

Assessment ladder

Year 7 Computing and Business department

Basic skills and databases				
Exceeding	I can give examples of how different search criteria can be used together to make complex searches that find specific information.	I can explain Boolean logic with examples and explain what a wild card search is and why it is used.	I can edit all common parts of a database setting data types and lengths and accurately and independently carry out Boolean searches and wild card searches	I can explain as above in great detail and I have explained how my suggested improvements will improve the work.
Securing	I can give examples of how the types of searches can be used together to make complex searches.	I can explain Boolean logic with examples and explain what a wild card search is.	I can edit as above and independently carry out Boolean searches and a wild card search.	I can explain as above in more detail and suggest at least two ways the result could be improved.
Demonstrating	I can give examples of each type of search that can be used	I can explain what Boolean logic is and give examples	I can edit most common parts of a database setting data types and lengths and accurately and independently carry out Boolean searches	I can explain in detail how I went about a task, what went well, what went wrong and suggest at least one way the result could be improved
Approaching	I can state most types of search that can be used	I can explain some of the more complex searches e.g. AND	I can edit all common parts of a database setting data types and lengths and carry out two or more Boolean searches	I can write an explanation of what I did, why I did it and highlight any problems I had.
Working towards	I know what a database is and what it is used for	I can explain how a search can be used to find information	I can make changes to a database including adding Field Headings and carry out at least one Boolean search	I can write basic explanations explaining what I did and why

Logo					
Exceeding	I can draw shapes using different colours and line thicknesses	I can correct any errors that I make using advanced formatting commands without needing to start over	I can discuss the importance of using repeat commands when writing a program	I can compare the use of variables versus not using them to draw a house in Logo	I can discuss wider impacts variables have on the maintainability of a program
Securing	I can use shortened commands to draw a shape	I can use more advanced formatting commands to write my name	I can use the repeat command to draw a perfect circle that starts and ends in the same place	I can reuse a variable I've created to draw a house	I can discuss the impacts of using variables when writing a program
Demonstrating	I can use the basic movement commands to draw a square	I can use more advanced formatting commands to draw a dashed line	I can use the repeat command to draw a range of regular polygons	I can draw a window shape using a variable	I can explain why variables are used
Approaching	I can name all of the basic movement commands	I can name all of the more advanced formatting commands	I can use the repeat command to draw a triangle	I can store instructions inside a variable	I can give an example of where a variable might be used
Working towards	I can name some of the basic movement commands	I can name some of the more advanced formatting commands	I know what a repeat command looks like	I know how to define a variable	I can explain what a variable is

Kodu				
Exceeding	I can explain how each object added to the game will be used to improve the gameplay	I can program a Kodu to follow a path around a racetrack without getting stuck or moving off the track	I can explain how each of the features used improve the gameplay or add to the storey line and how they fit into the lore of the game.	I can critically evaluate the good features and issues with my game, and discuss the steps needed to implement improvements
Securing	I can add different objects into my game world to enhance the look of the game	I can use the path tool to create a single path around the racetrack for a Kodu to follow	I can use when and do statements to create features that improve the gameplay or storyline of my game	I can explain further improvements I can make to my game and the effect they would have on game play
Demonstrating	I can use a range of tools to create a suitable racetrack	I can program a Kodu to move when arrow keys are pressed	I can search through many layers of menus to find the most suitable instruction	I can explain what went well and even better if
Approaching	I can use different brushes to create a 3D world in Kodu	I can add when and do statements to program my Kodu	I can use when and do statements to create an instruction	I can list some improvements I could make to my game
Working towards	I can use different paint brushes to create a 2D in Kodu	I can add a Kodu to my game world	I can find the when and do statements to program my Kodu	I can list some things that went well

Search engines and networks				
Exceeding	I can explain why a LAN or a WAN would be most suitable for a given scenario	I can discuss the benefits and drawbacks of using different types of networks for a given scenario	I can explain why it might be important to use advanced searches, such as 'must include' and 'omit'	I can write a bubble sort algorithm using step by step instructions
Securing	I can give examples of where a LAN and WAN might be used	I can explain why a wired or wireless network would be most suitable for a given scenario	I can use 'must include' and 'omit' searches on google	I can explain how the bubble sort algorithm works
Demonstrating	I can describe the difference between a LAN and a WAN	I can explain the advantages of using a wired network and a wireless network	I can use keywords to search the web effectively	I can perform a bubble sort on a large set of numbers
Approaching	I can explain what a network is	I can explain some advantages of using a network	I know the difference between a search engine and a web browser	I can perform a bubble sort on a small set of numbers
Working towards	I know what LAN and WAN stand for	I can name a wireless network device	I can name a search engine	I can name a sorting algorithm

