Digital Technologies Progression Points: Year 3 – v8.3

Independent Schools Queensland (ISQ) has developed Progression Points to support teachers in independent schools with implementation of version 8.3 of the Australian Curriculum.

A Word document version of the Progression Points is available so that teachers can rearrange the sequences of learning.

Personnel in independent schools are encouraged to consider how the Progression Points could be used to: -

* diagnose through formative assessment, the capabilities, strengths and weaknesses of individual students
* plan teaching programs to meet the needs of individuals and groups of students
* formally assess the progress of individuals and groups of students
* report to parents on the achievements of their children against the Australian Curriculum.

The “demonstrating” column accurately reflects the expectations of version 8.3 of the Australian Curriculum achievement standards.

ISQ welcomes any suggestions for improvement from teachers working very closely with the Progression Points.

**Digital Technologies Progression Points – Year 3**

| **Strands and content descriptions for teaching**  ***Modes*** | | | **Emerging** | **Developing** | **Demonstrating** | **Advancing** | **Extending** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Beginning to work towards the achievement standard | Working towards the achievement standard | Demonstrating the achievement standard | Working beyond the achievement standard | Extending with depth beyond the achievement standard |
| * *With explicit prompts (step-by-step oral scaffolding, reference to charts, word wall, etc)* * *In familiar contexts* * *Learning to follow procedures* | * *With prompts (oral or written questions, reference to charts, word walls, etc)* * *In familiar contexts* * *Attempts to explain* | * *Independent (with access to charts, word walls, etc.)* * *In familiar contexts* * *Explains basic understanding* | * *Independent (with access to charts, word walls, etc.)* * *Applying in familiar contexts* * *Explains with detail* | * *Independent (with access to charts, word walls, etc.)* * *Applying in new contexts* * *Explains with connections outside the teaching context* |
| **Achievement Standard**  By the end of Year 3, students [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) how a range of digital systems (hardware and software) and their peripheral devices can be used for different purposes. They [explain](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Explain) how the same data sets can be represented in different ways.  Students define simple problems, [design](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Design) and implement digital solutions using algorithms that involve decision-making and user input. They [explain](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Explain) how the solutions meet their purposes. They collect and [manipulate](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Manipulate) different data when creating information and digital solutions. They safely use and manage information systems for identified needs using agreed protocols and [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) how information systems are used. | | | | | | | |
| **Content Descriptions** | | | Students [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) how a range of digital systems (hardware and software) and their peripheral devices *(device that can be connected to a digital system)* can be used for different purposes. | | | | |
| **KNOWLEDGE AND UNDERSTANDING** | | Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of [data](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=data) [(ACTDIK007)](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACTDIK007) | **With explicit prompts, students can:**   * **lists** how peripheral devices can be used to display information   *EG. Student describes how a projector can be used for presenting information (i.e. PowerPoint) and displaying a video*   * **lists** how digital system components and peripheral devices can perform input functions   *EG. Student lists devices orally or by pointing and shows how they work*   * **shows** how digital system components and peripheral devices can perform output functions   *EG. Student shows how a printer can be used to print text and an image*   * **lists** how digital system components and peripheral devices can perform storage and transfer functions   *EG. Student describes how a USB can store a document and transfer it to another device* | **With prompts, students can:**   * **describe** how peripheral devices can be used to display information in a specific context   *EG. Student attempts to describe how a projector can be used for PowerPoint, input functions neglecting it could be used to display a video. Requires teacher prompts to reach conclusion.*   * **describe** how digital system components and peripheral devices can perform simple functions   *EG. Student shows how a mouse can be used to type text and control a visual object*   * **describe** how digital system components and peripheral devices can perform simple output functions   *EG. Student attempts to describe how a printer can be used to print text and an image*   * **describe** how digital system components and peripheral devices can perform simple storage and transfer function**s**   *EG. Student attempts to describe how a USB can store a document and transfer it to another device* | **Independently students can:**   * **describes correctly** how peripheral devices can be used to display information   *EG. Student describes how a projector can be used for presenting information and displaying a video*   * **describes correctly** how digital system components and peripheral devices can perform input functions   *EG. Student describes how a mouse can be used to type text and control a visual object*   * **describes correctly** how digital system components and peripheral devices can perform output functions   *EG. Student describes how a printer can be used to print text and an image*   * **describes correctly** how digital system components and peripheral devices can perform storage and transfer functions   *EG. Student describes correctly how a USB can store a document and transfer it to another device* | **Independently students can:**   * **analyse** how peripheral devices can be used to display information and can compare appropriateness of devices for audience   *EG. Student analyses describes how a projector is a more appropriate way of displaying information to a large audience compared to a tablet screen*   * **analyse** how digital system components and peripheral devices can perform complex input functions   *EG. Student analyses how a mouse can be used to make a choice on screen and can use shortcut keys to do the same actions.