

Appendix 3

Desirable Features

(includes updates for 2010/11)

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Animation (updated for 2010/11)

Working with stop frame animation requires that pupils have some models or objects to manipulate in order to structure the animation. Making models, using cut-outs and the sets or backgrounds that may be used to locate the models, are prerequisites for undertaking activities within the stop-frame animation area of practice. However, many of these preliminary activities do not use ICT. Using ICT in stop-frame animation comes into play once the models/cutouts are being used and the stages of the animation are being recorded digitally for subsequent editing using appropriate software.

Level 1	Pupils may demonstrate some of the following characteristics:
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- view and respond to a variety of animations (explore)
- with teacher assistance, take pictures of objects/characters to be animated and display these on screen (express)

Level 2	Pupils may demonstrate some of the following characteristics:
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- understand that a stop-motion animation is made up of stills that are arranged in sequence to create the impression of motion, for example, by looking at existing examples onscreen (explore)
- work in a group to photograph objects/models moving in sequence using a digital stills/digital video camera (express)
- plan own ideas by arranging photographs of objects in sequence to create a simple storyboard (express)
- talk about how to improve their work (evaluate)
- view sequence on screen (exhibit)

Level 3	Pupils may demonstrate some of the following characteristics:
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- review existing examples of animation (explore)
- while working onscreen, review a simple storyboard, and rearrange sequence or add additional sections in order to structure a story suitable for animating (explore)
- agree roles and animate a sequence of images using a digital stills/digital video camera, trying out different possibilities (express)
- use appropriate equipment to digitally record sound, for example, voiceover (express)
- work collaboratively online if appropriate, for example, email a printscreen of work in progress (exchange)
- add and delete images, rearrange and make modifications to improve their work (evaluate)
- save work using meaningful file names at regular stages as the work develops (exhibit)
- save work to a specified location (exhibit)

Level 4	Pupils may demonstrate some of the following characteristics (with developing independence):
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- compare and contrast existing examples of animation (explore)
- take digital stills and rearrange the resulting images to make a storyboard (explore)
- source sound effects and/or music from a range of appropriate sources (explore)
- add a sound file to an animation (express)
- demonstrate an awareness of audience and purpose when animating video/moving images (express)
- upload footage to view video files on-screen (express)
- work collaboratively online when appropriate, for example, sharing edits in progress to invite specific feedback from peers (exchange)
- trim the length of animated clips when editing (evaluate)
- organise store and retrieve their edited/saved work (exhibit)
- showcase work by uploading their work to a pre-prepared class e-portfolio (exhibit)

Animation (continued)

Level 5

Pupils may demonstrate some of the following characteristics:

- investigate existing examples of animation and moving image (explore)
- independently produce a storyboard for an animation taking account of audience and purpose (explore)
- add sound files saved in appropriate formats, and place sound clips along a timeline to match sounds to images, for example, voiceover (express)
- alter frame rate to adjust the speed at which the images appear in sequence (express)
- introduce transitions (express)
- work collaboratively online where appropriate, for example, sharing a range of files (such as animation clips, sound files or their URLs) for peer evaluation (exchange)
- use appropriate editing tools to improve and amend their work, for example, edit with greater awareness of rhythm and tempo (evaluate)
- reflect on the process and the outcome of their work (evaluate)
- keep versions of early edits to revert back to if necessary (exhibit)
- showcase work by uploading their work to their own e-portfolio (exhibit)

Level 6

Pupils may demonstrate some of the following characteristics:

- research and investigate a range of examples of animated and moving image products (explore)
- experiment with different camera angles and positions, and (if appropriate) introduce camera movement with discernment, showing increasing awareness of genre conventions to create meaning in their ongoing work (explore)
- design and create an animation for a specific audience and purpose (express)
- use more than one type of shot within animation (express)
- use different camera angles, positions and movements (express)
- add titles (express)
- edit sound files to combine sounds with moving images in order to create narrative within their animation (express)
- share compressed versions of edits for peer and/or teacher review, for example, by posting to a class forum, bulletin board or blog (exchange)
- work collaboratively online, for example, by creating a storyboard and then sharing it with a wider audience online (exchange)
- review and amend initial edits taking account of audience, for example, by selecting and using transitions with more discernment (evaluate)
- prepare edited sequence to be viewed by sample audience (exhibit)

Level 7**Pupils may demonstrate some of the following characteristics:**

- research, investigate and critically evaluate examples of animated and moving image products (explore)
- storyboard animation comprehensively and with all appropriate detail (explore)
- undertake a range of roles such as scriptwriter, storyboard artist, camera operator, editor (explore)
- work independently to produce a complete short animation for a client, undertaking a range of roles such as scriptwriter, camera operator, editor (express)
- storyboard ideas in detail, using stills and anticipating what shots and transitions will be required (express)
- create a shooting script based on the storyboard (express)
- work with editing tools within a software application to achieve a high quality of finish within their work, systematically saving, reviewing and amending work as it progresses (express)
- produce high quality sound files and incorporate these within the animation (express)
- use electronic means to exchange ideas/information about edits with clients/end users showing an awareness of genre conventions and using appropriately chosen means of compression (exchange)
- decide which software to use in order to best realise intentions (evaluate)
- take account of audience reception when planning and making the animation, for example, by trying early edits on sample audiences to get an impression of their reaction (evaluate)
- manage, store and present work in suitable format and size and make it available to appropriate audiences (exhibit)
- add titles and credits in keeping with the style and intentions of the animation (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

CAD (updated for 2010/11)

N.B. Focused assessment tasks seldom meet the requirements for all 5 'E's The characteristics of pupil performances typical of each level in CAD are described below. However, tasks will tend to target specific 'E's depending on the intention of the activity.

For example, it is worth noting that in order to fulfil the requirements for 'Exchange', especially at the higher levels, the online collaboration with which pupils engage must have some clear purpose. If the work is intended to contribute to the requirements for Exchange, it is recommended that you cross-reference with the Desirable Features for Online Collaboration.

Similarly (and especially at the higher levels), consideration will need to be given as to how to provide evidence for Evaluation and Exhibit if these 'E's are to be targeted within an assessment task.

CAD software can typically be used to make drawings for the purposes of illustrating a design idea, and can also be used to prepare files for machining. There is no assumption here that designs will be manufactured. However, computer aided manufacture and CAD are closely linked. Therefore, machined products produced via CNC machines should be encouraged where possible.

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• CAD is not an appropriate activity at Level 1
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• CAD is not an appropriate activity at Level 2
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• use CAD tools to create a component or simple product, incorporating use of colour (explore/express)• use CAD to convey a product design with the information necessary to describe the design and its function/purpose (express)• dimension a drawing using given values and showing an awareness of scale (express)• work collaboratively online if appropriate, for example, email a peer or the teacher as part of the process (exchange)• make some modifications to their work (evaluate)• save work for further use using meaningful file names (exhibit)• save work to a specified location (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• explore/consider examples in order to compare/contrast examples of product design (explore)• use CAD tools to create a component or simple product, showing an awareness of scale, and incorporating use of colour and rendering (explore/express)• experiment with available rendering, lighting, etc before deciding which features to use (explore)• select and use appropriate rendering tools such as gradient fill, shadow or texture to enhance the 3D effect of the design (express)• add basic annotation of work including some dimensions and notes about the function purpose of the illustration (express)• produce 3D components using a single feature such as extrude (express)• work collaboratively online when appropriate, for example, sharing final drawings and their earlier stages to invite specific feedback from peers (exchange)• in response to feedback, make improvements to simple drawings (evaluate)• save and organise their work (exhibit)• showcase work by uploading their work to a pre-prepared class e-portfolio (exhibit)

Level 5	Pupils may demonstrate some of the following characteristics:
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- investigate existing product designs and solutions (explore)
- experiment with proposed solutions to a design problem, showing an awareness of audience and purpose and including relevant details such as size, materials, functions, component pieces, etc (explore)
- produce a viable CAD drawing, within given constraints such as size, material, etc and taking account of audience and purpose (express)
- annotate drawings using simple dimensions and text demonstrating an understanding of audience and purpose (express)
- produce 3D components using a range of features such as extrude and other tools (express)
- work collaboratively online when and where appropriate (exchange)
- make ongoing improvements to designs, for example, changing dimensions, deleting a line, filleting a corner (evaluate)
- save and organise drawings for future access and development using meaningful file names and versions (exhibit)
- save work in an alternative format, for example, using a .jpeg, printscreen, etc to document versions of a design or for inclusion in a presentation (exhibit)

