The Valley Primary School

Whole School Computing Curriculum 2022-2023.

Computing	Autumn	Spring	Summer

Class One	Autumn 1 – We are treasure hunters	Spring 1 – Online Safety	Summer 1 – Word processing skills
	In this unit, pupils will learn:	In this unit, pupils will learn to:	In this unit, pupils will learn to:
	● that a programmable robot can be controlled	• type their name on a piece of work they have created;	• Type with two hands.
	by inputting a sequence of instructions	• open a web browser;	• Use shift, space and enter correctly.
	● to develop and record sequences of	• recall some of the SMART rules for Internet safety;	• Use undo and redo.
	instructions as an algorithm	• know who to tell if someone online asks for personal information;	• Make text bold, italic or underline.
	● to program a robot to follow their algorithm	• understand why email is a good way to communicate.	• Save their work in their folder.
	● to predict how their programs will work	• type their name and the date on a piece of work they have created;	• Edit text using backspace, delete and the arrow keys.
	● to debug programs	• choose the correct Safe Search filter when using a search engine;	• Format the font.
		• make links between the online and offline world;	• Select single words.
	Autumn 2 – Computer skills	• recall all of the SMART rules for Internet safety;	• Have some knowledge of the location of letters and symbols on the keyboard.
	In this unit, pupils will learn:	• recognise which personal information they should keep safe from strangers;	• Select text in different ways.
	• to click and drag with a mouse or trackpad.	• help to construct an email.	**Summer 2 – We are detectives**
	• to switch on and shutdown a computer independently.	• save images to a folder of their choice;	In this unit, pupils will learn:
	• to launch an application by double clicking it.	• construct an email using a computer or digital device;	● how data can be structured as records with fields for information
	● to log on and log off on a computer independently.		● how data can be organised into groups and subgroups
			● how data can be structured as a tree

	• Manipulate an application window by moving and resizing it. • to double click with a mouse or trackpad. • to save their work in their folder Independently. **EYFS Objectives:** **PSE – MS:** Increasingly follow rules and routines; Follow rules and routines; Understand why rules are important; **CL – S:** Use a wider range of vocabulary; Learn new vocabulary; Use new vocabulary throughout the day; Describe events in some detail; Use talk to help organise their thinking and actvities; **CL – LAaU:** Begin to understand instructions that have two parts; Understand simple questions about 'who' and 'what'; Understand simple 'who', 'what', 'where', 'why' and 'when' questions; Understand an instruction that has	• apply their knowledge of online safety to help others make safe choices. **Spring 2 – Painting** In this unit, pupils will learn to: • Paint with different colours. • Paint with different brushes. • Create shapes • Save their paintings in their folder. • Fill an area with a colour. • Undo and redo. • Add text. • Format text. • Resize text and images. **EYFS Objectives:** **PSE – MS:** Increasingly follow rules and routines; Show resilience and perseverance in the face of challenge; Remember rules without needing an adult to remind them; **CL – S:** Use a wider range of vocabulary; Use new vocabulary in different contexts;	● how data can be organised into a table ● how data in a table can be filtered and searched. **EYFS Objectives:** **PSE – MS:** Increasingly follow rules and routines; Be confident to try new activities and show independence, resilience and perseverance in the face of challenge; Explain the reasons for rules, know right from wrong and try to behave accordingly; **CL – S:** Use a wider range of vocabulary; Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate; Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher. **CL – LAaU:** Begin to understand instructions that have two parts; Understand simple questions about 'who' and 'what';

two parts, such as 'get your coat

and wait at the door';

Understand how to listen carefully;

Begin to ask questions to find out more;

PD – FMS:
Develop small motor skills so that they can use a range of tools competently, safely and confidently

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Articulate their ideas and thoughts in well-formed sentences;

Connect one idea to another using a range of conjunctions;

Use talk to help work out problems and organise thinking and activities;

To explain how things work and why they might happen;

CL – LAaU:

Begin to understand instructions that have two parts;

Understand simple questions about 'who' and 'what';

Understand simple 'who', 'what', 'where', 'why' and 'when' questions;

Understand how to listen carefully and why listening is important;

PD – FMS:
Develop small motor skills so that they can use a range of tools competently, safely and confidently

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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;
Make comments about what they have heard and ask questions to clarify their understanding;
Hold conversation when engaged in back and forth exchanges with their teacher and peers;
PD – FMS:
Develop small motor skills so that they can use a range of tools competently, safely and confidently

| Class Two | **Autumn 1 – We are Programmers**

In this unit, pupils will learn to:

● plan and create an algorithm for an animated

scene in the form of a storyboard

● write a program in Scratch to create the

animation, including characters, dialogue, costumes, backdrops and sound

● review their animation programs and correct mistakes.

