Year 7

Term	Topic	Assessment	Parent input
Autumn 1	**Using computers safely, effectively and responsibly** File Management Social Networking Keeping your data safe Using email Searching the web	**Written assessment conducted based on a series of question related to the topic.**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Autumn 2	**Understanding computers** Elements of a computer The CPU Understanding Binary Addition Storage Devices Convergence and New Technology	**Written assessment conducted based on a series of question related to the topic.**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Spring 1	**Graphics** Introduction to Vector Graphics Bitmap graphic Conveying meaning Effects and Enhancements Adding text	**Written assessment conducted based on a series of question related to the topic.**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Spring 2	**Introduction to coding through Kodu** How programs work Creating landscapes Navigation and pathing Clones and creatables Pages and selections Game depth and complexity	**Assessment based on creation and outcome of game or application**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**

Summer 1	**Spreadsheet modelling** Formulae Basic Costs and profits Cell referencing Developing a model Charts	**Assessment based on creation and outcome of solution**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Summer 2	**Create and publish an AppShed** Introduction to Apps Home screen and navigation Adding files, links and images Using map function Programming with Blockly Publishing your App	**Assessment based on creation and outcome of solution**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**

Year 8

Term	Topic	Assessment	Parent input
Autumn 1	**Computer crime and cyber security** Emails scams Hacking Protecting personal data Copyright Health and safety	**Written assessment conducted based on a series of question related to the topic.**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Autumn 2	**Animation in Flash** Frame by Frame animation Motion tweening Text, button and Action script Planning an animation Adding sound effects Publishing an animation	**Assessment based on creation and outcome of solution**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Spring 1	**Sound manipulation in Audacity** Digitizing sound Jobs in the sound industry Listening and planning Creating and advertisement Finishing and exporting	**Assessment based on creation and outcome of solution**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Spring 2	**Games programming in Scratch** Introduction to flowcharts Motion and looks Sensing and variables Virtual Pet	**Assessment based on creation and outcome of solution**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**

Summer 1	**Networks** The Internet Connectivity Topologies Client-server Encryption	**Written assessment conducted based on a series of question related to the topic.**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Summer 2	**Control systems with Flowol** Flowcharts Sequencing Sensors Subroutines Actuators Variables	**Assessment based on creation and outcome of solution**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**

Year 9

Term	Topic	Assessment	Parent input
Autumn 1	**Python Programming** Introducing Python Numbers and Arithmetic Selection Writing Algorithms While Loops Searching	**Written assessment conducted based on a series of question related to the topic.**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Autumn 2	**Python next steps** **The Basics of Python** **Loops** **Lists** **Procedures** **Functions**	**Written assessment conducted based on a series of question related to the topic.**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Spring 1	**Create an application** Research/investigates games Research/investigates apps	**Assessment based on creation and outcome of solution**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**
Spring 2	Flow charts Write Algorithm Create	**Assessment based on creation and outcome of solution**	**Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.**

Summer 1	Test Evaluate Beta version	Assessment based on creation and outcome of solution	Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.
Summer 2	Evaluate Final version	Assessment based on creation and outcome of solution	Encourage pupils to review and recap each slide covered during lesson; slides will be made available for pupils following each lesson.

Year 8

Computer crime and cyber security

This unit covers some of the legal safeguards regarding computer use, including overviews of the Computer Misuse Act, Data Protection Act and Copyright Law and their implications for computer use. Phishing scams and other email frauds, hacking, "data harvesting" and identity theft are discussed together with ways of protecting online identity and privacy. Health and Safety Law and environmental issues such as the safe disposal of old computers are also discussed. Safety is discussed outside the realm of e-safety which is covered in greater detail in the Using computers safely, effectively and responsibly unit. Assessment for this unit is by means of a multiple choice test.

Animation in Flash

In this unit, pupils will learn how animations are created and use a variety of drawing and animation techniques including tweening and motion paths in order to plan, create and export a multi-layered animation into a format that can be played as a standalone file or as a moving image within a web page. The unit includes theory on frame rates and the effect on file size. Pupils are encouraged to analyse existing animated advertisements before planning and creating their own to deliver effective messages to a specific audience. ActionScript is also introduced in order to add interactivity to their advertising banners. The unit is assess by means of an Assessment Portfolio. All accompanying animations have been created in Flash CC.

HTML and website Development

In the first three lessons, pupils will learn the basics of HTML and CSS, and how to create a responsive design which adapts to any size of screen for viewing on, say, a mobile phone or a PC. They will learn how to create text styles and add content, including text and graphics, in a specified position on a page, as well as navigation links to other pages on their website and to external websites. The basics of good design are covered and, with the help of worksheets, pupils will develop their own templates in a text editor such as Notepad. They will decide on a topic for their own websites, document their designs and collect suitable text and images. They will then use HTML templates to create their websites, including a web form. Pupils can view the data collected by the web form into a simulated database. This also helps to stimulate discussion on the privacy of data.

Sound manipulation in Audacity

In this unit pupils will learn how sound is digitized and stored on computers. They will learn basic sound editing techniques and how to add sound effects and mix tracks. Ways of creating different sound effects (the job of a "Foley artist") are described. Pupils will undertake a creative project to analyse, plan, record and edit a short sound file. This could take the form of a radio advertisement or short podcast. Assessment will be by means of an Assessment Portfolio, to include a description, critical review and evidence of an advertisement planned and recorded by the pupil, and a self-evaluation.

Games programming in Scratch

Pupils begin this unit with an introduction to the Scratch programming environment, and by reverse- engineering some existing games. They then progress to planning and developing their own game, learning to incorporate variables, procedures (using the Broadcast function), lists and operators. They should be able to create a fully working game with lives, scoring and some randomisation of objects. Finally they will learn to test and debug their programs.

Networks

This is a theoretical unit covering the basic principles and architecture of local and wide area networks. Pupils will learn that the World Wide Web is part of the Internet, and how web addresses are constructed and stored as IP addresses using DNS. Pupils will learn about data transmission and through an understanding of different network topologies and network hardware, they will plan the structure of a local area network. Client-server, peer-to-peer networks and the concept of cloud computing are all described. Ways of keeping data secure and simple encryption techniques are also covered. In the final lesson, pupils will sit a multiple choice test which will form the Unit assessment.