Level 6	Pupils may demonstrate some of the following characteristics:
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- research and investigate existing solutions through manipulating solid models (explore)
- design, model and manipulate 3D solutions (explore)
- experiment with the use of rendering, materials, etc in 3D models in order to explore product aesthetics (explore)
- consider sizes and dimensions on drawing layouts to maximise material economy (explore)
- create annotated orthographic working drawings considering dimensions and scale (express)
- produce 3D components using more advanced features such as using an assembly of component parts that need to be combined from separate files (express)
- create an assembly from at least 2 self-produced components (express)
- e-mail drawings for peer and/or teacher review or for manufacture, for example, by posting to a class forum, bulletin board or blog (exchange)
- work collaboratively online, for example, by creating a design project and then sharing it with a wider audience online (exchange)
- comment on and discuss drawings/solid models (evaluate)
- review parts or components and consider modifications (evaluate)
- review and improve designs based on feedback from user/client (evaluate)
- manage stored work showing awareness of format, portability and size, for example, converting to appropriate file types for manufacturing (exhibit)
- publish a virtual presentation of prepared drawings, such as using 'fly-by' for specified users/clients (exhibit)

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CAD (continued)

Level 7

Pupils may demonstrate some of the following characteristics:

- research and design solutions and make predictions through the manipulation of solid models (explore)
- design, model and manipulate 3D solutions to a set brief (explore)
- explore the use of 3D models in relation to aesthetics and surface finish (explore)
- produce quality and accurate annotated working drawings using recognised orthographic standards including appropriate detail such as sectioned views, hidden detail, feature highlights, etc (express)
- combine multiple part files to produce an assembly (express)
- produce 3D components using advanced features, for example, using 'sheet metal' or lofting (express)
- use electronic means to exchange ideas/information about designs with clients/end users showing an awareness of conventions and protocols (exchange)
- comment on and discuss drawings/solid models, gather feedback and respond to the view of client/end users (evaluate)
- consider that the proposed design solution will fit within machining parameters and strategies (evaluate)
- review parts or components and text and modify as necessary (evaluate)
- incorporate images into design portfolios with consideration to file sizes and types (exhibit)
- animate and publish drawings for specified audience and purpose, considering surface finish and rendering (exhibit)
- convert files to a range of formats for manufacturing techniques (exhibit)

Data Handling

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• access databases prepared/provided by teacher (explore)• take part in a teacher led discussion on information in database (explore)• print their work (exhibit)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• ask simple questions about information in a database (explore)• organise the data that needs to be collected, for example, use a data collection sheet (express)• insert text/numeric data (express)• make observations on the information they have collected (evaluate)• save their work (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• answer simple questions by using sort and search facilities (explore)• use table in datasheet view to enter, update and delete records (explore)• work with a single table (express)• create a data collection sheet for a given topic (express)• work collaboratively online if appropriate, for example gather information from other schools through a discussion forum (exchange)• understand that digital methods are more efficient/reliable, for example, using a calculator (evaluate)• save work and give it a suitable file name (exhibit)• save work to a specified location (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• plan the information required to prove a simple hypothesis and design an appropriate data collection method (explore)• sort tables by one field (explore)• create basic forms using a wizard (explore)• create basic reports using a wizard (explore)• work with more than one table (express)• use different data types (express)• solve simple problems by creating simple queries using one criterion (express/explore)• present the outcomes of research using formats with awareness of audience (express)• work collaboratively online when appropriate (exchange)• explain benefits of using database to investigate data (evaluate)• save database in a named folder and open the file again as and when required (exhibit)• showcase work by uploading their work to a pre-prepared class e-portfolio (exhibit)

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Data Handling (continued)

Level 5 Pupils may demonstrate some of the following characteristics:

- plan the information required to prove a complex hypothesis and design an appropriate data collection method (explore)
- use appropriate data types (express)
- identify Primary Keys (express)
- solve problems using queries with more than one criteria (express/explore)
- work collaboratively online when and where appropriate (exchange)
- evaluate the planning, for example, gain feedback through a blog and discuss what they might have done differently (evaluate)
- describe the process undertaken, the outcome achieved and the strong and weak points (evaluate)
- update saved work, if and when necessary (exhibit)
- showcase work by uploading the project (exhibit)

Level 6 Pupils may demonstrate some of the following characteristics:

- solve complex problems by creating queries with multiple criteria drawn from more than one table (explore)
- import data (explore)
- filter data by selection (explore)
- sort tables by multiple fields (explore)
- use group and sort facility in queries to answer questions (explore)
- use queries with more complex combined logic, for example, find all cars of 3 named makes that cost less than £12000, etc (explore)
- use wildcards in queries (explore)
- create or edit tables using a range of digital tools to ensure data integrity, for example, appropriate data types, use of validation rules, look-up tables and input masks (express)
- integrate data from different sources, for example, use mail merge and address data to create invitations for a school function (express/explore)
- work with linked tables (express)
- work collaboratively online, for example, by creating a database and then sharing it with a wider audience online (exchange)
- explain and justify their use of ICT for work, for example, explaining why this ICT method was more appropriate than other methods (evaluate)
- routinely explain and justify their choice of software and methods (evaluate)
- add work to a digital bank, for example, display results on a website (exhibit)

Level 7 Pupils may demonstrate some of the following characteristics:

- solve problems by using calculated fields in queries or reports (explore)
- add password protection (express)
- use appropriate naming techniques (tbl, rpt, qry, frm) (express)
- use queries on multiple tables (express/explore)
- add images/attachments to a database (express)
- work collaboratively online, for example, by creating a database then sharing it with a global audience online (exchange)
- gather feedback from other users and respond to this as necessary (evaluate)
- create a Switchboard to aid navigation (exhibit)
- add command buttons to forms (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

N.B. Data Handling may also provide assessment opportunities and evidence for the cross-curricular skill of Using Maths.

Desktop Publishing

Desktop Publishing allows for the creation of published documents using page layout software. The skills and software are not restricted to paper and book publishing but are also used to create displays, posters, package designs, etc.

Level 1	Pupils may demonstrate some of the following characteristics:
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- Desktop Publishing is not an appropriate activity at Level 1

Level 2	Pupils may demonstrate some of the following characteristics:
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- create a document through use of a template supplied by the teacher (express)
- create/combine text and available pictures (express)
- spell common and familiar words (express)
- use spaces in text (show evidence of word spacing) (express)
- use full stops and some capital letters (express)
- insert an image from a given source (express)
- move an image (express)
- talk about how to improve their work (evaluate)
- save work (exhibit)
- print work if required (exhibit)

Level 3	Pupils may demonstrate some of the following characteristics:
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- open new (or existing) document (explore)
- select a template, for example, brochure, card, newspaper, leaflet, etc (explore)
- access and select images from a range of given sources (guided by teacher), for example, camera, Internet, clipart, picture bank, own artwork (explore)
- create text and alter font, size, style and colour of text (express)
- spell frequently used words correctly (express)
- display text appropriately, for example, using correct punctuation, word spacing (express)
- include titles/subtitles if appropriate (express)
- select and use appropriate tools and tool options, for example, size, colour, pencil, paintbrush, paint, fill, autoshape, shadow, special effect, wallpaper, and repeat options (express)
- understand word wrapping, that is, not using return key at end of each line of text (express)
- position an image appropriately (express)
- scale an image proportionally (express)
- work collaboratively online if appropriate (exchange)
- make changes to work if necessary (evaluate)
- save work and give it a suitable file name (exhibit)
- save work to a specified location (exhibit)

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Desktop Publishing (continued)

Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• search for and select text, images and other assets from a range of digital sources (explore)• copy and paste text appropriately from a range of digital sources (explore)• create own text (express)• format text showing an awareness of audience, for example, inserting text boxes, aligning/justifying text appropriately, using page borders, using paragraphs, text wrapping, columns or use default text flow if appropriate (express)• use a text box (and format) if appropriate (express)• create a table (express)• import a graphic and position appropriately, editing it to enhance it, for example, crop, resize, adjust contrast/brightness (express)• work collaboratively online when appropriate (exchange)• review page, rethink layout and alter to enhance the document (evaluate)• use spellchecker (evaluate)• describe improvements made to document (evaluate)• create folders for saved work (exhibit)• demonstrate awareness of file format of resolution of digital images (exhibit)• showcase work by uploading their work to a pre-prepared class e-portfolio (exhibit)
Level 5	Pupils may demonstrate some of the following characteristics:

