Progression of skills and knowledge: COMPUTING						
INTENT	To be able to use computer technology to improve their understanding of a computerised world. To be able to remain safe and use technology and the information it provides in an appropriate manner. To be able to use computer technology across the curriculum in a confident and creative manner. To provide pupils with an understanding of technology that allows them to build, have the confidence to explore and be active in a digital world. Using Herts Computing Scheme from Reception allows the children to build and become familiar with technologies within the School.					

Ongoing skills

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1. To recognise a range of technology is used in places such as homes and schools. 2. To share their experiences of technology and engage in conversations about how to use it. 3. To use a range of simple devices and applications appropriately	1. Recognise uses of information technology both within and beyond school. 2. Use an extended range of devices 3. To develop typing skills through regular use of Keyboards, mouse, keypad and	1. Recognise uses of information technology both within and beyond school. 2. Use an extended range of devices 3. To develop typing skills through regular use of Keyboards, mouse, keypad and touch screens and	1. Develop understanding of how a computer and technology works, focusing on computational thinking. 2. To develop confidence in using a range of devices and to justify their choice for a specific purpose. 3. Develop understanding of shared documents. To be able to create, contribute	1. Develop understanding of how a computer and technology works, focusing on computational thinking. 2. To develop confidence in using a range of devices and to justify their choice for a specific purpose. 3. Develop understanding of shared documents. To be able to create, contribute to and edit	1. Continue to develop computational thinking in different aspects of the curriculum. 2. To be able to justify their choice of technology or computational software.	1. Continue to develop computational thinking in different aspects of the curriculum. 2. To be able to justify their choice of technology or computational software.

with increasing independence. 4. To select and use technology for a particular purpose. 5. To use various keyboards (onscreen and physical), increasingly able to locate and type letters and numbers.	touch screens and games.	games.	to and edit these documents being aware that that they are visible to all users. 4. To build on developingtyping speed.	these documents being aware that that they are visible toall users. 4. To build on developingtyping speed.		

Progression of skills and knowledge: COMPUTING

Computer science – Programming Skills – using a range of programming software and external output devices involving real world situations, games and quizzes.

Reception	Year 1	Year 2	Years 3	Year 4	Year 5	Year 6
1. To complete a simple program on a computer.	1. To combine commands to make a sequence in order to create, test and debug a simple program.	1. To understand the need for clear and unambiguous instructions in order to reach a desired outcome.	1. To explore ways of starting a program and apply principles of design to create a project	1. To explore the need for accuracy in programming	1. To use computer programming to control outputs.	1. To understand how variables can enhance a program.
2. To use computing hardware to interact with age appropriate software.	2. To join a series of commands together to create and run a program	2. To know that program can contain codes, algorithms, artwork and audio	2. To implement an algorithm as a code	2. To use text based language to create, implement and debug an algorithm	2. To design a program to control external outputs in a sequence of actions.	2. To use variables within their algorithms.
3. To know that technology can make things happen and to coordinate actions accordingly – eg click on icon, touch screen, use a mouse	3. To combine a test the effectiveness of their algorithms within a program.	3. To design, create, debug and evaluate the effectiveness of a program.	3. To create, adapt and develop a program across different contexts and with multiple features.	3. To use a range of more complex instructions in their algorithms.	3. To create, test, implement, debug and evaluate an algorithm against a design related to real world programming.	3. To create a program to run on a controllable device
4. To select and use technology for a particular purpose.						4. To control the flow of program with directed statements

Progression of skills and knowledge: COMPUTING

Computer science – Data and Information – collecting and presenting data in graphs and charts; databases; data logging; spreadsheets.

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1. To know that information can besaved onto and retrieved from computers 2. To explore simple programs where theycan input and view data in a range of ways – text, image	1. To understand that computers need to be given instructionsto perform tasks. 2. To understand that computers can group, sort and present information.	1. To know what data is. 2. To collect, input andpresent data on a computer. 3. To be able to presentthe same data in a variety of ways.	1. To know that a branching databasecan be used to separate objects/data 2. To create a branching databaseto separate data. 3. To understand that different information needs to be presented in differentways	1. To know that data can be collected over time and used to answer questions. 2. To be able to use adigital device to collect data automatically, overtime. 3. To use collected datato answer questions	1. To know that data can be organised into records and held on a database. 2. To create a databaseon which to collect and store data. 3. To search, sort, order and answer questions about datacollected. 4. To create graphs andcharts from their data.	1. To know that a spreadsheet can produce calculated data using a formula. 2. To be able to organise data to create a data set withapplied formulae. 3. To use a spreadsheet to answer questions, create graphs and make comparisons.

