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

**Immersion Curriculum: Year 1/2**
**Cycle A**

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- Information Technology Around Us | • Recognise the uses and features of information technology at home and beyond school.<br>• Explain how information technology benefits us.<br>• Identify a computer and its main parts.<br>• Use a mouse in different ways.<br>• Use a keyboard to type.<br>• Use the keyboard to edit text.<br>• Understand how to use information technology responsibly and safely.<br>• Recognise that choices are made when using information technology. | **Pupils should be taught to:**<br>• Recognise common uses of information technology beyond school<br>**Education for a Connected World:**<br>(non-statutory guidance)<br>Self-Image and Identity<br>• Recognise that there may be people online who could make me feel sad, embarrassed or upset.<br>• 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<br>• Explain how other people's identity online can be different to their identity in real life.<br>• Describe ways in which people might make themselves look different online.<br>• 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. |

| Duration | Cycle |
|---|---|
| Term 1 | A |

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.

**Making it real**



Study of Margret Hamilton (leading developer in NASA Apollo space programme)

**Key Vocabulary:**

Information technology (IT), computer, barcode, scanner/scan, digital devices,

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 |
|---|---|---|
| **Digital Media Making Music** | • Say how music can make us feel.<br>• Identify that there are patterns in music.<br>• Describe how music can be used in different ways.<br>• Show how music is made from a series of notes.<br>• Create music for a purpose.<br>• Review and refine our computer work. | **Pupils should be taught to:**<br>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content<br>**Education for a Connected World:**<br>(non-statutory guidance)<br>Online Relationships<br><br>• Explain why it is important to be considerate and kind to people online.<br>• Use the internet to communicate with people I don't know well (e.g. email a pen-pal in another school/ country).<br>• Give examples of how I might use technology to communicate with others I don't know well |

| Duration | Cycle |
|---|---|
| Term 2 | A |

**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.

**Making it real**



Study of Margret Hamilton (leading developer in NASA Apollo space programme)

**Key Vocabulary:**
pattern, notes, instrument, tempo, click, select, delete, weblink, edit, file, save, file type, open, app, software, digital,

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 Photography | • Know what devices can be used to take photographs.<br>• Use a digital device to take a photograph.<br>• Describe what makes a good photograph.<br>• Decide how photographs can be improved.<br>• Use tools to change an image.<br>• Recognise that images can be changed. | **Pupils should be taught to:**<br><br>• Use technology purposefully to create, organise, store, manipulate, and retrieve digital content |

| Duration | Cycle |
|---|---|
| Term 3 | A |

**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 Bullying

• 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:**
device, camera, photograph, capture, image, digital, landscape, portrait, horizontal, vertical, field of view, narrow, wide, framing, focal point, subject matter, field of view, format, compose, natural lighting, artificial lighting, flash, focus, background, foreground, editing, tools, colour, filter, images, effects, changed, real

Appropriate vocabulary will be selected from this list based on content.

**Making it real**



Study of Margret Hamilton (leading developer in NASA Apollo space programme)

| Focus | Milestone for end of Key Stage 1 (Year 2) | National Curriculum Objectives: By the end of the Key Stage 1 |
|---|---|---|
| **Programming A**<br>**Robot Algorithms** | • Explain that a series of commands can be joined together to form a sequence (known as an algorithm).<br>• Explain that a sequence of commands has a start and an outcome.<br>• Use an algorithm to create a program.<br>• Choose a command for a given purpose.<br>• Explain what happens when we change the order of instructions<br>• Identify the effect of changing a value.<br>• Use logical reasoning to predict the outcome of a program (series of commands).<br>• Explain that programming projects can have code and artwork.<br>• Design an algorithm.<br>• Create and debug a program. | **Pupils should be taught to:**<br>• Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.<br>• Create and debug simple programs.<br>• Use logical reasoning to predict the behaviour of simple programs.<br>**Education for a Connected World:**<br>(non-statutory guidance)<br><u>Health, Well-Being and Lifestyle</u><br><br>• Explain simple guidance for using technology in different environments and settings.<br>• Say how those rules/guides can help me. |

| Duration | Cycle |
|---|---|
| Term 4 | A |

**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.

| Making it real |
|---|
| <br>Study of Margret Hamilton (leading developer in NASA Apollo space programme) |