- demonstrate clear understanding of audience and purpose (express)
- format text showing a clear understanding of audience and purpose by inserting text boxes, aligning/justifying text appropriately, using page borders, using paragraphs, text wrapping, columns, using page numbers (express)
- link text boxes to allow for text flow (express)
- use grouping, for example, picture and caption (express)
- work collaboratively online when and where appropriate (exchange)
- regularly use a 'plan, do, review' cycle to improve their work (evaluate)
- demonstrate the process through design, drafting, versions and/or discussion (evaluate)
- discuss what they might do differently next time (evaluate)
- update saved work, if and when necessary (exhibit)
- create and organise sub-folders, for example, to store images, weblinks, etc. (exhibit)
- understand file formats, for example, for faster download (exhibit)
- showcase work by uploading it to their own e-portfolio (exhibit)

Level 6 | Pupils may demonstrate some of the following characteristics:

- reference sources, for example, bookmarking, favourites (explore)
- develop work independently (express)
- customise template to enhance appearance, for example, colour schemes, bullets, etc (express)
- use appropriate tools such as paragraphing facilities, word count, headers and footers, watermarks, footnotes, etc (express)
- use ordering, for example, collage of pictures, etc (express)
- demonstrate awareness of screen or print (express)
- when developing a DTP document for specific audiences use a range of digital methods to provide and/or obtain peer support, seeking clarification (for example, from the teacher) and providing constructive feedback about the work of others (exchange)
- retain record of experimentation, for example, screen shot, etc (evaluate)
- routinely explain and justify their choice of software and methods (evaluate)
- select file format appropriate to purpose (exhibit)
- show awareness of file size (exhibit)
- compress images if appropriate (exhibit)

Level 7 | Pupils may demonstrate some of the following characteristics:

- exploit a range of tools in a sophisticated and discerning way, for example, advanced text flow (page column numbers) (express)
- demonstrate clear understanding of how layout, font, styles, colour, etc transfer from screen to print (express)
- post quality feedback for other users (exchange)
- review their use of ICT, collecting and responding to the views of others and making adjustments as necessary (evaluate)
- compress files and use indexing (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

N.B. It is implicit that Desktop Publishing is a blend of text and images.

Exploring Programming

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• use simple commands to investigate how, for example, a simple robot or an onscreen sprite moves (explore)• talk about what they did (evaluate)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• enter commands to move or change, for example, a simple robot or an onscreen sprite (explore)• understand the outcome of a command and select and use commands to generate a change in movement or value (explore)• talk about how they caused movement and how they might do it again with different commands (evaluate)• save work (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• input simple sequences of commands (explore)• use more efficient commands such as repeat (explore)• work collaboratively online if appropriate (exchange)• talk about how and why they chose commands and suggest modifications (evaluate)• save work and give it a suitable file name (exhibit)• save work to a specified location (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• input more complex sequences of commands (explore)• build and edit simple procedures (explore)• work collaboratively online when appropriate, for example, by downloading a project and editing the script (exchange)• discuss how they could improve their commands and procedures and make any necessary modifications (evaluate)• showcase work by uploading their work to a pre-prepared class e-portfolio (exhibit)
Level 5	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• build and edit more complex procedures to solve a problem (explore)• group sequences of procedures together (explore)• work collaboratively online when and where appropriate, for example, by downloading a project, editing the script(s) and then sharing it with others online (exchange)• consider the output of the procedures and use trial and error to refine these as needed (evaluate)• reflect on what they could do to make procedures most efficient (evaluate)• update saved work, if and when necessary (exhibit)• showcase work by uploading the project (exhibit)

Level 6

Pupils may demonstrate some of the following characteristics:

- analyse a problem and list inputs, outputs and procedures required (explore)
- use a range of predefined and self written modules to improve their solution (explore)
- create suitable digital diagrams to plan the solution (explore)
- use validation techniques (explore/express)
- work collaboratively online, for example, by creating a project (using predefined and self written scripts) and then sharing it with a wider audience online (exchange)
- review and improve solution based on feedback from users (evaluate)
- show awareness of file size (exhibit)
- be aware that programs may be presented in a range of formats (exhibit)

Level 7

Pupils may demonstrate some of the following characteristics:

- follow a recognised systems analysis method to solve a problem (explore)
- use a range of methods to trace and correct errors in program code (explore/express)
- work collaboratively online, for example, by creating a project, using self written script(s) and then sharing it with a global audience online (exchange)
- design and implement a test plan (evaluate)
- present the completed program in a suitable format for the stated purpose (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

Game Making (new for 2010/11)

Level 1	(Playing an existing game) Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• access a pre-prepared game as directed by the teacher and explore and interact with the onscreen environment (explore)• talk about what they did (evaluate)
Level 2	(Purposefully interacting with a game to understand how a game works) Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• explore what happens when changes are made to pre-prepared sprite/object when changing a sprite's/object's properties (explore)• explore what happens when sprites/objects interact with each other, for example, one sprite/object colliding with another (explore)• select a sprite/object from the game library (express)• talk about how they caused a sprite to move and how they might do it again with different settings in a pre-prepared game (evaluate)• save work (exhibit)
Level 3	(Begin to make a simple game – for example, a bouncing ball) Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• open a new game (explore)• access and select a range of given resources (guided by teacher), for example, images, sounds, etc (explore)• create sprite/object and control its movement through key strokes or by inputting text or numbers (express/explore)• make modifications to their work (evaluate)• talk about how and why they chose events and actions (evaluate)• save work and give it a suitable file name (exhibit)• save work to a specific location (exhibit)
Level 4	(Begin to make a more sophisticated game) Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• plan a game for a given audience with an awareness of audience and purpose (explore)• create a sequence of commands, for example, to animate a sprite (explore)• create your own game with an awareness of audience and purpose (express)• create own sprites by editing existing images (express)• discuss how they could improve the game by making modifications to different user and/or sprite object interactions (evaluate)• share games by uploading their work to a pre-prepared class portfolio (exhibit)
Level 5	(Making a game with more than one room and various interactions with consequences) Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• independently produce a storyboard for a multilevel game taking account of audience and purpose (explore)• combining and editing procedures such as events and actions (explore)• create your own sprites or backgrounds by using a range of image software tools (express)• demonstrate an understanding of audience by considering the importance of the resolution of images for use as sprite objects (express)• work collaboratively online when and where appropriate, for example, by downloading a game, editing it and then sharing it online (exchange)• showcase their work by uploading the finished game to their own e-portfolio (exhibit)

Level 6	(Make a game to a given brief and produce a solution) Pupils may demonstrate some of the following characteristics:
<ul style="list-style-type: none"> • analyse a problem and list the required events and actions (explore) • plan the solution by creating suitable digital diagrams/storyboard (explore) • use variables to store data such as scores (explore) • create a more complex multilevel game and provide suitable user feedback (express) • routinely review their use of ICT, for example, explain and justify their choices in terms of interactive features and sprite objects and how they have enhanced the game for the specific audience (evaluate) • review and improve solution based on feedback from users (evaluate) • show an awareness of format, portability and size (exhibit) • show an awareness that games may be presented in a range of formats, for example, as executable files or for upload to the internet (exhibit) 	
Level 7	(Design a game to meet a user / clients need) Pupils may demonstrate some of the following characteristics:
<ul style="list-style-type: none"> • use a range of methods to trace and correct errors, for example, through using the debugger or user testing (explore/express) • create a sophisticated multilevel game which includes the use of self written scripts (express) • use self written scripts and share with a global audience, for example, through online gaming sites (exchange) • design and implement a test plan to show how they have met the needs of the end user/client (evaluate) • test finished product on end user/client in order to collect and respond to feedback (evaluate) • retrieve and use data stored that is stored in variables (exhibit) • convert files to a range of formats (exhibit) 	
<p>Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.</p>	

Measurement and Datalogging

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• use an electronic device/datalogger to take readings of a variable such as temperature and record the readings in another medium (explore)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• use an electronic device/datalogger to take readings from a range of different variables (temperature, ph, etc) and record the readings in another medium (explore)• talk about how to improve their work (evaluate)• save results of work (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• use an electronic device/datalogger to measure a physical quantity, for example, use a temperature sensor or an electronic balance, and record data over a given period of time at set intervals (explore)• display the data collected by the electronic device/datalogger (express)• work collaboratively online if appropriate (exchange)• make changes to work if necessary (evaluate)• talk about the advantages of using an electronic device to record information (evaluate)• save results to a specified location (exhibit)• save results with a meaningful file name (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• in an investigation use an electronic device to measure a physical quantity, for example, use an electronic balance to measure the change in mass during a chemical reaction, or use an electronic thermometer to record the temperature in the classroom over a 24-hour period (explore)• where appropriate, upload data collected/stored on an electronic device/datalogger to a computer using the appropriate software (express)• present the data collected by electronic devices/datalogger in another format, for example, display data in a table or produce a suitable graph or chart (express)• write a short report about how electronic measurement and control devices are used in the home (express)• work collaboratively online when appropriate (exchange)• make improvements to work (evaluate)• save and organise their work (exhibit)• showcase work by uploading it to a pre-prepared class e-portfolio (exhibit)
Level 5	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• in an investigation choose and use electronic devices/dataloggers to measure physical quantities (explore)• where appropriate, upload data stored on an electronic device/datalogger to a computer using the appropriate software (express)• integrate the data from an electronic device/datalogger into a report, displaying the data in a suitable format, for example, a graph, a chart or a table (express)• write a short report about how you could use an electronic device/datalogger to improve something, for example, the school canteen or the school assembly hall, etc (express)• work collaboratively online when and where appropriate (exchange)• make ongoing improvements to work (evaluate)• save and organise drawings for future access and development using meaningful names and versions (exhibit)• save work in another format if necessary (exhibit)• showcase work by uploading their work to their own e-portfolio or to the school's social network (exhibit)