Spring 1 – Presentation Skills

In this unit, pupils will learn to:

• create a simple presentation

• create shapes

• create a hyperlink to another slide

• use slide transitions

• insert audio and video files (where possible)

• record audio onto a slide

• plan a branching story

• create simple slide templates | **Autumn 2 – Online Safety**

In this unit, pupils will learn to:

• recognise cyberbullying;

• identify a safe person to tell if they encounter cyberbullying;

• know that cyberbullying can happen via a range of devices;

• identify adverts online;

• identify a targeted advert;

• explore how companies use websites to promote products;

• create a strong password;

• explain why a strong password is important;

• explain what privacy settings are;

• discuss email as a form of communication;

• identify an email that they should not open;

• write an email with an address and subject;

• know how to safely send an email;

• know how to safely receive an email;

• identify online communities they are a part of; | **Summer 1 – Internet research and communication**

In this unit, pupils will learn to:

• identify what the Internet is and how it works, including how packets of data move along routes and the different connections that can be used.

• use a search engine to find information and implement strategies to improve results when searching online, including using keywords.

• cross-reference using tabs and can identify reliable links through looking for a secured padlock in the URL address bar.

• bookmark or favourite an appropriate web page.

• use a search engine to copy and paste images across to a blank document.

Summer 2 – We are opinion pollsters

In this unit, pupils will learn to:

● understand some elements of survey design

● understand some ethical and legal aspects of online data collection |

• copy and organise slides as required • use animations to introduce objects to a slide • find out which audio and video formats work in a particular presentation application • set when the audio or video plays • evaluate the layout of presentation slides effectively	• identify different forms of online communication; • discuss the positive and negative aspects of online communities; • discuss the differences between communication in real life and online; • discuss what they have learnt about online safety; • communicate their ideas with a group clearly and listen to others' contributions; • use what they know about online safety to plan a party using online methods. **Spring 2 – We are who we are** In this unit, pupils will learn to: • create a number of structured presentations • create a narrated presentation • consider issues of trust and privacy when sharing information.	● use the Internet to facilitate data collection ● gain skills in using charts to analyse data ● gain skills in interpreting results.

Class Three	Autumn 1 – We are game developers	Spring 1 – We are architects	Summer 1 – We are adventure gamers
	In this unit, pupils will learn to:	In this unit, pupils will learn to:	In this unit, pupils will learn:
	● create original artwork and sound for a game	● understand the work of architects, designers and engineers working in 3D	● how to plan a non-linear presentation
	● design and create a computer program for a computer game, which uses sequence, selection, repetition and variables	● develop familiarity with a simple CAD tool	● to create text as part of a presentation
	● detect and correct errors in their games	● develop spatial awareness by exploring and experimenting with a 3-D virtual environment	● to add and edit images in a presentation
	● use iterative development techniques.	● develop greater aesthetic awareness.	● to use hyperlinks for navigation between the slides of a presentation
			● to record and add audio narration to a presentation
	Autumn 2 – We are cryptographers	**Spring 2 – We are web developers**	● to use commenting tools to give feedback on a presentation.
	In this unit, pupils will learn to:	In this unit, pupils will learn:	
	● be familiar with semaphore and Morse code	● the name and function of components making up the school's network	**Summer 2 – Online Safety**
	● understand the need for private information to be encrypted	● how information is passed between the components that make up the Internet	In this unit, pupils will learn to:
	● encrypt and decrypt messages in simple ciphers	● what the source code for a web page looks like and how it can be edited	• identify a spam email;
	● appreciate the need to use complex passwords and to keep them secure	● how a website can be structured	• explain what to do with spam email;
	● have some understanding of how encryption works on the Internet.	● how to add content to a web page.	• understand why they should cite a source;
			• explain the rules for creating a strong password;
			• create a strong password using a set of rules;

			• know that not everything they see online is true;
			• explain how to stay safe online;
			• identify unsafe online behaviour
			• identify a dangerous spam email;
			• create multiple strong passwords for use across different platforms;
			• spot citations online;
			• alter a photograph.