*   * **analyse** how digital system components and peripheral devices can perform complex output functions   *EG. Student analyses that sound and light are outputs and can be used to communicate i.e. phone speaker*   * **analyse** how digital system components and peripheral devices can perform storage and transfer functions   *EG. Student analyses ways of storing information, i.e. to a cloud, USB, network.* | **Independently and in multiple familiar contexts students can:**   * **analyse** how peripheral devices can be used to display information, comparing appropriateness of devices for audience   *EG. Student analyses how a projector is a more appropriate way of displaying information to a large audience compared to a tablet screen which can be touched is a more appropriate device for a toddler*   * **analyse** how digital system components and peripheral devices can perform complex input functions   *EG. Student analyses how using specific keys together can perform a different function i.e. ctrl,z*   * **analyse** how digital system components and peripheral devices can perform complex output functions   *EG. Student analyses that sound and light are outputs and can be used to communicate and entertain*   * **analyse** how digital system components and peripheral devices can perform storage and transfer function**s**   *EG. Student analyses ways of storing information and ways of transferring/sending information i.e. email or OneNote* |
|  | | | Students [explain](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Explain) how the same data sets can be represented in different ways. | | | | |
| **KNOWLEDGE AND UNDERSTANDING** | Recognise different types of [data](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=data) and explore how the same [data](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=data) can be represented in different ways [(ACTDIK008)](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACTDIK008) | | **With explicit prompts, students can:**   * **produce** a table on a digital system to reorganise information including words and numbers   *EG. Student can identify an Excel spreadsheet can change numbers into a bar graph*   * **identifies** numbers, text, images, sounds, animations and videos are all forms of data   *EG. Student states that numbers, text, images, sounds, animations and videos are all forms of data.* | **With prompts, students can:**   * **produce** a table on a digital system and explain how information can be reorganised to be represented in a different way   *EG. Student produces an Excel spreadsheet and attempts to change numbers into a bar graph*   * **recognise** that numbers, text, images, sounds, animations and videos are all forms of data when stored or viewed using a digital system   *EG. Student lists examples of different types of files.* | **Independently students can:**   * **develop** information which can be reorganised to be represented in a different way by using a table   *EG. Student develops a basic Excel spreadsheet to change numbers into a bar graph*   * **illustrate** **and explain in basic terms** that numbers, text, images, sounds, animations and videos are all forms of data when stored or viewed using a digital system   *EG. Student illustrates and explains different types of files are all types of data in a digital system.* | **Independently students can:**   * **develop and test** how information can be reorganised to be represented in a different and improved way by using a table   *EG. Student develops and tests an Excel spreadsheet and changes numbers into a bar graph*   * **explain in detail** that numbers, text, images, sounds, animations and videos are all forms of data when stored or viewed using a digital system and can describe how the data is represented in a digital system   *EG. Student explains in details different types of files are all types of data in a digital system.* | **Independently and in new contexts students can:**   * **develop, test and modify** in detail how information can be reorganised to be represented in a different and improved way by using a table and can modify the information to create greater meaning   *EG. Student develops, tests and further modifies an Excel spreadsheet changing numbers into a bar graph*   * **explain in detail** that numbers, text, images, sounds, animations and videos are all forms of data when stored or viewed using a digital system and can explain how the data is represented in a digital system   *EG. Student explains in details different types of files are all types of data in a digital system.* |
|  | | | Students define simple problems, [design](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Design) and implement digital solutions using algorithms that involve decision-making and user input. | | | | |