Level 6	Pupils may demonstrate some of the following characteristics:
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- in an investigation choose and use suitable electronic devices and select an appropriate time period for collecting data (explore)
- use software tools to carry out an analysis of the data (explore/express)
- transfer data collected to another application, for example, to a spreadsheet, and use a number of appropriate ways to display data in a meaningful way, for example, different charts, tables, summary data (express)
- write a short report on how IT devices can monitor and control devices and systems, for example, using an IT control system in a greenhouse or using IT in traffic control systems (express)
- work collaboratively online, for example, by sharing data findings with a wider audience online (exchange)
- review and improve data findings based on feedback from users (evaluate)
- evaluate and justify process and outcomes and reference sources (evaluate)
- select appropriate ICT tools to amend work as it is assembled, taking account of intended audience and purpose (evaluate)
- publish data to a world wide audience (exhibit)

Level 7	Pupils may demonstrate some of the following characteristics:
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- in response to a complex problem, select appropriate electronic devices to measure physical data, for example, choose and use electronic measuring devices to investigate a range of commercially available antacids to determine which is the most effective, or investigate the effect of exercise on heart rate by monitoring their heart rate during different activities (explore)
- record data remotely using at least two sensors (express)
- analyse the data using the available software tools (explore/express)
- transfer the data to a different software package and manipulate the data to generate further graphical information (express)
- write a report integrating data collected by electronic measuring devices with other appropriate data, for example, charts, graphs, diagrams, digital photographs, internet, etc (express)
- work collaboratively online, for example, by presenting and sharing data with a global audience online (exchange)
- write about real life use of IT control system and describe how feedback is used to maintain control systems (evaluate)
- retain copies of early versions of work saved in suitable formats, and use examples of the stages of development to showcase the processes used in making the work (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

Music Technology

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• explore and interact with a digital device, for example, use various control buttons on a CD/minidisk/MP3 player (explore)• record in real-time to capture a performance, for example, a song or an instrumental performance (exhibit)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• find, select, open and listen to given selection of pre-recorded sounds (explore)• use loop-based software to create simple musical structures, for example, selecting and repeating a drumbeat and a bass line (express)• take part in a discussion about how they might alter their work (evaluate)• save sound files/recordings to a specific location (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• source audio files from more than one location, such as a given selection of CDs, pupil's own mp3 library or copyright free .wav files from the Internet (explore)• use music technology to provide accompaniment for group or individual performances, for example, set up and play backing tracks for singers (explore)• use digital editing software to adapt existing music/sound files, for example, drag and drop, splitting a song to indicate sections (verse, chorus, intro, etc) (express)• use loop-based software to create simple and appropriate musical structures in a multi-track composition (express)• work collaboratively online if appropriate (exchange)• make modifications to their work (evaluate)• save changes to work using meaningful file names (exhibit)• record audio in a digital audio workstation, for example, using a USB microphone (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• research song structure through the use of Music Technology such as exploring the structure of well-known rock songs, dance tracks, etc (explore)• create own music, previewing and arranging loops to fit context (express)• play in or program own MIDI-based parts (express)• use software tools to control gain/input level (express)• work collaboratively online when appropriate (exchange)• make improvements to their work (evaluate)• save changes to work and keep earlier versions as work progresses (exhibit)• understand and use various file formats to save work and to make it available to different users and audiences (exhibit)• showcase work by uploading their work to pre-prepared class e-portfolio or to the school's social network (exhibit)

Level 5	Pupils may demonstrate some of the following characteristics:
<ul style="list-style-type: none"> • open an instrument track within software to play in, or program own MIDI-based parts (explore) • set up and edit digital effects inside a digital audio workstation (express) • set up internal or external sound card to record microphone or instrument-based audio track (express) • use automated volume and pan commands in audio software to create and mix a finished product with a sense of audience and purpose (express) • work collaboratively online where appropriate (exchange) • when contributing to group work, assume a specific role, for example, setting up of microphones, monitoring input levels (exchange) • carry out ongoing improvements demonstrating a clear understanding of audience and purpose and reflect upon process and outcome (evaluate) • showcase work by uploading their work to their own e-portfolio or to the school's social network (exhibit) 	

Level 6	Pupils may demonstrate some of the following characteristics:
<ul style="list-style-type: none"> • use a digital performance element, for example, real time manipulation of MIDI parts (express) • edit synth and effects presets to increase impact and expression for specific audiences and purposes (express) • collaborate on-line, for example, share self-produced sound files (exchange) • when developing tracks for specific audiences, use a range of digital methods to provide peer support, seeking clarification (for example, from the teacher) and providing constructive feedback about the work of others (exchange) • evaluate and justify processes and outcomes used in their work (evaluate) • select appropriate ICT tools to amend work as it is assembled, taking account of intended audience and purpose (evaluate) • manage stored work, understanding and using the effects of altering sample-rate and bit-rate on a recording and the effect on file size and quality (exhibit) 	

Level 7	Pupils may demonstrate some of the following characteristics:
<ul style="list-style-type: none"> • use and edit dynamic processing to increase impact of final master (express) • share ideas in an online forum and post quality feedback for other users and respond to this as necessary (exchange) • adapt mixing and mastering outcomes in response to the specific views of end users and client needs (evaluate) • save music files with consideration of file sizes/types and convert files to a range of file formats such that they are available to different users and audiences (exhibit) • retain copies of early versions of work saved in suitable formats, and use examples of the stages of development to showcase the processes used in making the work (exhibit) 	

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

Online Collaboration

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• Online Collaboration is not an appropriate activity at Level 1
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• Online Collaboration is not an appropriate activity at Level 2
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• log on to a VLE (exchange)• navigate through a VLE (explore)• understand that a VLE/learning platform, etc. can be used for communicating information, for example, for making announcements (exchange)• respond to an online prompt/posting in a VLE (exchange)• send an email to the class teacher (exchange)• communicate as a class with others, for example, by contributing to a class video-conferencing activity (exchange)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• navigate through a VLE/course and access materials and/or courses (explore)• take part in an online discussion forum, posting responses to other participants (exchange)• understand that communication through a VLE, etc is a two way process and there is a need for participants to check for responses (exchange)• track changes, make modifications to collaborative documents, for example, amend a wiki, contribute to a Google document etc (exchange)• understand that there are synchronous and asynchronous forms of communication, for example, instant messaging, email (exchange)• communicate with others independently, for example, by video-conferencing or using a webcam (exchange)• send an e-mail with an attachment (exchange)• showcase work by uploading their work to a pre-prepared class e-portfolio (exhibit)
Level 5	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• make timely responses when participating in a VLE/online forum, understanding the need to log on regularly (exchange)• post responses and attachments (exchange)• initiate new threads, for example, in a discussion forum (exchange)• use key features of collaborative software such as sharing materials and resources (exchange)• showcase work by uploading it to their own e-portfolio or to the school's social network (exhibit)

Level 6	Pupils may demonstrate some of the following characteristics:
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- demonstrate evidence of planning for online participation when working on a collaborative project with shared outcomes (exchange)
- contribute constructively in a collaborative learning community by posting quality responses and attachments of a more reflective nature (exchange)
- provide peer support by asking questions, seeking clarification, providing constructive feedback to each other (exchange)
- use a range of collaborative features, for example, Digital Drop Box, File Exchange, etc as part of the process of developing and/or evaluating work (exchange)

Level 7	Pupils may demonstrate some of the following characteristics:
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- demonstrate they are proactive members of a community of learners by assuming responsibility of moderating the course and/or populating some of the content for access by other participants (exchange)
- post quality responses of a more reflective and evaluative nature to initiate, direct and summarise online discussion (exchange)
- adopt a role/manage a task or a project to achieve a shared outcome, for example, by taking on the role of time keeper/chair/reporter to aid an online discussion (exchange)
- encourage participation, for example, motivate reluctant participants to log on more frequently, by providing occasional reminders, and asking questions to draw others in (exchange)
- demonstrate commitment showing clear evidence of collaboration (exchange)
- when moderating a VLE, establish and enforce acceptable conventions and protocols, for example, by discouraging flaming, message spamming, flooding, off topic responses, etc and intervene if and when necessary (exchange)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

