Subject Sequence - Computer Scientist

Become digitially literate and develop computational thinking and creativity to understand and change the world

Sonar Curriculum

E-Safety

- Use technology safely and respectfully, keeping personal information private
- Identify where to go for help and support when they have concerns
- Use technology safely, respectfully and responsibly
- Recognise acceptable/ unacceptable behaviour
- Identify a range of ways to report concerns about content and contact

Information Technology

- Recognise common uses of information technology beyond school
- Understand computer networks, including the internet
- Understand how they can provide multiple services, such as the World Wide Web
- Recognise the opportunities for collaboration and communication

Digital Literacy

- Use technology purposely to create, organise, store, manipulate and the retrieve digital content
- You searched technologies effectively and appreciate how results are selected and ranked
- Being discerning in evaluation 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 accomplished giving goals (including collecting, analysing, evaluating and presenting data and information)

Computer Science

- Understand what algorithms are and how they are implemented as programs on the digital devices
- Understand that program execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Design, write and debug programs that accomplish specific goals, including controlling 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/output
- Using logical reasoning to explain how some simple algorithms work
- Detect and correct errors in algorithms and programs

Juniper

E-Safety

Intent (Standardised Objectives)

Sonar Curriculum

Year 1

- Develop an understanding of how to use technology safely
- Know where to go for help/support when they have concerns about content/contact on internet

Year 2

- Use technology safely and respectfully, keeping personal information private
- Identify where to go for help/support when concerned about content/contact on internet/other online technologies

Year 3

- Use technology safely, respectfully and responsibly
- Recognise acceptable/unacceptable behaviour and identify ways to report concerns about content and contact

Year 4

- Recognise acceptable/unacceptable behaviour and identify ways to report concerns about content and contact

Year 5

- Confidently, competently and responsibly use information and communication technology

Year 6

- Confidently, competently and responsibly use information and communication technology

Juniper

Information Technology

Intent (Standardised Objectives)

Sonar Curriculum

Year 1

- Begin to recognise common uses of information technology beyond school

Year 2

- Recognise common uses of information technology beyond school

Year 3

- Show emerging understanding of computer networks including the internet and how they provide multiple services such as the World Wide Web
- Use some search technologies effectively and appreciate how results are selected
- Decide which questions to ask when using search engines

Juniper

Information Technology

Intent (Standardised Objectives)

Sonar Curriculum

Year 4

- Understand computer networks including the internet and how they provide multiple services such as the World Wide Web
- Use search technologies effectively and appreciate how results are selected and ranked
- Evaluate the reliability of digital content
- Begin to ask and answer questions based on the reliability of digital content

Year 5

- Recognise the opportunities computer networks offer for communication and collaboration
- Use a wide range of search technologies effectively and appreciate how results are selected and ranked
- Be discerning in evaluating the reliability of digital content

Year 6

- Use the opportunities computer networks offer for communication and collaboration
- Appreciate how results are selected and ranked and use this to retrieve accurate content
- Be discerning in evaluating the reliability of digital content

Juniper

Digital Literacy

Intent (Standardised Objectives)

Sonar Curriculum

Year 1

- Use technology to create, store and retrieve digital content

Year 2

- Use technology purposefully to create, store, retrieve, organise and manipulate digital content

Year 3

- Use a variety of software on digital devices

Year 4

- Select and use a variety of software on digital devices

Year 5

- Express own ideas by selecting, using and combining a variety of software on digital devices to design and create programs

Year 6

- Express own ideas by selecting, using and combining a variety of software on a range of digital devices and create programs

Juniper

Computer Science

Intent (Standardised Objectives)

Sonar Curriculum

Year 1

- Begin to develop an understanding of algorithms
- Begin to understand that programs work by following instructions
- Create simple programs and begin to debug them
- Develop reasoning to predict the behaviour of simple programs

Year 2

- Understand what algorithms are
- Understand how algorithms are implemented as programs on digital devices
- Understand that programs execute by following precise and unambiguous instructions
- Use logical reasoning to predict the behaviour of simple programs
- Create and debug simple programs

Year 3

- Start to use reasoning to understand how algorithms work
- Detect errors in algorithms and programs
- Begin to solve problems by decomposing them into smaller parts
- Start to use sequence and selection in programs
- Begin to develop understanding of how to write and debug programs that accomplish specific goals, including controlling or simulating physical systems
- Begin to work with various forms of input/output

Juniper

Computer Science

Intent (Standardised Objectives)

Sonar Curriculum

Year 4

- Use logical reasoning to understand how algorithms work
- Detect and correct errors in algorithms and programs
- Start to use sequence, selection and repetition in programs
- Write and debug programs that accomplish specific goals, including controlling or simulating physical systems
- Begin to solve problems by decomposing them into smaller parts
- Work with variables and various forms of input/output

Year 5

- 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
- Accurately manipulate variables and various forms of input/output
- Use logical reasoning to understand how algorithms work and detect and correct errors in algorithms and programs

Year 6

- 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 accurately in programs
- Accurately manipulate a wide range of variables and various forms of input/output
- Securely use logical reasoning to understand how algorithms work and detect and correct errors in algorithms and programs

Juniper