**Key Vocabulary:**
instruction, clear, unambiguous, algorithm, program, sequence, order, commands, prediction, artwork, design, route, mat, debug

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 |
|---|---|---|
| Data and Information Pictograms | • Recognise that we can count, compare and label objects.<br>• Select objects by attribute and make comparisons according to their descriptions and properties.<br>• Explain that we can present information using pictures or a computer.<br>• Answer questions about groups of objects.<br><br>**Ongoing:**<br><u>Managing Online Information</u><br>• Use the internet to find things out.<br>• Use keywords in search engines.<br>• 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.<br>• Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).<br>• Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri).<br>• Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.<br>• Explain why some information I find online may not be true.<br><br><u>Privacy and Security</u><br>• 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).<br>• Explain why I should always ask a trusted adult before I share any information about myself online.<br>• Explain how passwords can be used to protect information and devices.<br><br><u>Copyright and Ownership</u><br>• Explain why work I create using technology belongs to me.<br>• Save my work so that others know it belongs to me (e.g. filename, name on content).<br>• Recognise that content on the internet may belong to other people. | **Pupils should be taught to:**<br>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content.<br>• 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.<br><br>**Education for a Connected World:**<br>(non-statutory guidance)<br><u>Online Reputation</u><br><br>• Describe what information I should not put online without asking a trusted adult first.<br>• Recognise and explain how information put online about me can last for a long time and could be copied.<br>• Know who to talk to if I think someone has made a mistake about putting something online. |
| **Duration** / **Cycle**<br>Term 5 / A | | |
| **Making it real**<br><br><br><br>Study of Margret Hamilton (leading developer in NASA Apollo space programme) | | **Key Vocabulary:**<br>More than, less than, most, least, organise, data, object, tally chart, votes, total, enter, compare, objects, count, most, least, more common, least common, attribute, group, popular, common, block diagram, data, sharing<br><br>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<br>An introduction to quizzes | • Explain that a series of commands can be joined together to form a sequence (known as an algorithm).<br>• Explain that a sequence of commands has a start and an outcome<br>• Use an algorithm to create a program.<br>• Choose a command for a given purpose.<br>• Explain what happens when we change the order of instructions<br>• Identify the effect of changing a value.<br>• Use logical reasoning to predict the outcome of a program (series of commands).<br>• Explain that programming projects can have code and artwork<br>• Design an algorithm.<br>• Create and debug a program. | **Pupils should be taught to:**<br>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.<br>• Create and debug simple programs.<br>• Use logical reasoning to predict the behaviour of simple programs. |
| **Duration** / **Cycle**<br>Term 6 / A | **Ongoing:**<br>Managing Online Information<br>• Use the internet to find things out.<br>• Use keywords in search engines.<br>• 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. | Consolidation of Digital Literacy content from **Education for a Connected World:**<br>(non-statutory guidance) |
| **Making it real** | • Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).<br>• Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri).<br>• Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.<br>• Explain why some information I find online may not be true. | **Key Vocabulary:**<br><br>Sequence, command, program, run, start, outcome, predict, blocks, sprite, algorithm, blocks, design, actions, project, design, modify, change, match, compare, debug, features, evaluate |
| Study of Margret Hamilton (leading developer in NASA Apollo space programme) | Privacy and Security<br>• 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).<br>• Explain why I should always ask a trusted adult before I share any information about myself online.<br>• Explain how passwords can be used to protect information and devices.<br><br>Copyright and Ownership<br>• Explain why work I create using technology belongs to me.<br>• Save my work so that others know it belongs to me (e.g. filename, name on content).<br>• Recognise that content on the internet may belong to other people. | Appropriate vocabulary will be selected from this list based on content. |