



St Joseph's RC Voluntary Academy, Todmorden

Whole School Curriculum Map

Computing Cycle A

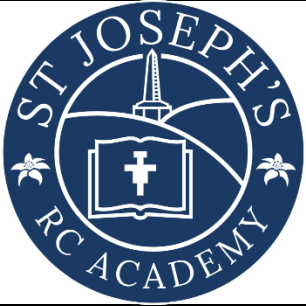
2024-2025



| Term | | Beech class | Cedar class | Elm class | Oak class |
|----------|--------------------------------|--|--|---|--|
| Autumn 1 | Unit | EYFS – set up continuous provision in your classroom | Y2 – Computing systems and networks 1 – What is a computer? | Y3 – Computing systems and networks 3 – Journey inside a computer | Y5 – Programming – Programming music sonic Pi |
| | National Curriculum Objectives | | Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Recognise common uses of information technology beyond school. | 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. | 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. 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. |
| Autumn 2 | Unit | EYFS Computing systems and networks – Using a computer | Y2 – Programming 2 – Programming Scratch Jr | Y3 – Programming – Programming Scratch | Y5 – Programming 2 – Micro: bit |
| | National Curriculum Objectives | Physical Development -Develop their small motor skills so that they can use a range of tools competently, safely and confidently. | 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. | 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. | 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. |
| Spring 1 | Unit | EYFS – Programming 1 – All about instructions | Y2 – Programming – Algorithms and debugging | Y3 – Computing systems and networks 2 - Emailing | Y5 – Creating media – Stop motion animation |
| | National Curriculum Objectives | <p>Communication and Language -Understand how to listen carefully and why listening is important. -Describe events in some detail. - Use talk to help work our problems and organise thinking and activities, and to explain how things work and why they might happen. Personal, Social and Emotional Development</p> <p>ELG: Self-Regulation> 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.</p> <p>ELG: Managing Self> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.</p> <p>ELG: Building Relationships> Work and play cooperatively and take turns with others.</p> <p>Physical Development -Know and talk about the different factors that support their overall health and wellbeing. -Further develop the skills they need to manage the school day successfully.</p> | <p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs.</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> | <p>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.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> | <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p> |
| Spring 2 | Unit | EYFS – Programming 2 – Programming Bee-Bots | Y2 – Data handling – International Space Station | Y3 – Computing systems and networks – Networks and internet | Y5 – Computing systems and networks – Search engines |
| | National Curriculum Objectives | <p>Personal, Social and Emotional Development</p> <p>ELG: Managing Self> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.</p> | <p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> | <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>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.</p> | <p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> |
| Summer 1 | Unit | EYFS – Computer systems and networks 2 – Exploring hardware | Y2 – Computing systems and networks 2 – Word processing | Y3 – Data handling – Comparison cards databases | Y5 – Data handling – Mars Rover 1 |
| | National Curriculum Objectives | <p>Personal, Social and Emotional Development</p> | <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> | <p>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</p> | <p>Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and</p> |

| | | | | | |
|----------|---------------------------------------|---|--|---|---|
| | | <p>ELG: Managing Self> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.</p> <p>Physical Development -Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</p> | <p>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.</p> | <p>that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> | <p>the opportunities they offer for communication and collaboration. 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.</p> |
| Summer 2 | Unit | EYFS – Data handling – Introduction to data | Y2 – Creating media – Stop motion | Y3 – Online safety | Y5 – Skills showcase – Mars rover 2 |
| | National Curriculum Objectives | <p>Communication and Language -Articulate their thoughts and ideas in well-formed sentences. -Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</p> <p>ELG: 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.</p> <p>ELG: Listening, Attention and Understanding> Make comments about what they have heard and ask questions to clarify their understanding.</p> <p>ELG: Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</p> | <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>Recognise common uses of information technology beyond school.</p> <p>Y2 – Online safety</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>Recognise common uses of information technology beyond school.</p> <p>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.</p> | <p>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.</p> | <p>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.</p> <p style="text-align: center;">Y5 – Online safety</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>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.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> |



St Joseph's RC Voluntary Academy, Todmorden
 Whole School Curriculum Map
 Computing Cycle B
 2023-2024



| Term | | Beech class | Cedar class | Elm class | Oak class |
|----------|--------------------------------|--|--|---|---|
| Autumn 1 | Unit | EYFS – set up continuous provision in your classroom | Y1 – Online safety | Y4 – Skills showcase - HTML | Y6 – Programming – Intro to Python |
| | National Curriculum Objectives | | 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. | 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. | 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. 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. |
| Autumn 2 | Unit | EYFS Computing systems and networks – Using a computer | Y1 – Computing systems and networks – Improving mouse skills | Y4 – Programming 2 – Computational thinking | Y6 – Skills showcase – Inventing a product |
| | National Curriculum Objectives | Physical Development -Develop their small motor skills so that they can use a range of tools competently, safely and confidently. | 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. | 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. 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. | 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 logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | 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. |
| Spring 1 | Unit | EYFS – Programming 1 – All about instructions | Y1 – Programming 1 – Algorithms unplugged | Programming 1 – Further coding with scratch | Y6 – Computing systems and networks – Bletchley Park |
| | National Curriculum Objectives | <p>Communication and Language -Understand how to listen carefully and why listening is important. -Describe events in some detail. - Use talk to help work our problems and organise thinking and activities, and to explain how things work and why they might happen. Personal, Social and Emotional Development</p> <p>ELG: Self-Regulation> 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.</p> <p>ELG: Managing Self> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.</p> <p>ELG: Building Relationships> Work and play cooperatively and take turns with others.</p> <p>Physical Development -Know and talk about the different factors that support their overall health and wellbeing. -Further develop the skills they need to manage the school day successfully.</p> | <p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs.</p> | <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> | <p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>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.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> |
| Spring 2 | Unit | EYFS – Programming 2 – Programming Bee-Bots | Y1 – Programming 2 – Programming Bee-Bot | Y4 – Data handling – Investigating weather | Y6 – Data handling – Big data 1 |
| | National Curriculum Objectives | <p>Personal, Social and Emotional Development</p> <p>ELG: Managing Self> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.</p> | <p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs.</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> | <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p> <p>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</p> | <p>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 .</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create</p> |

| | | | | | |
|----------|--------------------------------|---|--|--|---|
| | | | | 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. | 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. |
| Summer 1 | Unit | EYFS – Computer systems and networks 2 – Exploring hardware | Y1 – Data handling – Introduction to data | Y4 – Computing systems and networks – Collaborative learning | Y6 – Online safety |
| | National Curriculum Objectives | <p>Personal, Social and Emotional Development ELG: Managing Self> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.</p> <p>Physical Development -Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</p> | Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Recognise common uses of information technology beyond school. | 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. | 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. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. |
| Summer 2 | Unit | EYFS – Data handling – Introduction to data | Y2 – Computing systems and networks 1 – What is a computer? | Y4 – Creating media – Website design | Y6 – Creating media – History of computers |
| | National Curriculum Objectives | <p>Communication and Language -Articulate their thoughts and ideas in well-formed sentences. -Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</p> <p>ELG: 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.</p> <p>ELG: Listening, Attention and Understanding> Make comments about what they have heard and ask questions to clarify their understanding.</p> <p>ELG: Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</p> | Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Recognise common uses of information technology beyond school. | 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. | 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. 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. |
| | | | | <p>Y4 – Online Safety</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> | |

| | | | | | |
|--|--|--|--|--|--|
| | | | | Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | |
|--|--|--|--|--|--|