Assessment ladder

Year 8 Computing and Business department

BBC Microbit					
Exceeding	I understand and can explain the use of an Accelerometer within a program	I can plan and solve a problem by saving, transferring and running a code in the Microbit editor	I can independently plan and create an effective and fully efficient game using a Microbit which also uses an Accelerometer	I can independently use a text based code to create a code that solves a problem and I can use shading to create a more complex pattern	I can explain as above in great detail and write a very detailed answer to a complex question
Securing	I understand and can explain the use of Hex Files	I can save, transfer and run a planned code in the Microbit editor	I can independently plan and create an effective game using a Microbit which also uses an Accelerometer	I can independently use a text based code to create a code that solves a problem and use some shading to create a more complex pattern	I can explain as above in more detail and make a good attempt at answering a complex question
Demonstrating	I understand that these states are used within a code to create a pattern	I can I can plan and create a pattern using a block editor	I can plan and create a game that works using a Microbit which also uses an Accelerometer	I can independently change a text based code to effectively achieve a specific goal	I can explain in detail how I went about a task, what went well, what went wrong and write a brief answer to a complex question
Approaching	I understand that the LED lights have 2 states: on and off	I can I can create a simple pattern using the Microbit's LED lights	I can plan the creation of a game using a Microbit	I change a text based code to achieve a specific goal	I can write an explanation of what I did, why I did it and highlight any problems I had.
Working towards	I understand that lights are used to make patterns	I can change the state of the LED lights on a Microbit	I can create a basic grid in the image editor	I can change text based code to alter a pattern	I can write basic explanations explaining what I did and why

Go Control					
Exceeding	I understand the use of all shapes needed to complete flowcharts to solve multiple complex problems including loops, variables and sub routines and I am able to link the sub routines together.	I can plan and solve a variety of complex problems by planning, creating, saving and running flow charts in specialist software with excellent success and editing when necessary.	I can independently plan and create an effective and fully efficient flow chart to solve several complex problems	I can independently use bespoke software to create a flow chart that solves a problem in an efficient and effective manner	I can fully explain and thoroughly evaluate the effectiveness of a flow chart, using key terms and vocabulary in the process
Securing	I understand all shapes needed to complete flowcharts to solve complex problems including loops, variables and sub routines.	I can plan and solve multiple complex problems by planning, creating, saving and running flow charts in specialist software with great success.	I can independently plan and create an effective and fully efficient flow chart to solve a complex problem.	I can often work independently use bespoke software to create a flow chart that solves a problem in an efficient and effective manner	I can explain and evaluate the effectiveness of a flow chart, using key terms and vocabulary in the process.
Demonstrating	I understand all shapes needed to complete flowcharts to solve a complex problem including loops and Variables	I can plan and solve a complex problem by planning, creating, saving and running flow charts in specialist software with good success.	I can often work independently to plan and create an effective and fully efficient flow chart to solve several problems	I can often work independently to use bespoke software to create a flow chart that solves a problem.	I can explain and evaluate the effectiveness of a flow chart that solves a problem with some key terms used.
Approaching	I understand the basic shapes needed to complete flowcharts to solve a simple problem including loops.	I can plan and solve simple problems by planning, creating, saving and running flow charts in specialist software with reasonable success.	I can sometimes work independently to plan and create a flow chart to solve problems	I can sometimes work independently to use bespoke software to create a flow chart that solves a problem.	I can explain the use of a flow chart to solve a problem, with few key terms used.
Working towards	I understand the basic shapes needed to create flow chart including a loop.	I can plan and solve simple problems by planning, creating, saving and running flow charts in specialist software, with some success.	I can work with teacher guidance to plan and create a flow chart to solve problems	I can work with teacher guidance to use bespoke software to create a flow chart that solves a problem.	I can write basic explanations explaining the flow chart that I created.

