Amberley Parochial School

Providing the rich soil that enables
our children to develop deep roots and flourish.

Immersion Curriculum: Year 1/2
Cycle B

At Amberley, each unit of Computing aims to give our pupils the life-skills that will enable them to embrace and utilise new technology in a socially responsible and safe way in order to flourish.

Intent:

For our pupils to gain the skills to:

- be able to operate in the 21st century workplace and to know the career opportunities that will be open to them if they study computing
- to become autonomous, independent and safe users of computing technologies, gaining confidence and enjoyment from their activities
- to support learning across the entire curriculum and ensure that our curriculum is accessible to every child
- to develop creativity, resilience and problem-solving and critical thinking skills

Focus	Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1
Computing Systems and Networks Technology Around Us **Duration:** Term 1 — **Cycle:** B **Making it real** **Ada Lovelace & Charles Babbage** Famous for being the first people to programme a machine	• Recognise the uses and features of information technology at home and beyond school. • Explain how information technology benefits us. • Identify a computer and its main parts. • Use a mouse in different ways. • Use a keyboard to type. • Use the keyboard to edit text. • Understand how to use information technology responsibly and safely. • Recognise that choices are made when using information technology. **Ongoing:** <u>Managing Online Information</u> • Use the internet to find things out. • Use keywords in search engines. • Describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened. • Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). • Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri). • Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • Explain why some information I find online may not be true. <u>Privacy and Security</u> • Recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school). • Explain why I should always ask a trusted adult before I share any information about myself online. • Explain how passwords can be used to protect information and devices. <u>Copyright and Ownership</u> • Explain why work I create using technology belongs to me. • Save my work so that others know it belongs to me (e.g. filename, name on content). • Recognise that content on the internet may belong to other people.	**Pupils should be taught to:** • Recognise common uses of information technology beyond school • Use technology purposefully to create, organise, store, manipulate and retrieve digital content • 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. **Education for a Connected World:** (non-statutory guidance) <u>Self-Image and Identity</u> • Recognise that there may be people online who could make me feel sad, embarrassed or upset. • Give examples of when and how to speak to an adult I can trust if something happens that makes me feel sad, worried, uncomfortable or frightened • Explain how other people's identity online can be different to their identity in real life. • Describe ways in which people might make themselves look different online. • Give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help. **Key Vocabulary:** technology, computer, digital device, desktop, laptop, mouse/trackpad, keyboard, screen, scroll, click, drag, double-click, click and drag, screen, monitor, keyboard, login, password, internet, connection, input device, shift, space bar, safely, responsibly Appropriate vocabulary will be selected from this list based on content.

Focus		Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1
Creating Media Digital Writing		• Use a computer to write. • Add and remove text on a computer. • Identify that the look of text can be changed on a computer. • Make careful choices when changing text. • Explain why I used the tools that I chose. • Compare writing on a computer with writing on paper.	**Pupils should be taught to:** • Recognise common uses of information technology beyond school. • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • 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.
Duration	**Cycle**		
Term 2	B	**Ongoing:** Managing Online Information • Use the internet to find things out. • Use keywords in search engines. • Describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened. • Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). • Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri). • Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • Explain why some information I find online may not be true. Privacy and Security • Recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school). • Explain why I should always ask a trusted adult before I share any information about myself online. • Explain how passwords can be used to protect information and devices. Copyright and Ownership • Explain why work I create using technology belongs to me. • Save my work so that others know it belongs to me (e.g. filename, name on content). • Recognise that content on the internet may belong to other people.	**Education for a Connected World:** (non-statutory guidance) Online Relationships • Explain why it is important to be considerate and kind to people online. • Use the internet to communicate with people I don't know well (e.g. email a pen-pal in another school/ country). • Give examples of how I might use technology to communicate with others I don't know well
Making it real **Ada Lovelace & Charles Babbage** Famous for being the first people to programme a machine			**Key Vocabulary:** word processing, software, keys, keyboard, toolbar, image, insert, redo, undo, edit, select, highlight, letters, numbers, type, text, font, space, backspace, bold, italic, underline, cursor, create, organise, store, save, open, file, folder, personal information, technology, digital, internet, Appropriate vocabulary will be selected from this list based on content.

Focus	Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1
Creating Media Digital Painting **Duration** / **Cycle** Term 2 / B **Making it real** **Ada Lovelace & Charles Babbage** Famous for being the first people to programme a machine	• Describe what different freehand tools do. • Use the shape tool and the line tools. • Make careful choices when painting a digital picture. • Explain why particular tools have been chosen. • Use a computer to paint a picture independently. • Compare painting a picture on a computer and on paper. **Ongoing:** <u>Managing Online Information</u> • Use the internet to find things out. • Use keywords in search engines. • Describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened. • Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). • Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri). • Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • Explain why some information I find online may not be true. <u>Privacy and Security</u> • Recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school). • Explain why I should always ask a trusted adult before I share any information about myself online. • Explain how passwords can be used to protect information and devices. <u>Copyright and Ownership</u> • Explain why work I create using technology belongs to me. • Save my work so that others know it belongs to me (e.g. filename, name on content). • Recognise that content on the internet may belong to other people.	**Pupils should be taught to:** • Recognise common uses of information technology beyond school. • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • 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. **Education for a Connected World:** (non-statutory guidance) (Term 3) <u>Online Bullying</u> • Describe how to behave online in ways that do not upset others and can give examples. • Give examples of bullying behaviour how it can make someone feel and how it could look online. • Talk about how someone can/would get help about being bullied online or offline. **Key Vocabulary:** create, organise, store, save, open, file, folder, personal information, technology, digital, internet, software, toolbar, tools, image, inset, redo, undo, edit, select, shape/ line, fill, paint program, paintbrush, erase, primary colours, Appropriate vocabulary will be selected from this list based on content.

