­­computing curriculum is enhanced with banks of iPads in each classroom, easily accessible and the use of the CUSP iPad Unity curriculum. We use technology across the curriculum and link to many other subjects such as maths, science and history. We regularly encourage children to partake in their own research both in school and out of school using technology to enhance their learning. We have an iPad club that runs each week after school which gives children the opportunity to further explore technology and what technology has to offer. Through BrightStars children are able to use technology to promote and create a social enterprise giving children another opportunity to use technology in real world situations and allow children to have a greater understanding of how technology is used in the world and how it works. The whole school will also celebrate ‘Safer Internet Day’ and ‘Anti-bullying week’ which allows discussions on staying safe online and appropriate online behaviour. At Montreal we also participate in KidSafe which has aspects that focus on sating safe online and age appropriate games and films online. Giving children the confidence to know what is right and wrong for both themselves and other online and give them the skills to safeguard themselves.

### Curriculum Overview

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| **Montreal CoE Primary School** |
| Subject | Autumn Term 1 | Autumn Term 2 | Spring Term 1 | Spring Term 2 | Summer Term 1 | Summer term 2 |
| Reception | Early Learning Goals: All 7 Areas of the curriculum) |
| **Creativity** Everyone can create: People and Things | **Programming**Everyone can code early learners: Commands | **Safety**Online safety:Smartie the Penguin | **Programming**ScratchJr: Building Blocks to make animations | **Technology**Introduction to iPad | **Creativity** Everyone can create: Share a Story |
| Year one | **Creativity** Everyone can create: Light and Shadows in Photography | **Programming**Everyone can code early learners: Functions and loops | **Safety**Online safety: Smartie the Penguin | **Programming**ScratchJr:Creating a Quiz | **Technology**Data and information – Grouping Data | **Creativity** Everyone can create: Patterns and Shapes |
| Year Two | **Creativity** Everyone can create: Drawing People and Places  | **Programming**Everyone can code early learners: Variables and App Design | **Safety**Online safety:Smartie the Penguin | **Programming**ScratchJr:Musical Actions and Sequences  | **Technology**Technology all around us | **Creativity** Everyone can create: Photo Collages |
| Year Three | **Creativity** Everyone can create: Your First Movie | **Programming**Scratch: Using Loops and Repetition  | **Safety**Be internet Legends: Online Reputation, Passwords and Behaviour and Opinions and Differences : | **Programming**Scratch: Selection in Quizzes | **Technology**Data and information – branching databases | **Creativity** Everyone can create: Artistic adjectives  |
| Year Four | **Creativity** Everyone can create: Storyboards and Movie Pitch  | **Programming**Scratch: Using variables in a game  | **Safety**Be internet Legends: making good decisions online, being brave online and speak up and report it | **Programming**Everyone can Code: Commands and Functions.  | **Technology**Computer systems and networks: The internet  | **Creativity** Everyone can create: Infographics |
| Year Five | **Creativity** Augmented Reality: Ancient Greek Civilisation | **Programming**Everyone can code: For loops and variables | **Safety**Be internet Legends: Positive digital footprint, spotting fake information online and sharing, settings and passwords | **Programming**Everyone can code: Conditional code and types plus initialisation | **Technology**Data and information – flat file database | **Creativity** Everyone can create: Podcasts |
| Year Six | **Creativity** Everyone can create: Special effects in iMovie | **Programming**Everyone can code: Functions with parameters and Logical operators | **Safety**Be internet Legends: Relationships and being kind, refusing and reporting and handling and reporting mean behaviour | **Programming**Everyone can code: While Loops and Arrays and Refactoring | **Technology**Computer Systems and networks – communication and networks | **Creativity** Everyone can create:Year 6 short film |