

Ashton Hayes Primary School - Computing Long Term Plan

| | <u>AUTUMN Computer Science</u> <i>Programming</i> | <u>SUMMER Information technology</u> <i>Creating digital content</i> | <u>SPRING Digital Literacy</u> <i>Understanding the role of technology</i> |
|------|---|---|--|
| KS1 | <ul style="list-style-type: none"> ● Understand what algorithms are and that programs execute by following instructions ● Understand that programs follow precise and unambiguous instructions ● Create and debug simple programs ● Use logical reasoning to predict the behaviour of simple programs, for example: <ul style="list-style-type: none"> ▪ Beebot> Kodable> Daisy Dino> Scratch Jr. | <ul style="list-style-type: none"> ● Use technology purposefully to create, organise, store, manipulate and retrieve digital data content, for example: <ul style="list-style-type: none"> ▪ Mouse control and keyboard skills ▪ Organise pictures and text to communicate story or instruction Create/organise digital content (Stop animation) ▪ Create digital content (Artwork) ▪ Data Handling | <ul style="list-style-type: none"> ● Recognise common uses of information technology beyond school ● Use technology safely and respectfully, keeping personal information private ● Identify where to go for help and support when they have concerns about content or contact |
| LKS2 | <ul style="list-style-type: none"> ● Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web ● Design, write and debug programs that accomplish specific goals (control system or simulation using problem solving into smaller parts) ● Use logical reasoning to explain how some simple algorithms/programs work, including: <ul style="list-style-type: none"> ▪ detect and correct errors (e.g. in Kodu, Scratch) ▪ Use selection, sequence and repetition in programs ▪ Work with variables and various forms of input and output | <ul style="list-style-type: none"> ● Use search technologies effectively ● Select, use and combine a variety of software ● Use a range of devices to design and create digital content (system or program) to accomplish given goals <ul style="list-style-type: none"> ▪ Including: Collecting, analysing, evaluating and presenting data | <ul style="list-style-type: none"> ● Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns about content and contact |
| UKS2 | <ul style="list-style-type: none"> ● Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web ● Design, write and debug programs that accomplish specific goals (control system or simulation using problem solving into smaller parts) ● Use logical reasoning to explain how some simple algorithms/programs work, including: <ul style="list-style-type: none"> ▪ detect and correct errors (e.g. in Kodu, Scratch) ▪ Use selection, sequence and repetition in programs ● Work with variables and various forms of input and output <p>● Appreciate how search results are selected and ranked</p> <p>Suggestions:</p> <ul style="list-style-type: none"> ▪ Controlling physical systems (Raspberry Pi/Scratch) ▪ Write a program to randomly choose from lists (word generator) ▪ Write a program with inputs, outputs, conditions and variables (Multi-player game in Scratch) | <ul style="list-style-type: none"> ● Use search technologies effectively ● Select, use and combine a variety of software ● Use a range of devices to design and create digital content (system or program) to accomplish given goals <ul style="list-style-type: none"> ▪ Including: Collecting, analysing, evaluating and presenting data ● Suggestions: <ul style="list-style-type: none"> ▪ Touch typing ▪ Composing: emails/blogs, ▪ Recording podcasts ▪ Creating stop animation/time-lapse video | <ul style="list-style-type: none"> ● Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns about content and contact ● Be discerning in evaluating digital content ● Understand opportunities for collaboration and communication |

Ashton Hayes Primary School – Computing Progression of Skills

| | Computer Science | | | | | | Information Technology | | | | Digital Literacy | | | | |
|-----------------|--|------------------------------------|--|---|---|--|---|---|---|--|--|---|--|---|--|
| YEAR 1 | Understands what algorithms are | | | Creates simple programs | | | Uses technology purposefully to create digital content | Uses technology purposefully to store digital content | Uses technology purposefully to retrieve digital content | | Uses technology safely | Keeps personal information private | Recognises common uses of information technology beyond school | | |
| YEAR 2 | Understands that algorithms are implemented as programs on digital devices | | Debugs simple programs | Understands that programs execute by following precise and unambiguous instructions | | Uses logical reasoning to predict the behaviour of simple programs | | Uses technology purposefully to organise digital content | Uses technology purposefully to manipulate digital content | | Uses technology respectfully | Identifies where to go for help and support when they have concerns about content or contact on the internet or other online technologies | | | |
| YEAR 3 | Writes programs that accomplish specific goals | | Uses sequence in programs | Works with various forms of input | | Work with various forms of output | | Uses search technologies effectively | Uses a variety of software to accomplish given goals | Collects, designs and creates content | Presents information | Uses technology responsibly | Identifies a range of ways to report concerns about contact | | |
| YEAR 4 | Designs and creates programs that accomplish specific goals | | Debugs programs that accomplish specific goals | | Uses repetition in programs | Controls or simulates physical systems | Uses logical reasoning to detect and correct errors in programs | Understands how computer networks can provide multiple services, such as the World Wide Web | | Analyses and evaluates information | Selects, uses and combines a variety of software | Collects data | Presents data | Identifies a range of ways to report concerns about content | Recognises acceptable/unacceptable behaviour |
| YEAR 5 & 6 UKS2 | Design and debug: solve problems by decomposing them into smaller parts | Works with variables: input/output | Uses selection/ repetition/ sequence in programs | Uses logical reasoning to explain how some simple algorithms work | Detect and correct errors in algorithms | Understands computer networks, including the internet | Appreciates how search results are ranked | Combines a variety of software to accomplish given goals | Selects, uses and combines software on a range of digital devices | Analyses and evaluate data | Use search technologies effectively | Understands the opportunities computer networks offer for collaboration | Is discerning in evaluating digital content | Use technology respectfully & have understanding of social media laws including identity fraud | |