Focus		Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1
Programming A Moving a robot		• Explain that a series of commands can be joined together to form a sequence (known as an algorithm). • Explain that a sequence of commands has a start and an outcome. • Use an algorithm to create a program. • Choose a command for a given purpose. • Explain what happens when we change the order of instructions. • Identify the effect of changing a value. • Use logical reasoning to predict the outcome of a program (series of commands). • Explain that programming projects can have code and artwork. • Design an algorithm. • Create and debug a program. **Ongoing:** <u>Managing Online Information</u> • Use the internet to find things out. • Use keywords in search engines. • Describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened. • Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). • Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri). • Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • Explain why some information I find online may not be true. <u>Privacy and Security</u> • Recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school). • Explain why I should always ask a trusted adult before I share any information about myself online. • Explain how passwords can be used to protect information and devices. <u>Copyright and Ownership</u> • Explain why work I create using technology belongs to me. • Save my work so that others know it belongs to me (e.g. filename, name on content). • Recognise that content on the internet may belong to other people.	**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. **Education for a Connected World:** (non-statutory guidance) <u>Health, Well-Being and Lifestyle</u> • Explain simple guidance for using technology in different environments and settings. • Say how those rules/guides can help me.
Duration	**Cycle**		
Term 4	B		
Making it real			**Key Vocabulary:** plan, algorithms, sequence, instruction, predict, program, debug, fix, errors, spot, forwards, backwards, left, right, turn, clear, go, commands, directions, route Appropriate vocabulary will be selected from this list based on content.
 Ada Lovelace & Charles Babbage Famous for being the first people to programme a machine			

Focus	Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1
Data and Information Grouping data **Duration**: Term 5 **Cycle**: B **Making it real** **Ada Lovelace & Charles Babbage** Famous for being the first people to programme a machine	• Recognise that we can count, compare and label objects. • Select objects by attribute and make comparisons according to their descriptions and properties. • Explain that we can present information using pictures or a computer. • Answer questions about groups of objects. **Ongoing**: <u>Managing Online Information</u> • Use the internet to find things out. • Use keywords in search engines. • Describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened. • Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). • Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri). • Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • Explain why some information I find online may not be true. <u>Privacy and Security</u> • Recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school). • Explain why I should always ask a trusted adult before I share any information about myself online. • Explain how passwords can be used to protect information and devices. <u>Copyright and Ownership</u> • Explain why work I create using technology belongs to me. • Save my work so that others know it belongs to me (e.g. filename, name on content). • Recognise that content on the internet may belong to other people.	**Pupils should be taught to:** • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Use technology safely and respectfully. **Education for a Connected World:** (non-statutory guidance) <u>Online Reputation</u> • Describe what information I should not put online without asking a trusted adult first. • Recognise and explain how information put online about me can last for a long time and could be copied. • Know who to talk to if I think someone has made a mistake about putting something online. **Key Vocabulary:** object, image, search, match, group, category, sort, arrange, compare, label, tick, cross, property/properties, feature, drag, drop, select, record Appropriate vocabulary will be selected from this list based on content.

Focus	Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1
Programming B Introduction to animation **Duration**: Term 6 **Cycle**: B **Making it real** **Ada Lovelace & Charles Babbage** Famous for being the first people to programme a machine	• Explain that a series of commands can be joined together to form a sequence (known as an algorithm). • Explain that a sequence of commands has a start and an outcome. • Use an algorithm to create a program. • Choose a command for a given purpose. • Explain what happens when we change the order of instructions. • Identify the effect of changing a value. • Use logical reasoning to predict the outcome of a program (series of commands). • Explain that programming projects can have code and artwork. • Design an algorithm. • Create and debug a program. **Ongoing:** <u>Managing Online Information</u> • Use the internet to find things out. • Use keywords in search engines. • Describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened. • Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). • Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri). • Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • Explain why some information I find online may not be true. <u>Privacy and Security</u> • Recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school). • Explain why I should always ask a trusted adult before I share any information about myself online. • Explain how passwords can be used to protect information and devices. <u>Copyright and Ownership</u> • Explain why work I create using technology belongs to me. • Save my work so that others know it belongs to me (e.g. filename, name on content). • Recognise that content on the internet may belong to other people.	**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. Consolidation of Digital Literacy content from **Education for a Connected World:** (non-statutory guidance) **Key Vocabulary:** Algorithms, sequence, series, instruction, command, predict, program, debug, fix, errors, spot, animation, sprite, value**,** Appropriate vocabulary will be selected from this list based on content.