| **PROCESS AND PRODUCTION SKILLS** | Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them [(ACTDIP010)](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACTDIP010)  Implement simple digital solutions as visual programs with algorithms involving [branching](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=branching)(decisions) and user [input](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=input) [(ACTDIP011)](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACTDIP011) | | **With explicit prompts, students can:**   * **identify** simple problems   *EG. Identify the purpose of a digital game*  *EG. Consider ‘What will I make for dinner?’*  **In familiar contexts students can:**   * **order** drawings, pictures and text to create a sequence of steps   *EG. show the order of events in a familiar game*  *EG. show the order of events for making dinner* | **With prompts, students can:**   * **state** simple problems   *EG. With others, identify the problem in a game (the purpose) and how to be successful in the game*  *EG. Students state the problem, ie. ‘What will I make for dinner?’*  **In familiar contexts and with some scaffolding students can:**   * **produce** drawings, pictures and text to create a sequence of steps and simple decisions   *EG. show the order of events in a familiar game and include some decisions the gamer will make at various stages*  *EG. Show the choices within the sequence of making dinner when deciding what to make for dinner* | **Independently, students can:**   * **define** simple problems and **follow** a sequence of steps to solve them   *EG. Use a branching database to identify something, ie. a living thing, and describe how the problem is solved*  *EG. Consider the problem ‘What will I make for dinner versus breakfast?’*  **In familiar contexts students can:**   * **develop** a flow chart of drawings, pictures and text to create a sequence of steps and simple decisions   *EG. describe the order of events in a game and include some decisions the gamer will make at various stages*  *EG. create a flow chart for the algorithm ‘What will I make for dinner?’ showing the steps and decisions in the problem* | **Independently, students can:**   * **compare** simple problems   *EG. Identifies decision steps in algorithms and explains more than one way to address the problems*  *EG. Explain the difference between the problems of “What will I make for dinner?’ and ‘What will I make for breakfast?’*  **In familiar contexts students can:**   * **develop** **and test** drawings, pictures and text to create a sequence of steps and simple decisions   *EG. Design a game with mathematical algorithms as decision points, ie. go forward three steps, and play it with friends or family*  *EG. test the algorithm ‘What will I make for dinner?’* | **Independently, students can:**   * **compare and analyse** simple problems   *EG. Identifies problems and explains more than one way to address the problems. Generalises the solutions so that a set of steps can be used for further problems, ie. a ‘cheat sheet’ for a game, a ‘how to’ guide for an unfamiliar situation*  *EG. Why (or why not?) might a user make different decisions about what to make for dinner or what to make for breakfast?*  **In unfamiliar contexts students can consistently:**   * **develop**, **test** **and modify** drawings, pictures and text to create a sequence of steps and simple decisions   *EG. Design a game or create a branching database for others to use. Test and refine it based on user feedback*  *EG. after testing the dinner algorithm student modifies the process to improve efficiency* |
|  | | | They [explain](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Explain) how the solutions meet their purposes. | | | | |
| **PROCESS AND PRODUCATION SKILLS** | Explain how student solutions and existing information systems meet common personal, school or community needs [(ACTDIP012)](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACTDIP012) | | **With explicit prompts, students can:**   * **state** how information systems in the home and at school meet personal needs.   *EG. Student describes how an air-conditioning system monitors and adjusts the temperature in the house to keep it at a level specified by the user*   * **identify** the appropriateness of their solutions through peer and teacher feedback | **With prompts, students can:**   * **define** how information systems in the home and at school meet personal needs.   *EG. Student describes how an air-conditioning system monitors and adjusts the temperature in the house to keep it at a level specified by the user*   * **identify** the appropriateness of their solutions through peer and teacher feedback | **Independently students can:**   * **compare** how information systems in the home and at school meet personal needs.   *EG. Student describes how an air-conditioning system monitors and adjusts the temperature in the house to keep it at a level specified by the user*   * **explain in basic terms** the appropriateness of their solutions by examining peer and teacher feedback | **Independently students can:**   * **compare** how information systems in the home and at school meet personal needs.   *EG. Student justifies that an air conditioner meets personal needs by comparing rooms with and without it*   * **evaluate** the appropriateness of their solutions by examining peer and teacher feedback | **Independently students can:**   * **compare and analyse** how information systems in the home and at school meet personal needs.   *EG. Student prove that an air conditioner meets personal needs conducting a survey of people who use the technology*   * **evaluate in detail** the appropriateness of their solutions by examining peer and teacher feedback |
|  | | | They collect and [manipulate](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Manipulate) different data when creating information and digital solutions. | | | | |
