ICT progression chart

This information can be found on the National Curriculum in Action website, **www.ncaction.org.uk**

Level 1	**Characteristics**	**Example**
Level 1 is characterised by the use of ICT to **explore options** and **make choices** to **communicate meaning**. Pupils develop **familiarity** with simple ICT tools.	Typically, pupils: • explore information from various sources, showing they know that it exists in different forms; • present and share ideas using text, images and sounds – they talk about using ICT; • recognise that everyday devices respond to signals and make simple choices when using devices.	As part of a project about life and living things pupils look at information on animals. They use books, magazines, photographs and a CD-ROM. They talk about where different animals are found. They use an art package to create a farmyard scene, choosing appropriate animals and placing them onto a background. They make a class display and talk about the similarities and differences between printouts, photographs and drawings.
Level 2	**Characteristics**	**Example**
Level 2 is characterised by **purposeful** use of ICT to achieve **specific outcomes**.	Typically, pupils: • gather, organise and classify information; • explore real and imaginary scenarios; • generate and amend work; • plan and give instructions to make things happen; • present their findings – they record, save and share ideas in different forms, including text, tables, images and sounds.	In geography pupils are considering safe routes to school. As part of the project they undertake a survey of the frequency of traffic on local roads. They use a graphing program to enter, store and present their data. They use this information to identify the busiest and quietest roads. They record their findings onto a map, which they use to plan safe routes to school.
Level 3	**Characteristics**	**Example**
Level 3 is characterised by the use of ICT to **develop ideas** and **solve problems**.	Typically, pupils: • find and use appropriate stored information, following straightforward lines of enquiry; • explore ICT-based models or simulations to help them find things out and solve problems; • create sequences of instructions to control devices and achieve specific outcomes; • generate, develop and organise their work – they use ICT to present, share and exchange their ideas with others.	Pupils help to plan a day trip. They use the Internet and paper-based materials to find out the entry fees to various tourist attractions. They use route-finding software to determine the distance to various attractions. Pupils enter this data into a spreadsheet model prepared in collaboration with the teacher. The model includes information on entry fees and cost of transport. They use the model to establish the cost per pupil. The teacher provides a number of scenarios, such as an increase in the number of pupils. Pupils explore the model to answer questions. Later, groups make presentations to the rest of the class about their preferred destinations.

Level 4	Characteristics	Example
Level 4 is characterised by the ability to **combine and refine** information from various sources. Pupils **interpret** and question the **plausibility** of information.	Typically, pupils: • find and interrogate information, understanding the need for care in framing questions; • amend and combine different forms of information from a variety of sources; • explore patterns and relationships using ICT-based models and simulations – they interpret their findings, question plausibility and recognise that poor-quality information leads to unreliable results; • control events in a predetermined manner and to sense physical data; • present information in different forms – they refine the quality of their presentations showing an awareness of the intended audience; • compare their use of ICT with other methods.	Pupils were asked to investigate the Elgin marbles. They use various information sources, including the Internet, to gather information about the marbles. The teacher asks the class to create a presentation incorporating two contrasting points of view about the future of the marbles. Pupils cut and paste information from the web and create a scrapbook of information. They synthesise this information to create bullet points to use in a presentation. They combine pictures and text within the presentation. They present their work to other classes in the year group. Later, pupils conduct a survey to establish which point of view is most common within the school.
Level 5	**Characteristics:**	**Example**
Level 5 is characterised by **combining the use of ICT tools** within the **overall structure** of an ICT solution. Pupils critically evaluate the **fitness for purpose** of work as it progresses.	Typically, pupils: • select the information they need for different purposes, check its accuracy and organise it in a form suitable for processing – an increased range of quantitative and qualitative information is considered; • structure and refine information in different forms and styles for specific purposes and audiences; • explore the effects of changing the variables in an ICT-based model; • create sequences of instructions to control events, and understand the need for precision; • monitor and measure external events with sensors; • assess the use of ICT in their work and are able to reflect critically in order to make improvements in subsequent work.	Pupils investigate the logistics associated with staging school theatre productions. They gather information about costs from the head of drama. They collect information about hire of costumes, special effects and copyright fees. They create a spreadsheet model. They create a seat-booking system. They use information from this in their financial model to investigate break even points for different productions. As part of the theatre theme they create programmes and posters for different productions.

