Alderwood Academy – KS2 Haven Computing Programme of Study 2025/26

KEY STAGE 2 Computing - PROGRAMME OF STUDY	
Prior learning (KS1)	In key stage 1 pupils learn that a computer cannot intuitively complete tasks; humans program computers to carry out actions. There are repeated opportunities in key stage 1 and 2 to develop simple programs for a variety of scenarios, such as games and music, in order to reinforce understanding of key programming knowledge. Throughout the curriculum, computing is learnt in the context of creating solutions for the real world. In key stage 1 pupils learn about how to navigate a maze and digital artefacts that other people can view. Pupils explore the use of IT in the world around us in key stage 1.
KS2 Purpose and Aims	This curriculum enables pupils to become confident and efficient users of technology. The curriculum establishes the important knowledge in computing to provide a foundation for the technical nature of the subject. We aim for pupils to understand how the technology they use every day has an impact on the world around them, giving pupils the knowledge to express themselves and develop their ideas in real-world contexts.

Year 3						
Curriculum Area of study	Computer networks	Stop-frame animation	Programming sequence using sound	Organising data using databases	Desktop publishing	Events and actions in programs
Key concepts	• Computing systems • Networks	• Effective use of tools	• Design and development • Programming	• Data and information	• Creating media • Effective use of tools	• Programming
Year 3	In this unit pupils will explore digital devices, with an initial focus on inputs, processes, and outputs.	In this unit pupils will explore a range of techniques to create a stop-frame animation.	This unit explores the concept of sequencing in programming. Pupils will be introduced to a	This unit develops pupils' knowledge of what a branching database is and how to create	In this unit pupils will explore how text and images can be used to communicate messages. They will use desktop	In this unit, pupils explore the link between events and actions. Pupils begin by moving a sprite in four directions (up,

	Pupils will be introduced to computer networks, including devices that make up a network infrastructure and the benefits of connecting devices in a network.	They will have the opportunity to apply their skills by creating a story-based animation. Pupils will extend their animations by adding other types of media to their animation, such as music and text.	selection of motion, sound, and event blocks which they will use to create their own programs, featuring sequences. Pupils will make a representation of a piano where they will explore sequence through sound.	one. They will use yes/no questions to gain an understanding of what attributes are and how to use them to sort groups of objects. Pupils will create an identification tool using a branching database.	publishing software to make careful choices of font size, colour, and style to improve documents. They explore a range of page layouts using templates and placeholders as design tools.	down, left, and right) and then explore movement within the context of a maze. This unit also introduces programming extensions, through the use of Pen blocks.

Year 4					
Curriculum Area of study	The internet	Audio production	Repetition in programs	Data logging	Photo editing	Using repetition in programming to create a game
Key concepts	• Networks • Safety and security	• Creating media • Effective use of tools	• Algorithms and data structures • Programming	• Data and information • Effective use of tools	• Creating media • Effective use of tools	• Design and development • Programming
Year 4	In this unit pupils will recognise the internet as a network of networks. They will learn that the World Wide Web is part of the	In this unit pupils will discover the input and output devices required to work with sound digitally. They will discuss the ownership of	In this unit pupils will create text-based programs which use repetition. They will plan, modify, and test commands to create shapes and	In this unit, pupils will consider how and why data is collected. They will explore how sensors monitor the environment. Pupils will collect	In this unit pupils will develop their understanding of how digital images can be changed and edited, and how they can then be resaved and reused. They will	In this unit, pupils will explore the concept of repetition in programming in the Scratch environment. Pupils will look at the difference between count-controlled and

Note: The table headers "The internet", "Audio production", "Repetition in programs", "Data logging", "Photo editing", "Using repetition in programming to create a game" span the two data tables.

internet. They will evaluate online content to decide how honest, accurate, or reliable it is, and understand the consequences of false information.	digital audio and the copyright implications of duplicating the work of others. Pupils will develop skills in editing and track manipulation by creating a podcast.	patterns. They will explore the different types of loops that can be used to repeat commands in a program.	data as well as access data captured over long periods. They will look at data points, data sets, logging intervals and use a computer to analyse data.	consider the impact that editing images can have, and evaluate the effectiveness of their choices.	infinite loops. They will use their knowledge to modify, design and create games and animations that involve repetition.

Year 5					
Curriculum Area of study	Introduction to computer systems	Video production	Exploring selection in physical computing	Flat-file databases	Introduction to vector graphics	Using selection in programming to develop a quiz
Key concepts	• Networks	• Creating media • Effective use of tools	• Programming	• Data and information • Effective use of tools	• Creating media • Effective use of tools	• Algorithms and data structures • Programming
Year 5	In this unit pupils will explore computer systems and how information is transferred between devices. They will explore the input, output and processes of a variety of	In this unit pupils will discover how to create short videos. As they progress through this unit, they will develop the skills of capturing, editing, and manipulating video. Pupils are	In this unit pupils will use physical computing to explore the concept of selection. Pupils will use conditions to control the flow of a program. They will make use of their knowledge of repetition when	This unit looks at how a flat-file database can be used to organise data. Pupils will use tools to order and answer questions about data. They will create graphs and charts from their	In this unit pupils discover how to use drawing tools to create vector images. They will recognise that images in vector drawings are created using shapes and lines and individual elements are called a objects. Pupils use	In this unit pupils will discover how to write programs that ask questions and use selection to control the outcomes based on the answers given. They will design a quiz in response to a given task and implement it as a program. They

	different real-world systems. Pupils will discover how information is found on the WWW through learning how search engines work.	guided with step-by-step support to take their idea from conception to completion and evaluation.	introduced to the concept of selection and write programs that utilise this concept.	data to solve problems. They will use a real-life database to answer a question, and present their work to others.	layering, grouping and duplication to create more complex images.	will then evaluate their programs against given criteria.

Year 6						
Curriculum Area of study	Communication and the internet	Web page creation	Using variables in programming to develop a game	Introduction to spreadsheets	3D Modelling	Sensing movement with physical computing
Key concepts	• Effective use of tools • Safety and security	• Creating media • Design and development	• Programming	• Data and information • Effective use of tools	• Creating media • Effective use of tools	• Programming
Year 6	In this unit pupils explore how data is transferred over the internet. They will examine addressing and the makeup and structure of data packets. They will investigate how the internet	In this unit pupils will discover how to create websites for a chosen purpose. They will identify what makes a good webpage and use this information to design and evaluate their	This unit explores the concept of variables in programming through the development of games. Pupils will investigate what variables are and relate them to real-world examples of	This unit introduces pupils to how spreadsheets can be used to organise data and create their own data sets. They will discover the importance of formatting data to	In this unit pupils will discover how computers can be used to produce 3D models. They will experience working in a 3D space, moving, resizing, and duplicating objects. They will then create hollow objects using	This unit brings together all the four programming constructs: sequence, repetition, selection and variables whilst also utilising a physical device - the micro:bit. Pupils begin with a simple program to build and test and

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facilitates online communication and collaboration and how to communicate responsibly on the internet.	own website. Pupils will consider copyright and fair use of media, the aesthetics of the site, and clear navigation.	values that can be set and changed. Then they use variables to create a simulation of a scoreboard.	support calculations, while also examining how formulas can be used to produce calculated data and how graphs can present this data.	placeholders and combine multiple objects to create a model of a desk tidy.	then take on three new projects, with each adding more depth and complexity.

Subsequent learning (KS3)	- Computing systems - Networks - Creating media - Algorithms and data structures - Programming - Data and information - Artificial intelligence - Effective use of tools - Impact of technology - Design and development - Safety and security