| **PROCESS AND PRODUCTION SKILLS** | Collect, access and present different types of [data](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=data) using simple software to create information and solve problems [(ACTDIP009)](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACTDIP009) | | **With explicit prompts, students can:**   * **list** techniques to present data as information   *EG. Student creates a column chart in a spreadsheet*   * **explore** an online source to access data   *EG. Student can use a library catalogue*  **In familiar contexts, students can:**   * **identify** data is stored in digital systems and may be represented in different ways   *EG. Student identifies how data can be emailed* | **With prompts, students can:**   * **produce** different techniques to present data as information   *EG. Student creates a column chart in a spreadsheet and colours cells to represent different items*   * **explore** an online source to access data   *EG. Student can use a library catalogue*  **In familiar contexts, students can:**   * **identify** and store data in digital systems and represent it in different ways   *EG. Student stores data that can be emailed as files.* | **Students can independently:**   * **develop** different techniques to present data as information and manipulate the appearance and usability of the data   *EG. Student creates a column chart in a spreadsheet and uses colour and headings to organise and accurately identify data in the spreadsheet*   * **explore, access and collect** data from an online source   *EG. Student can find a required book from a library catalogue and print the locating code*  **In familiar contexts, students can:**   * **explain in basic terms** that all types of data are stored in digital systems and may be represented in different ways   *EG. Student describes how data that can be emailed as files.* | **Students can independently in familiar:**   * **develop and test** on techniques to present data as information and manipulate the appearance and usability of the data   *EG. Student decides to use a spreadsheet to present and manipulate data collected in a survey*   * **discuss and examine** data from an online source collecting and storing relevant information   *EG. Student can find a required book from a library catalogue and print the locating code*  **In familiar contexts, students can:**   * **explain in detail** that all types of data are stored in digital systems and may be represented in different ways   *EG. Student describes how data that can be emailed as files.* | **Students can independently and in unfamiliar contexts:**   * **develop**, **test and modify** techniques to present data as information and manipulate the appearance and usability of the data to improve a digital solution   *EG. Student decides to use a spreadsheet to present and manipulate data collected in a survey and organises information in a variety of ways to improve the usability of the spreadsheet*   * **discuss, examine and justify** the validity of data from an online source collecting and storing relevant information   *EG. Student can find a required book from a library catalogue and print the locating code*  **In unfamiliar contexts, students can:**   * **explain in detail** that all types of data are stored in digital systems and may be represented in different ways   *EG. Student describes how data that can be emailed as files.* |
|  | | | They safely use and manage information systems for identified needs using agreed protocols and [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) how information systems are used. | | | | |
| **PROCESS AND PRODUCTION SKILLS** | Plan, create and communicate ideas and information independently and with others, applying agreed ethical and [social protocols](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=social+protocols) [(ACTDIP013)](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACTDIP013) | | **With explicit prompts, students can:**   * **state** general digital citizenship rules   *EG. Student states why passwords should not be shared, describes importance of communicating in a respectful way when online*   * **identify** the importance of acknowledging digital products created by others   *EG. Student states the source of their information*   * **state** ways to communicate with peers to complete a project.   *EG. Student helps to complete a part of a project to avoid delays* | **With prompts, students can:**   * **define** **and explore** simple agreed protocols when using information systems   *EG. Student states why passwords should not be shared, describes importance of communicating in a respectful way when online*   * **identify** the importance of acknowledging digital products created by others   *EG. Student identifies the source of their information*   * **explore** ways students can communicate with peers and teacher using information systems to complete a project.   *EG. Student communicates to teacher using email or blogs* | **Students can independently:**   * **compare and use** simple agreed protocols when using information systems   *EG. Student states why passwords should not be shared, describes importance of communicating in a respectful way when online*   * **describes correctly** the importance of acknowledging digital products created by others   *EG. Student states the source of their information via a hyperlink*   * **test** ways students can communicate with peers and teacher using information systems to complete a project.   *EG. Student communicates to teacher using email or blogs* | **Students can independently:**   * **compare, analyse and use** agreed protocols when using information systems   *EG. Student states why passwords should not be shared, describes importance of communicating in a respectful way when online*   * **analyse** the importance of acknowledging digital products created by others   *EG. Student states the source of their information via a hyperlink*   * **test and evaluate** ways students can communicate with peers and teacher using information systems to complete a project.   *EG. Student communicates to teacher using email or blogs* | **Students can independently:**   * **compare, evaluate and use** agreed protocols when using information systems and think critically about the information they share online   *EG. Student states why passwords should not be shared, describes importance of communicating in a respectful way when online*   * **analyse** the importance of acknowledging digital products created by others   *EG. Student states the source of their information via a hyperlink*   * **test, evaluates and justify** ways students can communicate with peers and teacher using information systems to complete a project.   *EG. Student communicates to teacher using email or blogs* |