- **"The principle goal of education is to create men and women who are capable of doing new things, not simply repeating what other generations have done."** Jean Piaget

<u>Christian values underpinning learning:</u> To develop a life of faith in God and **respect** for the dignity of all human beings; to nurture **resilient** thinkers rather than mere reflectors of others' thoughts; to promote **compassion**, **co-operation** and **happiness** through loving service rather than selfish ambition; to ensure maximum development of each individual's potential; and to embrace all that is true, good, and beautiful.

<u>Intent</u>

The National Curriculum (2014) forms the basis for all subject teaching ensuring continuity and progression in an age-related curriculum. In addition, teachers make sure the content is relevant and stimulating. We believe that all children are entitled to receive a high-quality of education regardless of their needs or disabilities. Teachers will ensure that all pupils needs are identified and reviewed regularly, and that appropriate support is put in place. We work in collaboration with the children's parents, external agencies and other professionals to ensure that there is a collaborative approach to supporting our pupils with SEND. Teachers will provide a learning environment that is tailored to the needs of all pupils including those with additional needs. It is our intention that our children will be equipped with the skills needed to become independent learners, both inside and outside of the classroom. All pupils should expect to receive an education that enables them to achieve the best possible outcomes, and become confident, able to communicate their own views and ready to make a successful transition into secondary school and then adulthood.

Our computing curriculum has been developed because we believe that:

Children need to be able to be responsible, confident users and innovators of technology in order to participate safely in the digital world that they are growing up into and identify where to go for help and support if they have any concerns.

- Children need to be able to search effectively and evaluate digital content.
- Children can develop their problem solving skills using logical reasoning to explain how simple algorithms work and to investigate and correct errors.
- Children need to understand and experience how technology can be used for communication and collaboration in the wider world.
- Children need to be creators and have the opportunity to express themselves and their ideas using a range of software responsibly.
- Children should be confident to select and use a variety of software to design and create a range of programs and content to accomplish given goals.

Implementation

All pupils including those with SEND will be provided with high quality teaching and resources adapted to meet their individual needs. Where appropriate, pupils may be supported 1:1 or in a small group to enable them to access the curriculum.

- Computing will be taught weekly and links to class topics should be explored when appropriate. Opportunities for children to use technology across other areas of the curriculum should be planned where possible. It is essential that staff plan to ensure that content and skills are taught and that a progression of skills is evident across year groups. Children in Class One, Two and Three will have access to iPads and in Class Four, to MacBook Air laptops, so they can experience a range of devices to support the delivery of the Computing curriculum. We will be following the Twinkl Computing scheme of work, supported by Discovery Espresso Coding scheme. In KS2, we will also make use of schemes linked to Crumble Computers and BBC Micro bits. Children also have access to Bee Bots in Class 1 and 2.
- Underpinning our approach is a commitment to the teaching of how to use technology safely and respectfully. Learning and teaching within the computing curriculum empowers children to become digitally confident in their daily lives which helps to prepare them to become independent users of technology beyond the classroom.
- The teaching of computing will include learning how to use technology safely, respectfully and responsibly. We will teach children how to recognise acceptable and unacceptable behaviour and a range of ways that they can report concerns about contact and content on the internet or on other online technologies. We regularly teach the children how to stay safe online using online resources, including PSHE 'One Decision', Twinkl Computer Safety and CEOP Think U Know.
- Where appropriate, IT will be used to support children who find writing, reading and maths difficult, to access these subjects.

Subject overview:

Year A

Class	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Class 1 (EYFS)	N/A		N/A		N/A	
Class 2 (Y1/2)	Computer skills - This unit will teach children the basic computer skills that they will need in order to be able to use a desktop or laptop computer. Children will learn how to use a computer mouse or a trackpad and how to switch on and shut down a computer. They will apply their mouse or trackpad skills by launching applications, manipulating windows and opening and saving files and folders. The children will then practise their clicking skills and learn how to drag objects, either using a mouse or trackpad. Word processing skills - This Word Processing Skills unit will teach your class basic typing and word processing skills. Children will learn how to type with two hands, use the shift, space and enter key properly, and edit work by using the backspace, delete and arrow keys. Children will then go on to learn how to use undo and redo and to select and format text. Ongoing: Using & Applying/online safety		Programming Toys - In this unit about programming toys, children will be introduced to the principles of programming through unplugged tasks and the use of Bee-Bots (or similar programmable toys). They will be introduced to algorithms as a set of step-by-step instructions given to a device, will learn how to debug simple algorithms and how to use logical reasoning to predict how a program will behave. Painting - This Painting unit will teach your class basic painting skills in a painting application on a computer or tablet device. Children will use a simple painting program to paint with different colours and brushes, create shapes, fill areas, undo and redo and add text. Ongoing: Using & Applying/online safety		Scratch Junior Programming - This unit introduces children at Key Stage 1 to the principles of coding, using the age-appropriate ScratchJr software. A more accessible version of the popular Scratch Programming and aimed at age 5-7, ScratchJr is available as a free app for Apple, Amazon and Android tablets. The platform encourages basic understanding of algorithms and how to create precise instructions for visual working programs. It begins to develop a sense of creating, debugging and logical reasoning, which are required for further programming at KS2. Ongoing: Using & Applying/online safety	
Class 3 (Y3/4)	Online safety - **Our online safety module helps the children to understand the golden rules for staying safe online, how their online activity can affect others, and how to identify other positive and negative aspects of using technology.** **Students will explore the potential outcomes for online bullying, sharing images, and making friends online with people who they do not know. They will also be introduced to a supporting network of helpful organisations.**		Presentation skills – Branching stories - This unit develops children's use of presentation software. The first three lessons teach children new skills, following on from previous skills learnt; setting the theme, slide transitions, animating objects onto the slide, creating hyperlinks in the action settings and adding audio and video.		Espresso Coding: Level 3 and 4 In this unit the children will use visual coding blocks within the online programming platform, Espresso Coding, to write algorithms. As they write algorithms in Espresso Coding, the children will have the opportunity to test their code and debug as required. At the end of each level, the children will be encouraged to apply their knowledge and skills in a final project to create a simple game in espresso Coding.	