Presentation

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• enter text on to a slide (express)• insert an image and/or voiceover from a pre-prepared folder (express)• with help, show the slide (exhibit)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• select and use a simple transition (explore)• enter text on to slides (express)• insert images (express)• add a sound (express)• take part in a discussion about how to improve their work (evaluate)• save presentation (exhibit)• with teacher's help, show presentation to the group or class (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• choose and use a slide layout (express)• add a background colour (express)• combine selected images/sound with text (express)• create text and then alter font, size, style and/or colour (express)• select text from given sources and edit by altering font, size, style and/or colour of text (express)• work collaboratively online if appropriate (exchange)• make changes to their work if necessary (evaluate)• save presentation using meaningful file name (exhibit)• independently show presentation to the group or class (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• when designing a presentation for a given audience and purpose, select and use a range of appropriate layouts for each slide, for example, select pre-set layouts from the provided templates (explore)• select and use a number of transitions (explore)• apply slide design templates (express)• create a multimedia presentation showing an awareness of audience and purpose (express)• create text and format it to show an awareness of audience and purpose (express)• use a range of features, for example, text boxes, images, borders, bullets and numbering (express)• edit images to suit audience and purpose, for example, resize, rotate, use border, sharpen (express)• work collaboratively online when appropriate (exchange)• e-mail presentation as an attachment to the teacher (exchange)• make improvements to their work, for example, using slide master or spell checker (evaluate)• describe improvements made to presentation (evaluate)• save presentation in a named folder and be able to access it when required (exhibit)• showcase work by uploading to a pre-prepared class e-portfolio (exhibit)• deliver presentation to the group or class (exhibit)

Level 5	Pupils may demonstrate some of the following characteristics:
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- when creating a slide presentation, demonstrate a clear sense of audience and purpose in the selection and use of assets such as moving/still images, sound and text (explore)
- select and use transitions and/or animations appropriate to audience and purpose (explore)
- create a multimedia presentation, demonstrating a clear understanding of audience and purpose (express)
- use a wider range of features to enhance the presentation, for example, hyperlinks, sound and video files, insert and embed objects (express)
- edit images to demonstrate clear understanding of audience and purpose, for example, crop, recolour, adjust brightness, contrast (express)
- work collaboratively online when and where appropriate (exchange)
- regularly use a 'plan, do, review' cycle to improve their work (evaluate)
- alter sequencing of slides if necessary (evaluate)
- talk about and describe the process they have undertaken and discuss what they might do differently (evaluate)
- create a loop for slide show and/or use suitable timings if appropriate (exhibit)
- save presentations and assets in an organised set of folders and sub-folders, updating and deleting files as required (exhibit)
- showcase work by uploading it to their own e-portfolio or the school's intranet (exhibit)

Level 6	Pupils may demonstrate some of the following characteristics:
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- when creating a slide presentation for a specific audience and purpose, select and justify choices, for example, sound, still/moving image, text, etc (explore)
- source suitable buttons for use with action/navigation (explore)
- use more sophisticated slide presentation techniques, for example, navigation buttons, master slides, speaker notes, sound and moving image files (express)
- when developing presentations for specific audiences, use a range of digital methods to provide peer support, seeking clarification (for example, from the teacher) and providing constructive feedback about the work of others (exchange)
- routinely review their use of ICT, for example, explain and justify their choices in terms of multimedia features used and how these have enhanced the presentation for the specific audience/purpose (evaluate)
- show an awareness of format and size of assets used when storing presentation/files, for example, compressing files if necessary (exhibit)

Level 7	Pupils may demonstrate some of the following characteristics:
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- when developing a solution for a client, select, evaluate, justify and reference sources used (explore)
- when developing a multimedia presentation for an identified client, use a range of software, for example, digital video, sound/music, animated sequences, flash files, etc to produce a solution that meets defined user needs (express)
- share design ideas in an online forum and post quality feedback for other users (exchange)
- review their use of ICT by gathering feed back from a client and/or end users and make adjustments as necessary (evaluate)
- compress files and create an executable version (pack and go, run-time version) (exhibit)
- set up a slide show for running from a kiosk or display screen for an end user (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

N.B. Learners should be given opportunities to deliver their presentations to others as part of the Evaluate requirement. The oral delivery of the presentation may also provide assessment opportunities and evidence for the cross-curricular skill of Communication.

Researching

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• select a familiar picture or word from a given bank for a specific topic, for example, ourselves, homes (explore)• match picture to word (explore)• print their work (exhibit)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• select an appropriate picture or sound from a wider range and use it purposefully, for example, farm animals/zoo animals (explore)• take part in a whole class discussion about their choices (evaluate)• save their work (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• use search facilities, directed by the teacher, for example, given Internet sites or given CD Rom (explore)• search for documents, sound or pictures on Internet or shared folders (explore)• find content (explore)• demonstrate some awareness of referencing sources (explore)• discuss where information on a topic might be found (explore)• work collaboratively online if appropriate (exchange)• discuss where information on a topic might be found (evaluate)• talk about their choices, restating information, sometimes supported by evidence (evaluate)• save work and give it a suitable file name (exhibit)• save work to a specified location (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• make suggestions on searches for a given topic (explore)• gather information from a limited range of sources with some relevance, quality, depth and balance (explore)• select information to download in suitable format, for example, partial content from a website (explore)• edit found text (explore)• provide some reference to sources (explore)• work collaboratively online when appropriate (exchange)• talk about reasons for their choices, for example, choice of text, images, sounds and moving images (evaluate)• show an awareness that not all information is accurate (evaluate)• add appropriate websites to favourites/bookmarks (exhibit)• showcase work by uploading it to a pre-prepared class e-portfolio (exhibit)

Level 5	Pupils may demonstrate some of the following characteristics:
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- gather information in an organised manner from a range of print and digital sources (explore)
- search for information from a range of sources, for example, CD Rom, Internet, LNI and carry out more advanced searches (explore)
- analyse the evidence collected (explore)
- show an awareness that not all information is objective (explore)
- reference sources and provide supporting notes (explore)
- select, copy and paste selected relevant information (explore/express)
- work collaboratively online when and where appropriate (exchange)
- begin to evaluate in terms of audience and purpose (evaluate)
- store and organise bookmarks (exhibit)
- store downloaded text, pictures and sound in appropriate format for further use (exhibit)
- showcase work by uploading it to their own e-portfolio (exhibit)

Level 6	Pupils may demonstrate some of the following characteristics:
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- independently reference sources (explore)
- independently refine searches to gather and download assets from a range of quality sources (explore)
- evaluate found assets for authenticity and for audience/purpose (explore)
- demonstrate understanding of validity of information and be discriminating in its use (explore)
- carefully analyse information collected and draw appropriate conclusions supported by evidence (explore)
- work on a collaborative research project to communicate and exchange information/assets (exchange)
- explain and justify their use of ICT for each piece of work, for example, explaining why an ICT method was more appropriate than non-ICT method (evaluate)
- routinely explain and justify their choice of software and methods (evaluate)
- store and organise bookmarks selectively (exhibit)
- download text, still and moving images and sound, identifying and using different formats for storage of assets, for example, jpegs, gifs, formatted/unformatted text (exhibit)
- organise the storage of found assets (exhibit)
- showcase work by uploading it to their own e-portfolio and structuring it (exhibit)

Level 7	Pupils may demonstrate some of the following characteristics:
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- use advanced search techniques to refine searches, for example, "quotes", operators (+, -) (explore)
- develop questioning/research independently (explore)
- verify found assets by cross-referencing a number of sources to ensure accuracy and authenticity (explore)
- reference sources, for example, produce lists of sites and comments on their usefulness (explore)
- take account of web standard sites when preparing to share materials for particular audiences and purposes (exchange)
- review their use of ICT and make adjustments as necessary (evaluate)
- gather feedback from other users and respond to this as necessary (evaluate)
- download and store various assets, taking into account format, size, copyright and versioning (exhibit)
- showcase work by uploading their work to their own e-portfolio and structuring it logically (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