Progression of skills and knowledge: COMPUTING

Information technology - understanding computers and networks

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1. To select and use technology for particular purposes. 2. To create a piece of digital work (image or text) and save it. 3. To know that technology can be used to find out about things. 4. To know that technology can be used to communicate with others.	1. To know that technology can help us. 2. To be familiar with the different components of a computer. 3. To develop their keyboard and mouse skills	1. To know that technology is used at home, school and the wider community 2. To suggest how technology improves our world. 3. To explore the idea of a network and relate to logging on, saving and retrieving files.	1. To begin to understand how digital devices function. 2. To explain components of a network and how they are connected. 3. To understand the benefits of a digital network.	1. To understand that the internet is a series of networks. 2. To know that the World Wide Web is part of the internet 3. To know how to evaluate online content for honesty, accuracy and reliability.	1. To understand how information is transferred between systems and devices. 2. To explore and explain a variety of real-world systems. 3. To complete a collaborative online project	1. To know that the World Wide Web is a communication tool. 2. To explain how search engines work. 3. To investigate and evaluate different methods of internet-based communication.

Progression of skills and knowledge: COMPUTING

Digital literacy – Creating Media – Digital Art; Digital Writing; Digital Photography; Music and audio editing; Animation and video editing; Desktop Publishing; 3DModelling; Web page creation.

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1. To select and use technology for particular purposes.(ELGs)	1. To use a range of tools to create andedit digital art.	1. To know that different devices canbe used to capture a photograph.	1. To create stop frameanimation that includes music and text.	1. To be able to identifyinput and output devices used in audio.	1. To use drawing toolsin a range of ways to produce different outcomes.	1. To compare 2D and3D graphics.
2. To explore how technology can beused to create and capture writing, drawing, pictures, sound and video	2. To create text and to manipulate it with changes in font and capitalisation.	2. To recognise thatimages can be changed.	2. To use a range of tools to edit and improve a document.	2. To know how to open, create and save audio files.	2. To be able to create more complex vector images by combininglayers of shapes or pixels.	2. To construct a digital3D model of a physical object.
3. To explore digitaltexts	3. To become confidentin using a keyboard and mouse.	3. To know how to capture, edit and improve photos.	3. To use publishing software to create a document with careful considerationto layout and style.	3. To show how a digital image can be changed in a range of ways, resaved and reused.	3. To use digital deviceand linked software to capture, edit and manipulate video.	3. To design, develop and improve a digital 3D model.
4. To discuss similarities and differences in using digital and non-digitalmedia and share what they have discovered.	4. To explore digitaltexts.	4. To use a computer to create a musical pattern	4. To explain how publishing is used inthe real world.		4. To evaluate different features of an effective video and identify how to improve through	4. To review the purpose and effectiveness of different web pages.
						5. To identify and suggest different features to be usedon their web page.
						6. To explain the implication

					reshooting and editing.	s of ownership and copyright

Progression of skills and knowledge: COMPUTING

Online safety

Reception	Years 1	Year 2	Year 3	Year 4	Year 5	Year 6
1. To be able to say who to tell if something they see makes them worried or uncomfortable. 2. To understand they should ask permission when capturing an image or recording a sound of others. 3. To take sensible pictures.	1. Develop e-safe practices. 2. Use technology safely and respectfully. 3. Understand the need to keep personal information safe and private. 4. Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 5. Understand the need to check their research results.	1. Develop e-safe practices. 2. Use technology safely and respectfully. 3. Understand the need to keep personal information safe and private. 4. Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 5. Understand the need to check their research results.	1. Use technology safely, respectfully and responsibly. 2. Understand the importance of keeping personal information safe and private. 3. Identify a range of ways to report concerns about content and contact. 4. To recognise safe websites and know the signs of an unsafe website. 5. Respect copyright and ownership.	1. Use technology safely, respectfully and responsibly. 2. Understand the importance of keeping personal information safe and private. 3. Identify a range of ways to report concerns about content and contact. 4. To recognise safe websites and know the signs of an unsafe website. 5. Respect copyright and ownership.	1. Recognise what acceptable/unacceptable behaviour may look like across the use of a range of devices. 2. Understand the importance of keeping personal information safe and private. 3. Identify a range of ways to report concerns about content and contact. 4. To apply copyright rules in their work	1. Recognise what acceptable/unacceptable behaviour may look like across the use of a range of devices. 2. Understand the importance of keeping personal information safe and private. 3. Identify a range of ways to report concerns about content and contact. 4. To apply copyright rules in their work

	6. Begin to respect copyright and ownership.	6. Begin to respect copyright and ownership.			