	This module includes a documentary about staying safe online. Online searchers and surfers - **In this unit about Online Searchers and Surfers, children will learn about what the Internet is, how the Internet works and the three different types of connections that can be used. They will then have the opportunity to explore web browsers and search engines, learning how to detect if a web page can be trusted whilst also ensuring that they know how to stay safe online. Finally, they will learn how to copy and paste images from the web and complete their own scavenger hunt project at the end of the unit.**		Throughout the unit children will develop their coding vocabulary as they plan, evaluate and edit their algorithms.
Class 4 (Y5/6)	Online Safety (Y6) In this unit about online safety, children will be taking a more in depth look at a variety of online safety issues, most of which they will have been familiarized with in previous years. They will be introduced to the idea of the internet, as a type of media, and how it can shape our ideas about boys and girls through stereotypes. Children will be given ways to deal with online content that they find worrying or even believe to be dangerous. Introduction to HTML (Discovery Espresso) In this computing unit, aimed at upper key stage 2 (UKS2) pupils, we will be introducing the fundamentals of HTML coding. The objective is to provide students with a comprehensive understanding of Hypertext Markup Language (HTML) and the basic structure of webpages. Following the lesson aims from Discovery Espresso's coding HTML, students will explore various HTML tags, such as headers, paragraphs, and image placements. They will learn how to format text, create links, and embed multimedia content into their webpages. Throughout the unit, pupils will be encouraged to apply their knowledge and skills, collaborating with peers to create interactive and user-friendly websites. Assessment tasks	Scratch: Animated stories - This unit Coding with Scratch: Animated Stories is designed to help children to continue developing their skills in writing their own algorithms as well as editing and debugging existing codes. New skills are introduced to structure code and animate characters and scenes, gradually building to create a short animated story.	Film-making - This aim of this unit is to allow children to explore various aspects of film-making. In doing so, they must choose and use appropriate software in order to complete tasks such as writing a script, researching information, filming and editing. As well as using digital devices for recording (video camera or tablet), children work through pre- and post-production stages, planning good-quality interviews for a documentary and completing the process with use of video editing software such as iMovie.

will be designed to evaluate their understanding of HTML coding and their ability to effectively implement it.
By the end of this unit, students will have gained a solid foundation in HTML and be equipped with the skills necessary to create and publish their own webpages.

Year B

Class	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Class 1 (EYFS)	N/A		N/A		N/A	
Class 2 (Y1/2)	Computer Art - This 'Computer Painting' unit aims to teach children key skills that will support progression within the KS1 Computing curriculum. The children will have the opportunity to learn about reproducing the painting styles of great artists using computer programs. Each lesson focuses on a different artist and their particular style. The children		Programming Turtle Logo & Scratch - This Programming Turtle Logo and Scratch unit will teach your class to create and debug algorithms. Following on from the earlier Year 2 unit on Preparing for Turtle Logo, the children use the basic commands in Logo to move and draw using the turtle on screen, and then further develop algorithms using the "repeat"		Using the Internet - This unit introduces children to using the Internet safely and with a purpose. Children are shown how to search the Internet using one word; how to make sense of the returned results; how to use "for kids" to return more suitable results; how to follow links and return to the search results. Children are encouraged to use a range of search	

