

# Digital Competence Framework

Years 3 to 6

Year 3

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Year 6

## Strand

**Citizenship – Through these elements learners will engage with what it means to be a conscientious digital citizen who contributes positively to the digital world around them and who critically evaluates their place within this digital world. They will be prepared for and ready to encounter the positive and negative aspects of being a digital citizen and will develop strategies and tools to aid them as they become independent consumers and producers.**

## Citizenship

Element	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:
Identity, image and reputation	<ul style="list-style-type: none"> <li>understand simple rules for sharing images and data, e.g. <i>understand that photographs cannot be taken of others or shared online without seeking permission first</i></li> <li>use strategies for creating and keeping strong, secure passwords, e.g. <i>three to four random words joined together or using capitalisation and numbers</i></li> </ul>	<ul style="list-style-type: none"> <li>understand how to protect themselves from online identity theft, e.g. <i>security symbols such as padlock, phishing, scam websites</i></li> <li>understand that information put online leaves a digital footprint or trail, e.g. <i>to aid identity theft</i></li> <li>identify risks and benefits of installing software, e.g. <i>identify possible risks of installing free and paid for software, for instance free software could download viruses to the device/computer</i></li> </ul>	<ul style="list-style-type: none"> <li>talk about the impact that the digital content created can have, e.g. <i>think critically about the information shared online; be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online</i></li> <li>explain why it is important to discuss their use of technology with an adult, e.g. <i>discuss aspects of positive and negative reputation</i></li> <li>maintain secure passwords on a regular basis applying the characteristics of strong passwords and refrain from using the same password more than once</li> </ul>	<ul style="list-style-type: none"> <li>explain what metadata of a photograph can include, e.g. <i>date, time and location</i></li> <li>identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g. <i>apps accessing location</i></li> <li>identify secure sites by looking for privacy seals of approval, e.g. <i>https, padlock icon</i></li> <li>identify the benefits and risks of giving personal information and device access to different software</li> <li>understand how and why people use their information and online presence to create a virtual image of themselves as a user</li> </ul>
Health and well-being	<ul style="list-style-type: none"> <li>acknowledge age restrictions and suitability of digital media and devices, e.g. <i>locate and begin to understand PEGI ratings and age restriction guidelines</i></li> <li>identify physical and emotional effects of playing/watching inappropriate content/games</li> </ul>	<ul style="list-style-type: none"> <li>identify the positive and negative influences of technology on the environment, e.g. <i>consider the different ways free time is spent and begin to find a balance between active learning activities and digital activities</i></li> <li>explain the importance of balancing game and screen time with other parts of their lives</li> </ul>	<ul style="list-style-type: none"> <li>understand the advantages and disadvantages, permissions and purposes of altering an image digitally and the reasons for this</li> </ul>	<ul style="list-style-type: none"> <li>understand the importance of balancing game and screen time with other parts of their lives, e.g. <i>explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has on their health</i></li> </ul>
Digital rights, licensing and ownership	<ul style="list-style-type: none"> <li>explain how giving credit is a sign of respect</li> <li>explain when and how it is acceptable to use the work of others</li> </ul>	<ul style="list-style-type: none"> <li>understand that copying the work of others and presenting it as their own is called 'plagiarism', e.g. <i>begin to consider consequences of plagiarism</i></li> <li>recognise watermarks and copyright symbols, e.g. <i>recognise watermarks on a variety of media, know the reasons for using watermarks and explore how watermarks can be added in different software</i></li> </ul>	<ul style="list-style-type: none"> <li>cite all sources when researching and explain the importance of this, e.g. <i>create simple lists for the referencing of digital and offline sources; discuss rights and permissions associated with this</i></li> <li>understand that photographs can be edited digitally and the rights and permissions associated with this</li> </ul>	<ul style="list-style-type: none"> <li>cite all sources when researching and explain the importance of this, e.g. <i>create simple lists for the referencing of digital and offline sources; discuss the rights and permissions associated with this</i></li> <li>understand that photographs can be edited digitally and discuss the rights and permissions associated with this</li> </ul>
Online behaviour and cyberbullying	<ul style="list-style-type: none"> <li>explain the similarities and differences between offline and online communications, e.g. <i>follow the same rules when communicating face-to-face and online; discuss how online communication can be misinterpreted</i></li> <li>compose clear and appropriate messages in online communities</li> <li>identify different forms of bullying, including cyberbullying, and suggest strategies for dealing with it, e.g. <i>screenshot, block, report</i>.</li> </ul>	<ul style="list-style-type: none"> <li>identify actions to report and prevent cyberbullying, e.g. <i>use strategies such as not replying, reporting and saving evidence</i></li> <li>identify appropriate behaviour when participating or contributing to collaborative online projects for learning, e.g. <i>devise a set of rules</i>.</li> </ul>	<ul style="list-style-type: none"> <li>demonstrate appropriate online behaviour and apply a range of strategies to protect themselves and others from possible online dangers, bullying and inappropriate behaviour, e.g. <i>turn off comments on digital media, block users; know how to deal with and report inappropriate content and misuse</i>.</li> </ul>	<ul style="list-style-type: none"> <li>demonstrate appropriate online behaviour and apply a range of strategies to protect themselves and others from possible online dangers, bullying and inappropriate behaviour, e.g. <i>turn off comments on digital media, block users; identify the risks and legal consequences of sending intimate images and content/sexting; recognise language that could be deemed to be offensive (including racist, sexist, homophobic, transphobic) in online activities</i>.</li> </ul>