Scratch programming					
Exceeding	I understand a variety of complex coding principles including the use of X and Y coordinates, if statements, forever if loops, incremental variables, costumes and operators to create comprehensive games in scratch.	I can plan, solve and develop games in scratch software using a high level coding techniques to solve the problem independently. There will be evidence of multiple variables used.	I can independently plan and create effective and fully efficient games with a range of sophisticated code blocks used within their creation.	I always work independently to use scratch software to create several games including a race track, Pong and one of my own, With excellent success rate.	I can fully explain and thoroughly evaluate the effectiveness of the code blocks required to create an effective game in scratch, identifying many potential improvements for the future
Securing	I understand complex coding principles including the use of X and Y coordinates, if statements and forever loops and incremental variables to create comprehensive games in scratch.	I can plan, solve and develop games in scratch software using some high level coding techniques to solve the problem independently. There will be evidence of multiple variables used.	I can often work independently to plan and create effective and efficient games using a variety of sophisticated code blocks used within their creation.	I often work independently to use scratch software to create several games including a race track, Pong and one of my own, with good success.	I can independently, explain and evaluate the effectiveness of code blocks that have been used to create an effective game, identifying some improvements.
Demonstrating	I understand some complex coding principles including the use of X and Y coordinates, if statements and forever loops to create a comprehensive game in scratch.	I can plan, solve and develop games in scratch software using a variety of coding techniques to solve the problem with some independence. A variable will have been used	I can plan and create effective and efficient games using a variety of code blocks used within their creation.	I often work independently to use scratch software to create several games including a race track, Pong and one of my own, with some success.	I can explain and evaluate the effectiveness of some code blocks in a game that has been created with an improvement identified.
Approaching	I understand the basic coding principles and the use of X and Y coordinates to create a simple game in scratch.	I can plan, solve and develop games in scratch software using a some coding techniques to solve the problem with some support.	I can work with some support and guidance to plan and create some games with limited code blocks used within their creation.	I can sometimes work with teacher guidance to use scratch software to create several games including a race track and Pong.	With support and guidance I can explain and evaluate the effectiveness of some code blocks in a game that has been created with an improvement identified.
Working towards	I understand the basic coding principles to create a simple game in scratch.	I can plan, solve and develop games in scratch software using a some coding techniques to solve the problem with a lot of support.	I can work with a lot of teacher guidance to plan and create some simple games using basic code blocks within their creation.	I can work with a lot of teacher guidance to use scratch software to create several games including a race track and Pong.	I can write a basic evaluation of a game that has been created, using explanations of code blocks to show some understanding

HTML Coding					
Exceeding	I understand and recall a variety of complex HTML tags that are used to create websites online	I can plan and solve a problem by saving, transferring, and running multiple complex HTML code tags in a browser to format the appearance of a webpage	I can independently plan and create an effective and fully efficient webpage using a variety of complex HTML tags	I can independently use text-based HTML code to create a webpage using numerous complicated tags in the process.	I can explain in great depth and detail, the different tags that have been used to create a webpage, including background colours, inserting images and other formatting techniques
Securing	I understand and can recall some complex HTML tags that are used to create webpages	I can plan and solve a problem by saving, transferring, and running some complex HTML code tags in a browser to format the appearance of a webpage	I can independently plan and create an effective and fully efficient webpage using some complex HTML tags	I can independently use text-based HTML code to create a webpage using some complicated tags in the process and all the basic tags.	I can explain with clarity and detail, the different tags that have been used to create a webpage, including background colours, inserting images and other formatting techniques
Demonstrating	I understand and can recall all basic HTML tags that are used to create webpages with a few complex tags identified an understood with reference to their use.	I can plan and solve a problem by saving, transferring, and running HTML code tags in a browser to format the appearance of a webpage.	I can often work independently to plan and create an effective and fully efficient webpage using some complex HTML tags.	I can often work independently to use text-based HTML code to create a webpage using all basic HTML tags in the process, with some Complex Tags in addition.	I can explain with clarity and detail, all the different tags that have been used to create a webpage.
Approaching	I understand and can recall a variety of basic HTML tags that are used to create webpages with a few with reference to their use.	I can plan and solve a problem by saving, transferring, and running a variety of basic HTML code tags in a browser to format the appearance of a webpage.	I can plan and create a webpage using a variety of basic HTML tags to change the formatting of the webpage.	I can work with teacher support to use text-based HTML code and create a webpage using some basic HTML tags in the process.	I can explain with some detail, all the different HTML tags that have been used to create a webpage.
Working towards	I understand and can recall a few basic HTML tags that are used to create webpages with a few with reference to their use.	I can plan and solve a problem by saving, transferring, and running a few basic HTML code tags in a browser to format the appearance of a webpage.	I can plan and create a webpage using a few basic HTML tags to change the formatting of the webpage.	I can work with a lot of teacher support to use text-based HTML code and create a webpage using a few HTML tags in the process.	I can briefly explain some of the different HTML tags that have been used to create a webpage.