	will use this as inspiration for mastering specific techniques within design-based software we have chosen an app called 'Sketchbook'. By the end of the unit, learners will have the opportunity to use a mixture of the styles and skills learnt within this topic to produce their own computer-painted masterpiece! Preparing for Turtle Logo - This unit has two main aims, to enable children to create, test and debug algorithms, and preparing children to use the language of Turtle Logo. The children begin by giving and following instructions to move forward and make quarter turns, followed by walking different rectilinear shapes. The language is extended to use the main Turtle Logo commands. Children will create, text and debug algorithms for shapes and routes around school in preparation for using the commands in online programs such as Turtle Logo/Logo Interpreter or MSWLogo. Ongoing: Using & Applying/online safety	command. These skills are then developed by teaching children to create algorithms in Scratch using a selection of blocks. Technology Around us - In this unit, children begin by learning about a range of technology in familiar settings, such as school and home, before being introduced to technology in the wider world. They will learn the difference between technology and information technology and will begin to understand the benefits of using information technology. Children will also consider safety implications of using information technology, linking to online safety. They will have the opportunity to learn about the history of information technology and be introduced to significant individuals involved in computing. Finally, children will use their knowledge of technology creatively to design some technology of the future. Used theoughout this unit is a helpful Knowledge Organiser which collates subject knowledge. Ongoing: Using & Applying/online safety	engines, including Google, Bing and Yahoo, and some more child-friendly engines like Kidrex. (Note: many of the child-friendly searches use Google.) The children then learn to blog safely and responsibly. Teachers will need to ensure they follow their own school guidelines on blogging, particularly on the use of names and photographs. Suggested guidelines are included in the lessons, but may differ from those agreed by the school. The focus of the lessons is less on the technical aspects, which will vary according to which blogging site is used, and more on how to blog in a safe and responsible way, looking at how to blog well, and how to post and respond to comments effectively. Presentation Skills - This unit is intended as the first unit of the academic year. Lessons 1 and 6 focus on important computer skills needed for safe and effective computer use and introduce some further skills concerning the use of folders, searching for files and printing. Lessons 2-5 introduce children to presentations and teach the skills needed to create a simple presentation. Our school uses Keynote on iPads. Ongoing: Using & Applying/online safety
Class 3 (Y3/4)	**Online safety - This module allows students to deepen their understanding of the negative and positive aspects of using computers and being online, including laws that have been created to protect us.** **Throughout this module, children will gain the skills and knowledge to enable them to deal with online bullying, and to make friends safely online.** **Word processing - In this unit, children will learn to use various features for formatting text and images and organising content into an effective layout.**	Scratch: questions and quizzes - In this unit the children write quizzes by combining questions. While specific skills in Scratch are taught, the unit aims to teach children the wider programming skills of solving problems, testing, debugging, improving and evaluating.	Drawing Desktop publishing - This unit is aimed at developing children's graphic and presentation skills by introducing drawing as opposed to painting. It also goes on to further children's understanding of layouts using a desktop publishing application. Children will learn to draw, order, group and manipulate objects to make a picture. They will also learn to evaluate and create effective layouts, combining text and images.
Class 4 (Y5/6)	Online Safety 3D Modelling: SketchUp/ Tinkercad - In this unit the children extend their drawing skills to create 3D models based on using the software SketchUp. The free version of this is suitable	Programming with sensors - Crumble Computing (DT link) - In this project, pupils will create robots that interact with each other to create a giant piece of artwork. The scribble bots are constructed using the ultrasonic	Programming – Variables in games - In this unit the children will use Scratch to build and edit algorithms for simple games. The unit is designed to help children develop their skills in

for the unit, although the full version can also be used if the teacher already has access to this. Children will learn how to create simple and complex 3D models. They will be able to add detail and manipulate 3D models using a variety of tools.	sensor as an input and a motor as an output. Pupils will write code that varies the motor's speed depending on the distance of other scribble bots. Through this project, pupils will learn to design, write, and debug a program to control a physical system, as well as working with an ultrasonic sensor and a motor. They will also gain experience using selection and variables in their programs.	writing their own algorithms as well as editing and debugging existing codes.

Impact

As a result of the provision above, all pupils including those with SEND will develop confidence and resilience in the classroom and will demonstrate high levels of engagement. All pupils will make progress from their starting points. They will develop both as independent and interdependent learners.
The children at Fletewood School enjoy and value Computing and know why they are doing things, not just how. Learning in computing will be enjoyed across the school. Teachers will have high expectations and quality evidence will be presented in a variety of forms. Children will use digital and technological vocabulary accurately, alongside a progression in their technical skills. They will be confident using a range of hardware and software and will produce high-quality purposeful products. Children will see the digital world as part of their world, extending beyond school, and understand that they have choices to make. They will be confident and respectful digital citizens going on to lead happy and healthy digital lives.

Assessment in Computing:
Assessment of learning objectives will take place across the year through summative and formative assessments. Formative assessments will be included regularly as part of the lessons, to monitor understanding and progress. Pupil workbooks as well as folders on laptops will provide evidence of pupils' learning against each National Curriculum Programme of Study.

Role of the co-ordinator:
- Celebrate successes
- Collate appropriate evidence over time
- Monitor the standards in the subject to ensure that outcomes are at expected levels
- Provide ongoing support/ signposting to other members of staff
- Undertake training when possible and practical to do so
- Provide other staff members with examples and ideas of how to use existing and new IT software, hardware, websites and APPs to support both Computing and other areas of the curriculum.