

Learning Ladder – COMPUTING

Exam Criteria	AO1 – Using Computers	AO2 – Programming	AO3 - Algorithms	AO4 - Micro bit
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1-3

<p>Theory</p> <ul style="list-style-type: none">• I can recognise different file types (e.g. .doc, .ppt, .jpg)• I can identify what makes a “strong” password• I can list some dangers/ drawbacks of social networking sites• I can identify possibly responses to cyber bullying• I know who to contact with e safety matters in school <p>Skills</p> <ul style="list-style-type: none">• I can create, save, copy, move, rename, delete files and folders• I can send and reply to emails (with attachments)• I can use a search engine <p>Testing</p>	<p>Theory</p> <ul style="list-style-type: none">• I can identify use of a loop.• I can identify use of selection. <p>Skills</p> <ul style="list-style-type: none">• I can write a sequence of instructions• I can use a variable to store a value• I can create separate blocks of code to complete different tasks	<p>Theory</p> <ul style="list-style-type: none">• I can identify key terminology• I can identify where selection is used• I can identify where iteration is used <p>Skills</p> <ul style="list-style-type: none">• I can write an algorithm using selection• I can write an algorithm using iteration	<p>Theory</p> <ul style="list-style-type: none">• I can identify use of a loop.• I can identify use of selection. <p>Skills</p> <ul style="list-style-type: none">• I can write a sequence of instructions• I can use a variable to store a value• I can create separate blocks of code to complete different tasks
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<p>Theory</p> <ul style="list-style-type: none"> • I can identify how to minimise the danger of having your computer infected by a virus • I can identify guidelines for keeping your identity secure on the Internet • I know who to contact with e safety matters in a range of situations <p>Skills</p> <ul style="list-style-type: none"> • I can set up folders and files with suitable names • I can resize images before attaching to emails • I can use advanced features of a search engine • I can create a presentation that is suitable for purpose <p>Testing</p> <ul style="list-style-type: none"> • I can test functionality 	<p>Theory</p> <ul style="list-style-type: none"> • I can describe one example of using a loop in the code. • I can describe one example of using a selection in the code. • I can describe how variables have been used and changed • I can explain how some blocks are executed by an event happening (e.g. arrow button pressed) <p>Skills</p> <ul style="list-style-type: none"> • I can use a loop that repeats continuously • I can use an IF statement to select whether to execute an instruction • I can change the value of a variable 	<p>Theory</p> <ul style="list-style-type: none"> • I can describe why I am using iteration • I can describe why I am using selection • I can describe functions • I can explain what is happening within code. <p>Skills</p> <ul style="list-style-type: none"> • I can write an algorithms that uses a nested loop • I can write an algorithm that uses nested selection <p>Testing</p> <ul style="list-style-type: none"> • I am able to identify errors in an algorithm 	<p>Theory</p> <ul style="list-style-type: none"> • I can describe one example of using a loop in the code. • I can describe one example of using a selection in the code. • I can describe how variables have been used and changed • I can explain how some blocks are executed by an event happening (e.g. arrow button pressed) <p>Skills</p> <ul style="list-style-type: none"> • I can use a loop that repeats continuously • I can use an IF statement to select whether to execute an instruction • I can change the value of a variable within the program <p>Testing</p> <ul style="list-style-type: none"> • I can able to identify
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<p>Theory</p> <ul style="list-style-type: none"> • I can describe what is acceptable and unacceptable behaviour when using online services • I can describe why information found on the internet might not be accurate • I can describe the advantages and disadvantages of email as a method of communication <p>Skills</p> <ul style="list-style-type: none"> • I can set up and use sub folders with suitable names • I can set up and use sub folders with suitable names • I can create a presentation that shows good awareness of purpose and audience <p>Testing</p>	<p>Theory</p> <ul style="list-style-type: none"> • I can discuss use of loops and using conditions to control them. • I can discuss use of selection and else statements • I can discuss why variables are used in an effective program. • I can discuss use of broadcasts in the program <p>Skills</p> <ul style="list-style-type: none"> • I can use a loop that repeats whilst a condition is met • I can use an IF statement with Else to decide which instruction to execute • I can use variables in condition to control program flow 	<p>Theory</p> <ul style="list-style-type: none"> • I can discuss why we use loops and the conditions to use in algorithms • I can discuss how we use selection and else statements in algorithms • I can discuss variables and data types used in algorithms <p>Testing</p> <ul style="list-style-type: none"> • I can identify errors in an algorithm and I can correct them 	<p>Theory</p> <ul style="list-style-type: none"> • I can discuss use of loops and using conditions to control them. • I can discuss use of selection and else statements • I can discuss why variables are used in an effective program. • I can discuss use of broadcasts in the program <p>Skills</p> <ul style="list-style-type: none"> • I can use a loop that repeats whilst a condition is met • I can use an IF statement with Else to decide which instruction to execute • I can use variables in condition to control program flow • I can use broadcasts to call a block of code
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Exam Criteria	A05 – Understanding Computers	A06 – Hardware and Networks	A07 – Python Advanced	A08 - Html
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<p>Theory</p> <ul style="list-style-type: none"> • I have given examples of computer hardware and software • I can name different input, output and storage devices • I have drawn a block diagram showing CPU, input, output and storage devices • I have defined a Bit, Byte, Kb, Mb and Gb • I can show how numbers and text can be represented in binary 	<p>Theory</p> <ul style="list-style-type: none"> • I can understand that the Internet is a wide area network and the world wide web is part of the Internet • I have defined the meaning of the terms • “domain name”, http protocol • I can explain the basic principle of packet switching • I can give examples of LANs and WANs • I can state three different network Topologies • I can describe what is meant by a client server network and state some of its advantages • I can explain why some 	<p>Theory</p> <ul style="list-style-type: none"> • I understand that methods are used to perform different tasks • I can describe one example of using a loop in the code. • I can describe one example of using a selection in the code. • I can describe how variables have been used and changed <p>Skills</p> <ul style="list-style-type: none"> • I can use a sequence of instructions • I can use built-in methods • I can use an IF statement to select whether to execute an instruction • I can change the value of a variable within the program <p>Testing</p> <ul style="list-style-type: none"> • I have created more 	<p>Theory</p> <ul style="list-style-type: none"> • I know and understand how to use some HTML tags. <p>Design</p> <ul style="list-style-type: none"> • I can use a design to create a template for a web page using HTML <p>Skills</p> <ul style="list-style-type: none"> • I have edited basic HTML to change the content of a web page • I can change basic CSS to alter the appearance of a web page • I have specified a width for my web page and images <p>Testing</p> <ul style="list-style-type: none"> • pages are tested to ensure that they work <p>Evaluation</p> <ul style="list-style-type: none"> • I can show evidence that I have
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4-6