Internet safety and cyber crime

Exceeding	I fully understand and recall a variety of complex issues relating to internet safety and can articulate ways to prevent risk and stay safe online.	I can effectively plan and solve problems efficiently and thoroughly with the use of digital media to the outline the risks of online safety and devices used and recommend safety advise specific to a target audience.	I can independently plan and create an effective and fully efficient way to raise awareness of internet safety for a specific target audience and provide advice on how to stay safe online.	I can independently use digital media efficiently to create a fully effective and thought-provoking project to year 6 students, using a range of effective key vocabulary throughout.	I can thoroughly evaluate in detail, the consequences of Cyber-crime and provide an in-depth discussion of the key concepts of internet safety, analysing a variety of improvements to the project.
Securing	I fully understand and recall some of the complex issues relating to internet safety and can articulate ways to prevent risk and stay safe online.	I can plan and solve problems efficiently with the use of digital media to the outline the risks of online safety and devices used and recommend safety advise specific to a target audience.	I can often work independently to plan and create an effective way to raise awareness of internet safety for a specific target audience and provide advice on how to stay safe online.	I can often work independently and use digital media efficiently to create a fully effective and thought-provoking project to year 6 students, using effective key vocabulary throughout	I can evaluate the consequences of Cyber-crime and provide an in-depth discussion of the key concepts of internet safety, analysing some improvements to the project.
Demonstrating	I understand and I can recall some of the complex issues relating to internet safety and I can explain ways to prevent risk and stay safe online.	I can plan and solve problems with the use of digital media to identify the risks of online safety and devices used, recommending safety advise.	I can sometimes work independently to plan and create a way to raise awareness of internet safety for a specific target audience and provide advice on how to stay safe online.	I can sometimes work independently and use digital media to create an effective and thought-provoking project to year 6 students, using some key vocabulary.	I can evaluate the consequences of Cyber-crime and provide some discussion of the key concepts of internet safety, identifying some improvements to the project.
Approaching	I have some understanding of some of the key concepts of internet safety and I can identify and explain some ways to prevent risks and stay safe online.	I can partially plan and solve a problem with the use of digital media to list the risks of online safety and devices used, recommending some safety advise.	I can work with teacher guidance, to plan and create a way to raise awareness of internet safety and provide advice on how to stay safe online.	I can work with teacher guidance to use digital media by creating an online safety project to year 6 students, using some key vocabulary.	I can list the consequences of Cyber-crime and provide some of the key concepts of internet safety, listing some improvements to the project.
Working towards	I have some understanding of some of internet safety and I can list some ways to prevent risks and stay safe online.	I can solve a problem with the use of digital media to list the risks of online safety recommending a few safety tips.	I can work with a lot of teacher guidance, to plan and create a way to raise awareness of internet safety with some advice on how to stay safe online.	I can work with a lot of teacher guidance to use digital media by creating an online safety project to year 6 students, using little key vocabulary.	I can write a limited evaluation the of Cyber-crime dangers, listing a few improvements to the project.

Assessment ladder

Year 9 Computing and Business department

Introduction to Computing theory			
Exceeding	I can explain why computers use binary numbers and humans use denary numbers	I can justify how many different bits are needed to represent a given number of different bit patterns	I can draw a logic gate circuit for a given logic statement or truth table
Securing	I can convert numbers larger than 255 to and from binary	I can explain how different bit patterns can be used to represent different pieces of information	I can draw a truth table for a circuit containing multiple logic gates
Demonstrating	I can convert denary to binary up to 255	I can decode a message written using bit patterns	I can describe the inputs and outputs for each of the 3 logic gates
Approaching	I can convert binary to denary up to 255	I can show how different colours can be represented by different bit patterns	I can identify different logic gates from their names and their symbols
Working towards	I know what digits make up binary numbers	I can define a bit	I can name 3 logic gates

Creative multimedia projects			
Exceeding	I can evaluate the importance of system software and application software and recommend which would be most suited to a given scenario	I can discuss the benefits and drawbacks of using different types of networks for a given scenario	I can evaluate the use of different data types for representing numbers and suggest the most appropriate type for a given scenario
Securing	I can name different system software and explain the function of it	I can explain why a wired or wireless network would be most suitable for a given scenario	I can calculate the size of bit pattern needed to store different data types
Demonstrating	I can describe the difference between application software and system software	I can explain the advantages of using a wired network and a wireless network	I can explain what can be stored is different data types
Approaching	I can name different application software that's used for the same function	I can explain some advantages of using a network	I can give examples of different data types
Working towards	I can list some application software	I can name a wireless network device	I can list some of the different data types