Using Modelling

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• access spreadsheets prepared/provided by teacher (explore)• produce a basic graph from given data using simple software (express)• print the spreadsheet or graph (exhibit)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• answer simple questions using the information in a given spreadsheet (explore)• enter text and numeric data into a worksheet (express)• insert a graphic (express)• make observations about the data they have collected (evaluate)• save their work (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• enter records into a worksheet selecting appropriate data types (explore)• make predictions and solve mathematical problems using data (explore)• use simple mathematical operators such as +, -, /, *, to calculate basic arithmetic problems (explore)• use of formatting such as border/shading appropriately (express)• use suitable labels/titles for data (express)• resize fields to ensure all data is displayed (express)• use a variety of font sizes and styles, for example, bold, italic, underline, etc. (express)• create a graph using Chart Wizard (express)• work collaboratively online if appropriate (exchange)• understand that digital methods are more efficient/reliable (evaluate)• save a spreadsheet using a suitable file name (exhibit)• save work to a specified location (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• plan the collection of information required to prove a hypothesis (explore)• carry out simple 'What if?' scenarios (explore)• sort by a single field (explore)• format cells with appropriate data types and alignment (express)• choose and create an appropriate graph using Chart Wizard, for example, pick the most suitable type from a choice of line graph, bar chart or pie chart (express)• add header/footer (express)• work collaboratively online when appropriate (exchange)• explain benefits of using spreadsheet for example to create/manipulate information (evaluate)• discuss their work and make changes based on feedback (evaluate)• organise, store and retrieve their data (exhibit)• save spreadsheet in a named folder and open the file again as and when required (exhibit)

Level 5	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none"> • make use of some features of the available digital tools to analyse data and solve problems, for example, built-in spreadsheet functions such as SUM, AVERAGE, MIN and MAX to help make decisions or using a graphic calculator to explore slope (explore) • sort by multiple fields (explore) • design and create suitable structures and make use of the features of digital tools to analyse the data (explore/express) • use relative cell referencing (express) • hide cells, for example, use Freeze Panes (express) • give appropriate names to worksheets and workbook (express) • create a fit for purpose graph including appropriate title, axis labels and legend (express) • use borders and shading/merge cells (express) • add comments to assist a user (express) • work collaboratively online when and where appropriate (exchange) • consider their planning, and discuss what they might have done differently (evaluate) • describe the process undertaken and make improvements based on feedback (evaluate) • display worksheets in formulae/data view (exhibit) • print to one page including gridlines/row and column headings (exhibit) • showcase work by uploading the project (exhibit)
Level 6	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none"> • make use of a wider range of features of digital tools to analyse data and solve problems, for example, incorporating built-in spreadsheet functions into more complex formulae or using a graphic calculator to work with matrices (explore) • use filter/autofilter (explore) • use conditional formatting to identify significant patterns (explore) • use of multiple worksheets (express) • use absolute cell referencing to cut down on data repetition (express) • create charts using non-adjacent columns (express) • use validation (express) • import data into spreadsheets from text/csv format (express) • work collaboratively online, for example, by creating a database and then sharing it with a wider audience online (exchange) • explain and justify their use of ICT for work, for example, explaining why this ICT method was more appropriate than other methods (evaluate) • routinely explain and justify their choice of software and methods (evaluate) • discuss and re-evaluate their hypothesis based on the results of their modelling (evaluate) • protect spreadsheet cells to assist basic users (exhibit) • export updatable graphs to other applications (exhibit) • add work to a digital bank, for example, display spreadsheet on a website (exhibit)
Level 7	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none"> • investigate more complex hypothesis using a full range of suitable digital tools and combining different software packages (explore) • use automated features, for example, Goal Seek or macros (express) • use complex functions such as IF, COUNTIF, SUMIF, VLOOKUP statements to help make decisions (express) • work collaboratively online, for example, by creating a spreadsheet then sharing it with a global audience online (exchange) • gather feedback from other users and respond to this as necessary in a continuous process (evaluate) • explain how they solved a hypothesis by modelling or give detailed, correct reasoning for the hypothesis remaining unsolved (evaluate) • showcase work by uploading their work to their own e-portfolio or to the school's social network (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

N.B. Using Modelling may also provide assessment opportunities and evidence for the cross-curricular skill of Using Maths.

Web Design

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• visit a given website (explore)• talk about what they like or do not like, for example, relating to the content of the website (evaluate)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• use a given website (explore)• talk about which ICT features they like or do not like in a given website, for example, they will be using some of the language associated with web design, such as images, font, background colours, etc (evaluate)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• discuss features found in a range of given websites in terms of, for example, design, ease of use, readability, etc. (explore)• create a plan/storyboard for their website (led by the teacher) (express)• contribute to the design of a webpage, working together in a group with allocated roles, for example, sourcing images or designing individual pages (express)• combine text, sound, images, etc for inclusion on their webpage (express)• spell frequently used words correctly (express)• know about features such as links, homepage etc. (express)• understand how web sites are used for communicating information and contain navigation features (exchange)• show an awareness of the dangers of posting/uploading personal information for a wider audience (exchange)• carry out changes to work if necessary (evaluate)• save work and give it a suitable file name (exhibit)• save work to a specified location (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• create a digital or manual site map, such as a tree diagram (express)• produce a website of at least three linked pages showing a sense of layout combining text, sound, still or moving images, etc and showing an awareness of audience and purpose (express)• use template driven applications to create a website, for example, either an appropriate software package or an online source (express)• demonstrate an awareness of safe and acceptable online behaviour (exchange)• evaluate work and make changes as appropriate (evaluate)• use spellchecker (evaluate)• create folders for saved work (exhibit)• showcase work online (exhibit)

Level 5	Pupils may demonstrate some of the following characteristics:
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- select and use an appropriate web creation package for their web design activity (explore)
- create a digital site map using a mind-mapping tool or flow chart tool (express)
- create and build a multi page website, for example, online newsletter with navigational links to other pages/email/other web sites (express)
- integrate found and self produced text/sound/still and moving images into website (express)
- demonstrate safe and acceptable online behaviour (exchange)
- regularly use a 'plan, do, review' cycle to improve their work (evaluate)
- talk about and describe the process they have used and discuss what they might do differently (evaluate)
- publish and present website showing a clear understanding of audience and purpose (exhibit)

Level 6	Pupils may demonstrate some of the following characteristics:
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- produce a web-site of at least 5 linked pages for a specified audience and purpose by using a web creation package (express)
- show evidence of planning in the design of web pages and navigation (express)
- manipulate and integrate found and self produced text/sound/still and moving images, for example, select appropriate textures, patterns, etc; format images for web use taking account of resolution/file format/file names (express)
- demonstrate safe and acceptable online behaviour using agreed protocols (exchange)
- routinely review their use of ICT, for example, explain and justify their choices of features and how these have enhanced the website for the specific audience/purpose (evaluate)
- publish to a world wide audience (exhibit)

Level 7	Pupils may demonstrate some of the following characteristics:
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- use a web creation package to create a site for a specified end user/purpose, for example, create a website to promote an event or a product (express)
- create advanced interactivity and functionality of features such as roll over buttons, drop down menus, links, breadcrumbs, illustrations, photographs, logos, textures, patterns and animations (express)
- demonstrate safe and acceptable online behaviour, taking account of web standards, for example, <http://webstandards.org> (exchange)
- demonstrate collaborative approaches to website development by working with a real end user, for example, try out with a test audience/focus group (exchange)
- collect and respond to feedback from end users by making changes to suit client needs (evaluate)
- upload to web space for end user, testing for browser compatibility (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

N.B. It is implicit that websites are published at Level 5 and beyond.

Working with Images

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• select digital image, for example, drag and drop own photograph from a picture bank (explore)• create picture using default tools, such as pencil, paintbrush (express)• insert a picture by using stamp tool (express)• print their work (exhibit)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• insert an image from a given source (express)• move an image to reposition it on screen (express)• use a wider range of tools, for example, fill, shape, special effects, etc. (express)• choose and use colour appropriately for the purposes of the work, for example, to make a distinction between object and background (express)• begin to use tools appropriately, for example, thin/thick pencil (express)• talk about how to improve their work (evaluate)• save their work (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• access images from a range of given sources, (guided by teacher), for example, camera, Internet, Clip Art, own artwork scanned by teacher (explore)• insert an image and move it around (express)• scale an image proportionally (express)• select appropriate tools and tool options, for example, size, colour, pencil, paintbrush, paint, fill, special effect, wallpaper and/or repeat options (express)• work collaboratively online if appropriate (exchange)• make changes to work if necessary (evaluate)• save work and give it a suitable file name (exhibit)• save work to a specified location (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• access and select images from a range of sources, for example, a CD-ROM, a search on Google, etc (explore)• work with images that may include photo, own scanned image, still from film, Clip Art or stock image (express)• demonstrate an awareness of audience and purpose when working with images (express)• use borders, text boxes, background and WordArt, if appropriate (express)• crop an image (express)• edit image to enhance it (express)• work collaboratively online when appropriate (exchange)• explain changes to an image (observation/verbal) (evaluate)• demonstrate awareness of file format of images (exhibit)• organise storage of their work (exhibit)• showcase work by uploading their work to a pre-prepared class e-portfolio (exhibit)