Theory

- I have described the difference between hardware and software
- I have suggested input and output devices for a simple scenario
- I have shown that I can distinguish between main memory and permanent storage devices
- I have defined Hz, MHz and GHz and stated how these relate to the speed of the processor
- I have converted integers to binary numbers and binary to integer
- I have explained how characters are encoded using the ASCII system

Theory

- I can explain what is meant by buffering and why it is used
- I can explain the meaning and significance of bandwidth
- I can identify some of the extra hardware components used in a LAN
- I can state the advantages and disadvantages of different network topologies
- I can compare the uses of peer-to-peer networks and client-server networks

Design

- I can design a simple network layout

Theory

- I understand that methods are used to perform different tasks

Skills

- I can discuss use of loops and using Conditions to control them.
- I can discuss use of selection and else statements
- I can discuss why variables are used in an effective program
- I can create methods to break down the program in small chunks of code.
- I can use a loop that repeats continuously I can use a loop that repeats whilst a condition is met
- I can use an IF statement with Else to decide which instruction to execute

Theory

- I can explain the difference between how
- HTML and CSS are used in creating a web page.

Design

I can use the template to design a multipage website with a consistent look and feel to each page

Skills

- I have written basic HTML to create a web page of my own
- I have used basic CSS to control the appearance of my own web page
- I have changed the width setting to percentages in order to make the page responsive
- I have used the example web form to submit data to a simulated database

7-9

<p>Theory</p> <ul style="list-style-type: none">• I have input and output devices for more complex scenarios• I have explained the difference between RAM and ROM and what ROM is used for• I have named the three stages in the Fetch Execute Cycle• I have used an ASCII reference chart to convert a character into binary and its decimal equivalent	<p>Theory</p> <ul style="list-style-type: none">• I can describe the concept of cloud computing and some of the benefits it brings to individuals and organisations <p>Design</p> <ul style="list-style-type: none">• I can design a network layout for their school, using icons to represent server, hub, switch, router, Internet, workstation, printer	<p>Theory</p> <ul style="list-style-type: none">• I can discuss the use of methods to break down the program. <p>Skills</p> <ul style="list-style-type: none">• I can effectively call methods to execute different parts of the program in sequence.	<p>Theory</p> <ul style="list-style-type: none">• I understand how DIV tags separate areas of a web page and how their appearance is controlled by CSS <p>Design</p> <ul style="list-style-type: none">• I can add enhancements or additional features to the original basic design <p>Skills</p> <ul style="list-style-type: none">• I have added DIV tags in order to separate areas of a web page• I have used CSS to control the appearance of DIV sections of HTML• I have added a footer DIV section to a web page (Expert)• I have added a web form to my own web Page <p>Testing</p>
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