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Interacting and collaborating – Through these elements learners will look at methods of electronic communication and know which are the most effective. Learners will also store data and use collaboration techniques successfully.

Interacting and collaborating

Element	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:
Communication	<ul style="list-style-type: none"> <li>exchange simple online communication, e.g. e-mail or video call</li> <li>explain the advantages of communicating electronically, e.g. time saving (especially covering large distances almost instantly), resource saving, cost effectiveness, able to have multiple users from different countries communicating simultaneously, content is easily shared/saved/stored/tagged</li> </ul>	<ul style="list-style-type: none"> <li>exchange online communication with other learners, making use of a growing range of available features, e.g. send e-mails with attachments and change formatting (where device allows)</li> </ul>	<ul style="list-style-type: none"> <li>exchange online communication with other learners, making use of a growing range of available features, e.g. when e-mailing, use search function, manage contacts</li> <li>show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each, e.g. explain when video conferencing may be more appropriate than e-mail, and vice versa; explain the pros and cons of using instant messaging in social contexts; talk about purpose and audience</li> </ul>	<ul style="list-style-type: none"> <li>exchange online communication, making use of a growing range of available features, e.g. manage folders within e-mail including using reporting features to filter spam and make use of webcams to facilitate video calls</li> <li>show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each, e.g. explain when video conferencing may be more appropriate than e-mail, and vice versa; explain the pros and cons of using instant messaging in social contexts; talk about purpose and audience</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>use an online collaborative platform to create or edit a file, e.g. word processing, presenting tools, spreadsheets</li> </ul>	<ul style="list-style-type: none"> <li>manage an online file, adding and responding to comments, e.g. create, share and edit an online file engaging in reflective discussion with teacher and/or peers</li> </ul>	<ul style="list-style-type: none"> <li>work with others to create an online collaborative project for a specific purpose, sharing and appropriately setting permissions for other group members, e.g. editing, commenting, viewing</li> </ul>	<ul style="list-style-type: none"> <li>work with others to create an online collaborative project for a specific purpose, sharing and appropriately setting permissions for other group members, e.g. editing, commenting, viewing</li> </ul>
Storing and sharing	<ul style="list-style-type: none"> <li>save files to a specific location using an appropriate file name, e.g. select a file name that would be searchable at a later date</li> <li>understand the importance of saving work periodically to avoid losing work.</li> </ul>	<ul style="list-style-type: none"> <li>understand that there are different types of storage, e.g. local, network, online, removable</li> <li>manage files and folders locally or online, e.g. move files to a different folder.</li> </ul>	<ul style="list-style-type: none"> <li>back up files to a second or third storage device, e.g. removable storage device, network drive (locally or online)</li> <li>search for a specific file</li> <li>upload files from a local drive to online storage.</li> </ul>	<ul style="list-style-type: none"> <li>create and share hyperlinks to local, network and online files</li> <li>password-protect a file.</li> </ul>

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**Producing** – These elements cover the cyclical process of planning (including searching for and sourcing information), creating, evaluating and refining digital content. Although this process may apply to other areas of the framework, it is of particular importance when creating and producing digital content. It is also essential to recognise however that producing digital content can be a very creative process and this creativity is not intended to be inhibited.

Digital content includes the production of text, graphics, audio, video and any combination of these for a variety of purposes. As such, this will cover multiple activities across a range of different contexts.