Level 6	Characteristics	Example
Level 6 is characterised by increased **integration** and **efficiency** in the use of ICT tools. A greater range and complexity of information is considered.	Typically, pupils: • use information from a range of sources and use complex lines of enquiry to solve problems and test hypotheses; • make predictions and vary the rules within models – they assess the validity of their ICT-based models by comparing their behaviour with information from other sources; • develop, try out and refine sequences of instructions to monitor, measure and control events, and show efficiency in framing these instructions; • present their ideas in a variety of ways and show a clear sense of audience; • discuss the impact of ICT on society.	Pupils evaluate a range of websites considering features of style, navigation and content. They use this information to plan and design their own website for a particular audience. They produce a project plan, breaking down work into a series of smaller tasks. In their work they consider efficiency, fitness for purpose and audience needs. For example, they might use ICT to convert and compress graphic files to allow faster download times. They make informed use of automated features in software to create, for example, a navigational menu on each page. Where appropriate, they integrate applications. For example, they may include a response form on their site, to collect information from users. They test and refine their site using the school intranet.
Level 7	**Characteristics**	**Example**
Level 7 is characterised by the ability to **scope** the information flow required to develop an ICT system. Pupils **define**, **implement and refine** ICT systems. They make use of **audience and user feedback** to enhance ICT solutions.	Typically, pupils: • select and use information to develop systems suited to work in a variety of contexts, translating enquiries expressed in ordinary language into the form required by the system; • use ICT to measure, record and analyse physical variables and control events; • scope and design ICT-based models and procedures with variables to meet particular needs; • combine information from a variety of ICT-based and other sources for presentation to different audiences; • identify the advantages and limitations of different information-handling applications.	Pupils design and implement ICT systems. They may work from a range of scenarios provided by the teacher or identify their own starting point. Typically, a pupil might create a system based on a 'car trading' scenario. They establish the information flow of the main transactions and use this to inform the design of their ICT system. For example, a pupil might construct a number of data tables, identifying fields and data-types. This might include a table for cars and another for customers. Information is processed to match customers to cars. Aspects of the system are integrated, for example, mail-merges are created which incorporate information from queries into standard letters for different groups of customers. Pupils produce user documentation.

Handout 3.1 *cont.*

Level 8	**Characteristics**	**Example**
Level 8 is characterised by systems that are **designed and implemented for others to use**. The needs of users are considered and addressed. The wider issues raised by ICT are discussed.	Typically, pupils: • design and implement systems for others to use; • independently select appropriate information sources and ICT tools for specific tasks, taking into account ease of use and suitability – they design successful ways to collect and prepare information for processing; • make appropriate use of feedback when developing systems; • take part in informed discussions about the social, economical, ethical and moral issues raised by ICT.	Pupils design and implement an ICT-based system to meets the needs of a 'third party'. In developing the system, they compare their work with existing systems. They trial their solutions with third-party users and take account of feedback to refine their work.
Exceptional performance	**Characteristics**	
Exceptional performance is characterised by the ability to design, implement, test, document and evaluate systems for others to use.	Typically, pupils: • design and implement systems for others to use – they also evaluate software packages and ICT-based models, analysing the situations for which they were developed and assessing their efficiency, ease of use and appropriateness; • suggest refinements to existing systems and design, implement and document systems for others to use, predicting some of the consequences that could arise from the use of such systems; • use their knowledge and experience of information systems to form their views on the social, economic, political, legal, ethical and moral issues raised by ICT.	