Level 5	Pupils may demonstrate some of the following characteristics:
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- demonstrate an understanding of audience and purpose when selecting images from a range of sources by choosing from among found images, scanned images and self produced assets (express)
- demonstrate an understanding of audience for screen and print, for example, consider the importance of resolution of images when viewed onscreen or in print (express)
- use a range of image software tools, for example, shape, colour palette, selection, freehand, etc (express)
- work collaboratively online when and where appropriate (exchange)
- carry out ongoing improvements to enhance work, through design, drafting and versions as the work develops (evaluate)
- review work on-screen as it is assembled, and incorporate changes (evaluate)
- understand file formats, for example, for faster download (exhibit)
- organise, store and maintain their work, saving early drafts and work in progress (exhibit)
- showcase work by uploading it to their own e-portfolio (exhibit)

Level 6	Pupils may demonstrate some of the following characteristics:
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- select and evaluate images from a range of sources justifying choice in terms of specific audiences and purposes (explore)
- reference sources, for example, list of websites, scanned photographs (explore)
- use advanced image editing software features, for example, multiple layers, masks, colour control, filters, etc (express)
- assemble a completed image by manipulating and integrating component parts such as image, layers, text to create a result that is for a specific audience or purpose (express)
- select appropriate tools to amend work as it is assembled, taking account of intended audience and purpose (evaluate)
- retain record of experimentation, for example, keep earlier drafts (exhibit)
- choose file formats showing awareness of format, portability and size, for example, export as .jpg, .gif, .png, .psd files (exhibit)

Level 7	Pupils may demonstrate some of the following characteristics:
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- use a wide range of assets, (for example, Internet, scanner, self produced) to produce a solution, or part of a solution, for a specific client (explore)
- show how they have designed a solution to meet the needs of the user (explore)
- use advanced image design features, for example, cut and paste from within groups of layers, create complex (multi-layer) images, 'extract' from background, etc (express)
- adapt material using appropriate software tools to generate an outcome targeted at a specific audience and suitable for the intended purpose (express)
- share design ideas in an online forum, gather feedback from other users and respond to this as necessary (exchange)
- review their use of ICT to manipulate images by collecting feedback on their products and making adjustments as necessary (evaluate)
- select and use combinations of tools and commands to create a look and feel in keeping with intentions and the purpose of the work (evaluate)
- choose appropriate formats for different needs, for example, web pages, print (exhibit)
- retain copies of early versions of work saved in suitable formats, and use examples of the stages of development to showcase the processes used in making the work (exhibit)

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

Working with Moving Images (updated for 2010/11)

In this area of practice there are a number of ways in which to begin working with the conventions associated with moving image. Very young pupils can be introduced to using hardware in a simple straightforward manner, for example, by capturing their own moving images using a digital camera. It is for this reason that the Desirable Features below mention that pupils might choose to record their own material right from the outset. However, it is also worth bearing in mind that some of the most sophisticated activities associated with editing moving image footage may not actually require that the pupil was involved in the original capturing of that footage, for example, when they are working with found or archive footage. Therefore, when considering the level of demand inherent in work that is being assessed, it is not the case that each of the characteristics below need to be exhaustively met for each level.

N.B. Focused assessment tasks seldom meet the requirements for all 5 'E's. The characteristics of pupil performances typical of each level in Moving Images are described below. However, tasks will tend to target specific 'E's depending on the intention of the activity.

For example, it is worth noting that in order to fulfil the requirements for 'Exchange', especially at the higher levels, the online collaboration with which pupils engage must have some clear purpose. If the work is intended to contribute to the requirements for Exchange, it is recommended that you cross-reference with the Desirable Features for Online Collaboration.

Similarly, (and especially at the higher levels), consideration will need to be given as to how to provide evidence for Evaluation and Exhibit if these 'E's are to be targeted within an assessment task.

Level 1	Pupils may demonstrate some of the following characteristics (producing own assets or working with given assets):
	<ul style="list-style-type: none">• view and respond to a variety of moving image products, for example, advertisements, films, documentaries (explore)• with teacher assistance, take photos of people and places as a stimulus for digital storytelling ideas (express)
Level 2	Pupils may demonstrate some of the following characteristics (producing own assets or working with given assets):
	<ul style="list-style-type: none">• see that a story can be told by placing still or moving images in different sequences (explore)• work in a group to photograph objects/people using a digital camera, capturing images in order to tell a story (express)• arrange a sequence of still images to develop narrative, for example, put together still images in order to produce a comic strip or photo story (express)• talk about how to improve their work (evaluate)• save their work (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics (producing own assets or working with given assets):
	<ul style="list-style-type: none">• review existing examples of moving image work (explore)• plan digital story sequences using a storyboard, for example, with photos or digitally sourced images (explore)• with assistance, produce and/or use given stills or moving image footage to tell a story (express)• with assistance, begin to tell a story with still or moving image footage within a basic, timed editing environment such as presentation software or introductory editing software (express)• with assistance, add sound to the sequence, for example, music (express)• work collaboratively online if appropriate, for example, email a printscreen of work in progress (exchange)• make some modifications to improve their work (evaluate)• save work using meaningful file names at regular stages as the work develops (exhibit)• save work to a specified location (exhibit)

Level 4	Pupils may demonstrate some of the following characteristics (producing own assets or working with given assets):
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- compare and contrast existing examples of moving image work (explore)
- source sound effects/music (explore)
- rearrange captured clips and connect sound and images (explore)
- carry out a group role using a digital camera to capture stills, use a digital video camera to capture moving image, or source and select found moving image footage/stills imagery (express)
- record appropriate sound, for example, voiceover/narration (express)
- use appropriate editing tools to assemble and amend their work (express)
- work collaboratively online when appropriate, for example, share edits during the process to invite specific feedback from peers (exchange)
- review assembled footage and make changes to work as it develops (evaluate)
- organise, store and retrieve their saved/edited work (exhibit)
- show awareness of the audience and purpose for their work (exhibit)

Level 5	Pupils may demonstrate some of the following characteristics (producing own assets and working with some given assets):
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- investigate existing examples of film and moving image (explore)
- in a group, plan, storyboard and create a working edit for a moving image production (explore)
- with increasing discernment: use a digital camera to capture stills, use a digital video camera to capture moving image, or source found moving image footage (express)
- record live sound to be incorporated into an edit (express)
- use digital video editing software to assemble and edit sequences of still and moving image footage, with sound, and showing clear understanding of audience and purpose (express)
- use appropriate transitions, for example, dissolve, fade, etc (express)
- work collaboratively online where appropriate, for example, share a range of files (such as movie clips, sound files or their URLs) for peer evaluation (exchange)
- use appropriate editing tools to improve and amend their work, for example, edit with greater awareness of rhythm and tempo (evaluate)
- reflect on the process and the outcome of their work (evaluate)
- keep versions of earlier edits to revert back to if necessary (exhibit)
- showcase work by uploading their work to their own e-portfolio or to the school's social network (exhibit)

Level 6	Pupils may demonstrate some of the following characteristics (producing own assets and working with some given assets):
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- research and investigate a range of examples of film and moving image products (explore)
- experiment with different camera angles and position, introduce camera movement if appropriate, or use and adapt found moving image footage with discernment showing increasing awareness of genre conventions to create meaning in their ongoing work (explore)
- capture, assemble and edit digital video to create a moving image product for a specific audience and purpose (express)
- use several types of shot within the edit, such as establishing shot, pan, close-up (express)
- use a range of camera angles and movements as appropriate to the moving image production (express)
- add appropriate titles (express)
- edit sound files to combine sound and images in order to create narrative or rhythm within their production (express)
- share compressed versions of edits for peer and/or teacher review, for example, by posting to a class forum, bulletin board or blog (exchange)
- work collaboratively online, for example, by creating a storyboard and then sharing it with a wider audience online (exchange)
- make more discriminating use of effects, titles, and transitions (evaluate)
- cope with different formats, for example, widescreen (evaluate)
- respond to comments from test audiences by updating work in progress (evaluate)
- create with a specific audience in mind and with a clear sense of purpose (exhibit)
- document saved footage and files in appropriate formats and back-up copies when necessary (exhibit)

Working with Moving Images (continued)

Level 7	Pupils may demonstrate some of the following characteristics (producing own assets and working with some given assets):
<ul style="list-style-type: none">• research, investigate and critically evaluate examples of film and moving image products (explore)• storyboard film comprehensively and with all appropriate detail (explore)• undertake a range of roles such as scriptwriter, storyboard artist, camera operator, editor, etc (explore)• work independently with digital video editing tools to achieve a high quality of finish when making a complete moving image product using digital video footage and stills (express)• produce high quality sound files to complement the sequence of images (express)• select and use an appropriate range of shots, angles, positions and camera movements (or found footage) within their film and make creative and inventive use of editing conventions (express)• use electronic means to exchange ideas/information about edits with clients/end users showing an awareness of genre conventions and using appropriately chosen means of compression (exchange)• decide which software to use in order to realise intentions (evaluate)• use specialist vocabulary associated with film to describe and analyse what they are doing (evaluate)• evaluate and review the process and outcome of their film, showing clear consideration of audience and adjusting their work as necessary (evaluate)• add titles and credits in keeping with the style and intentions of the film (exhibit)• retain in appropriate file formats and using appropriate storage media, back-up copies of files used to assemble the completed sequence (exhibit)	
Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.	