## Producing

Element	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:
Planning, sourcing and searching	<ul style="list-style-type: none"> <li>use identified success criteria as a plan for completion of a digital task</li> <li>develop strategies for finding information using different keywords and techniques, <i>e.g. follow a step-by-step set of instructions on how to search effectively for information relevant to a task and select an appropriate website from skimming through a small number of sources</i></li> </ul>	<ul style="list-style-type: none"> <li>develop own success criteria to plan a digital task</li> <li>find relevant information using different keywords and search techniques</li> <li>select an appropriate website from search results and begin to consider if the content is reliable</li> </ul>	<ul style="list-style-type: none"> <li>create a written plan using a template provided</li> <li>adjust keywords and search techniques to find relevant information; begin to reference sources used in their work; consider if the content is reliable, <i>e.g. find information using accurate terms, use a range of sources to check validity and understand the impact of incorrect information</i></li> </ul>	<ul style="list-style-type: none"> <li>plan work independently before beginning the digital task</li> <li>extend strategies for finding information; store previous searches and results for future use, <i>e.g. reference through hyperlinks and bookmark a website</i></li> </ul>
Creating	<ul style="list-style-type: none"> <li>create and edit multimedia components</li> <li>organise a range of text, image, sound, animation and video for selected purposes</li> </ul>	<ul style="list-style-type: none"> <li>create and modify multimedia components using a range of software</li> <li>modify and present a range of text, image, sound, animation and video for selected purposes</li> </ul>	<ul style="list-style-type: none"> <li>combine a range of multimedia components to produce an appropriate outcome</li> <li>create, collect and combine a range of text, image, sound, animation and video for selected purposes</li> </ul>	<ul style="list-style-type: none"> <li>use a range of software to produce and refine multimedia components</li> <li>select and combine a range of text, image, sound, animation and video to produce an outcome for a selected purpose; use software tools to enhance the outcomes for specific audiences</li> </ul>
Evaluating and improving	<ul style="list-style-type: none"> <li>give an opinion about their own work and suggest improvements, <i>e.g. spot mistakes and use editing tools to improve their work.</i></li> </ul>	<ul style="list-style-type: none"> <li>give an opinion about their own and others' work and suggest improvements independently and collaboratively, <i>e.g. check through their work and correct their spelling/use a spellchecker; decide if the red line underneath words point to misspelt words; use suggested spellings where appropriate</i></li> <li>give reasons for choices made, <i>e.g. discuss the benefits and limitations of a spellchecker especially with Welsh language documents.</i></li> </ul>	<ul style="list-style-type: none"> <li>explain reasons for layout and content of own work, <i>e.g. evaluate the presentation for audience and appropriateness</i></li> <li>comment on reasons for layout</li> <li>invite feedback/responses from others</li> <li>create groups and share work between them to allow review of work.</li> </ul>	<ul style="list-style-type: none"> <li>explain reasons for layout and content of own work, <i>e.g. evaluate the presentation for audience and appropriateness</i></li> <li>ensure output is appropriate for specific purpose</li> <li>comment on reasons for layout and content</li> <li>invite feedback/responses from others, <i>e.g. use 'Comment' in Word Online/Excel Online for asking questions or adding suggestions</i></li> <li>create groups and share work between them to allow review of work.</li> </ul>

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Data and computational thinking – Computational thinking is a combination of scientific enquiry, problem-solving and thinking skills. Before learners can use computers to solve problems they must first understand the problem and the methods of solving them.

Through these elements learners will understand the importance of data and information literacy; they will explore aspects of collection, representation and analysis. Learners will look at how data and information links into our digital world, and will provide them with essential skills for the modern, dynamic workplace.

Data and computational thinking

Element

Learners are able to:

Learners are able to:

Learners are able to:

Learners are able to:

Problem-solving and modelling

- represent a solution symbolically, e.g. *the order of waking up, through a diagram or flow chart*, and find the variables in the solution
- detect and correct mistakes in sequences of instructions, e.g. *identify mistakes in a solution that would cause it to fail (debug)*
- identify repetitions or loops in a sequence, e.g. *identify where to shorten a set of instructions by repeating steps, for instance when learning a new song*

- demonstrate how part of a solution might need repetition
- represent a simple solution in a flow chart that contains a looping element, e.g. *identify where a repeat or loop may work in a flow chart, for instance traffic lights, and select variables*

- design simple sequences of instructions (algorithms) including the use of Boolean values (i.e. yes/no/true/false), e.g. *within the algorithm demonstrate the correct use of Boolean values giving an either/or response*

- demonstrate how programs or processes run by following a sequence of instructions exactly and in order
- demonstrate how an algorithm is useful for representing a solution to a problem through testing
- understand that changing instructions can affect or even terminate a process, e.g. *moving instructions around in a program could produce unexpected outcomes or cause the program to fail altogether*

Data and information literacy

- collect data, enter and begin to analyse in given formats, e.g. *table, charts, databases and spreadsheets.*

- begin to create data sets and extract information from them with tables, charts, spreadsheets and databases.

- create, explore and analyse data sets, highlighting relationships within them, e.g. *using tables, charts, spreadsheets and databases..*

- construct, refine and interrogate data sets to test or support an investigation.