Working with Sound

Level 1 Pupils may demonstrate some of the following characteristics:

- record in real-time to capture an activity, a voiceover or a performance, for example, record a song or a poem (exhibit)

Level 2 Pupils may demonstrate some of the following characteristics:

- open, listen to and select pre-recorded sounds (explore)
- with more independence, record in real-time to capture an activity, a voiceover or a performance (express)
- capture soundscape information with recording device, for example, environmental sounds (express)
- take part in a discussion about how they might alter their work (evaluate)
- save chosen sounds to a specific location (exhibit)

Level 3 Pupils may demonstrate some of the following characteristics:

- transport files from recording device to editing device, for example, sound card, USB, bluetooth (explore)
- drag in sound clips in sequence (explore)
- use a variety of pre-recorded or given sounds (express)
- use software to edit existing sound files, for example, crop a sound clip (express)
- work collaboratively online if appropriate (exchange)
- make modifications to their work (evaluate)
- save changes to work using meaningful file names (exhibit)

Level 4 Pupils may demonstrate some of the following characteristics:

- select and edit sound files from a range of sources (explore)
- plan a product with a sense of audience and purpose (explore)
- create a product with an awareness of audience and purpose, for example, sound effects/audio track (express)
- edit, refine and modify sound file, for example, cut, paste, sequence, delete (express)
- work collaboratively online when appropriate (exchange)
- make improvements to their work (evaluate)
- save changes to work and keep earlier versions as work progresses (exhibit)
- save/store own work to an appropriate location for future use (exhibit)
- understand and use various file formats to save work and to make it available to different users and audiences (exhibit)
- showcase work by uploading it to pre-prepared class e-portfolio or to the school's social network (exhibit)

continued overleaf

Working with Sound (continued)

Level 5	Pupils may demonstrate some of the following characteristics:
<ul style="list-style-type: none">• select, edit and evaluate sound files from a range of sources, for example, music loops, recorded sound, CDs, etc (explore)• plan a product with clear understanding of audience and purpose (explore)• create a product with clear understanding of audience and purpose (express)• work with more than one track (express)• adjust volume within software (express)• work collaboratively online where appropriate (exchange)• when contributing to group work, assume separate role, for example, sharing files to edit before assembling whole (exchange)• carry out ongoing improvements demonstrating a clear understanding of audience and purpose and reflect upon role, process and outcome (evaluate)• understand and use appropriate file formats for audience (exhibit)• showcase work by uploading it to their own e-portfolio or to the school's social network (exhibit)	

Level 6	Pupils may demonstrate some of the following characteristics:
<ul style="list-style-type: none">• independently create a multi-layered sound track for a specific audience and purpose (express)• introduce effects to increase impact and expression (express)• collaborate online, for example, share self-produced sound files (exchange)• when developing tracks for specific audiences, use a range of digital methods to provide peer support, seeking clarification (for example, from the teacher) and providing constructive feedback about the work of others (exchange)• evaluate and justify process and outcomes and reference sources (evaluate)• select appropriate ICT tools to amend work as it is assembled, taking account of intended audience and purpose (evaluate)• manage stored work, understanding and using the effects of altering sample-rate and bit-rate on a recording and the effect on file size and quality (exhibit)	

Level 7	Pupils may demonstrate some of the following characteristics:
<ul style="list-style-type: none">• in response to a brief, produce a piece of work, for example, a radio programme, sound files, etc in response to the specific views of end users/client needs (express)• edit presets within digital effects (express)• share self-created audio files in an online forum, gather feedback from other users and respond to this as necessary (exchange)• adapt mixing and mastering outcomes in response to the specific views of end users and client needs (evaluate)• save sound files with consideration of file sizes/types and convert files to a range of file formats such that they are available to different users and audiences (exhibit)• retain copies of early versions of work saved in suitable formats, and use examples of the stages of development to showcase the processes used in making the work (exhibit)	

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

Working with Text

Level 1	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• use a simple word bank (explore)• create a simple phrase or sentence (express)• print their work (exhibit)
Level 2	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• control the mouse to navigate onscreen (explore)• create/combine text and available pictures (express)• spell common and familiar words (express)• use spaces in text (show evidence of word spacing) (express)• use full stops and some capital letters (express)• talk about how to improve their work (evaluate)• save work using icon (exhibit)
Level 3	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• open new (or existing) document (explore)• create text and alter font, size, style and colour of text (express)• position an image appropriately (express)• spell frequently used words correctly (express)• display text appropriately, for example, using correct punctuation, word spacing (express)• include title or subtitles if appropriate (express)• work collaboratively online if appropriate (exchange)• make changes to work if necessary (evaluate)• save work and give it a suitable file name (exhibit)• save work to a specified location (exhibit)
Level 4	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">• retrieve existing document (explore)• select text and other assets from a range of digital sources (explore)• copy and paste text appropriately from a range of digital sources (explore)• create text and format it to show an awareness of audience, for example, aligning/justifying text appropriately, using page borders, using paragraphs, text wrapping, columns (express)• use a text box (express)• create a table (express)• import a graph and position/format it appropriately (express)• import, alter and position an image if necessary, for example, resize, crop, etc (express)• work collaboratively online when appropriate (exchange)• review page, rethink layout and alter to enhance the document (evaluate)• use spellchecker (evaluate)• describe improvements made to document (evaluate)• create folders for saved work (exhibit)• showcase work by uploading their work to a pre-prepared class e-portfolio or wiki (exhibit)

continued overleaf

Working with Text (continued)

Level 5	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">display text in a variety of formats such as newspapers, presentations, leaflet, etc demonstrating a clear understanding of audience and purpose (express)use page numbers if appropriate (express)use tables and tabs to organise text (express)format a table, for example, borders, shading, merging cells, changing widths and heights (express)format lists using bullets and numbering (express)work collaboratively online when and where appropriate (exchange)regularly use a 'plan, do, review' cycle to improve their work (evaluate)demonstrate the process they have used through design, drafting, versions and/or discussion (evaluate)discuss what they might do differently next time (evaluate)create folder structure to store work (exhibit)update saved work, if and when necessary (exhibit)showcase work by uploading their completed work to their own e-portfolio or wiki (exhibit)
Level 6	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">in an extended document written for a specific audience and purpose, use appropriate tools such as page numbers, headers and footers, line spacing, footnotes, word count, watermarks (express)create a multiple page document for a specific audience and purpose, use titles, subtitles, multiple columns, integrated images, separation lines, justified text, grouping, ordering (express)exploit potential of ICT to work collaboratively, for example, use tracking tool to manage edits, use a live collaborative document for synchronous working (exchange)when developing text-based document for specific audiences, use a range of digital methods to provide peer support, seeking clarification (for example, from the teacher) and providing constructive feedback about the work of others (exchange)explain and justify their use of ICT for each piece of work, for example, explaining why an ICT method was more appropriate than non-ICT method (evaluate)retain record of experimentation, for example, screen shot (evaluate)routinely explain and justify their choice of software and methods (evaluate)manage stored work, taking into account the need for different file formats (exhibit)compress images if appropriate (exhibit)
Level 7	Pupils may demonstrate some of the following characteristics:
	<ul style="list-style-type: none">in an extended text document for a specific client use a range of tools to produce a sophisticated document, for example, automated contents, index, page and section breaks, landscape and portrait pages, etc (express)use styles to control text formatting (express)import data seamlessly from other applications, for example, data/charts from spreadsheet/database (express)post quality feedback for other users (exchange)review their use of ICT, collecting and responding to the views of others and making adjustments as necessary (evaluate)save files in portable format, for example, export as pdf, swf (exhibit)
Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.	