Assessment of ICT Capabilities

Select and use hardware and software: identify and safely operate ICT systems to complete relevant simple specified tasks and seek help when encountering a problem?

Understand ICT systems: identify common consumer ICT systems with input and output functions.

Generate solutions to challenges and learning area tasks: use ICT as a creative tool to generate simple solutions, modifications or data representations for personal or school purposes.

Manage digital data: Save and retrieve digital data with support.

Assessment of Digital Technologies

Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001).

Recognise and explore patterns in data and represent data as pictures, symbols and diagrams (ACTDIK002).

Collect, explore and sort data, and use digital systems to present the data creatively (ACTDIP003).

Create and organise ideas and information using information systems independently and with others, and share these with known people in safe online environments (ACTDIP006).

Our breakfast

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Bananas is less popular.
Toast is more popular.

Rebecca Vivian & Katrina Falkner, Computer Science Education Research (CSER) Group, The University of Adelaide

Note: This example of some ways to explore assessment, based on a Year 1 year level: drawing on the Level 1 ICT Capabilities examples and Band F-2 Digital Technologies.
Assessment of ICT Capabilities

Identify the impacts of ICT in society: Can the student explain how else they use the tablet in the classroom? Can the student explain what is different about using the tablet to using the computer to present data?

Understand ICT systems: Can the student talk about their iPad/tablet device? Can they explain the features?

Generate solutions to challenges and learning area tasks: Does the student select an appropriate app for the task (e.g. representing data)? Can the student use the software effectively as a tool to represent data class (e.g. about breakfast)?

Select and use hardware and software: Can the student successfully operate a tablet and software autonomously? Can they turn the tablet on and off? Can they find and open the app? Can they follow classroom help-seeking processes? (e.g. “Ask 3 before me”)

Manage digital data: Save and retrieve digital data with support

Assessment of Digital Technologies

Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001). Can students identify what is the “hardware” (tablet) and what is the “software” (app)? Do they use this language when talking about their work? Can students explain how they use the software and hardware to solve their problem?

Recognise and explore patterns in data and represent data as pictures, symbols and diagrams (ACTDIK002). Can the student represent their data as pictures and symbols? Can the student identify and explain patterns that they see in their data?

Collect, explore and sort data, and use digital systems to present the data creatively (ACTDIP003). Can the student take a screenshot of their work and share this on the class blog/website? Can students use the tablet independently and with others to collect and represent their data?

Create and organise ideas and information using information systems independently and with others, and share these with known people in safe online environments (ACTDIP006). Can the student take a screenshot of their work and share this on the class blog/website? Can students use the tablet independently and with others to collect and represent their data?

Note: This example of some ways to explore assessment, based on a Year 1 year level: drawing on the Level 1 ICT Capabilities examples and Band F-2 Digital Technologies.

Our breakfast

Apples: 3
Bananas: 1
Toast: 4
Cereal: 2

Bananas are less popular.
Toast is more popular.

Rebecca Vivian & Katrina Falkner, Computer Science Education Research (CSER) Group, The University of Adelaide
Assessment of ICT Capabilities

- **Locate, generate and access data and information:** locate, retrieve or generate information from a range of digital sources.
- **Collaborate, share and exchange:** use appropriate ICT tools safely and exchange information with appropriate known audiences.
- **Recognise intellectual property:** acknowledge when they use digital projects created by someone else.
- **Generate ideas, plans and processes:** use ICT to generate ideas and plan solutions.
- **Manage digital data:** manage and maintain digital data using common methods.

Assessment of Digital Technologies

- **Collect, access and present different types of data:** using simple software to create information and solve problems (ACTDIP009).
- **Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them:** (ACTDIP010).
- **Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input:** (ACTDIP011).
- **Explain how student solutions and existing information systems meet common personal, school or community needs:** (ACTDIP012).

Note: This is an example of some ways to explore assessment, based on a Year 4 year level: drawing on the Level 3 ICT Capabilities examples and Band Years 3-4 Digital Technologies.

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Assessment of ICT Capabilities

**Locate, generate and access data and information:** Does the student retrieve relevant & quality information from a range of digital sources to inform their Scratch project topic?

**Recognise intellectual property:** Has the student acknowledged when they have used blocks of code, ideas or remixed projects created by someone else? Can they explain when this is required and when it is not?

**Collaborate, share and exchange:** Can students demonstrate how they can exchange (safe & appropriate) ideas with peers in Scratch using comments? Can they explain how to share and unshare Scratch projects?

**Generate ideas, plans and processes:** Does the student effectively use ICT to generate ideas and plan solutions for their Scratch project prior to coding? E.g. mind mapping software, storyboarding with slides.

**Manage digital data:** Does the student manage and maintain their Scratch projects using suitable methods? Can the student organise project folders and save project versions?

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Assessment of Digital Technologies

**Collect, access and present different types of data using simple software...** (ACTDIP009): Has the student identified and collected relevant data to include in their Scratch project (e.g. Indigenous words)? Can the student store this data in their program (e.g. using lists for Indigenous words)?

**Define simple problems, and describe and follow a sequence of steps and decisions (algorithms).** (ACTDIP010): Do planning documents demonstrate the student’s logical algorithm design? Has the student clearly documented/explained the stages involved in designing their Scratch project?

**Implement simple digital solutions as visual programs with algorithms involving branching and user input** (ACTDIP011): Has the student created a working program with visual programming language? Has the student used a decision-block? Is there evidence of user input into the program? Can students explain how their code works to meet their intended solution?

**Locate, generate and access data and information:** Does the student retrieve relevant & quality information from a range of digital sources to inform their Scratch project topic?

**Explain how student solutions meet common personal, school or community needs** (ACTDIP012): Can the student explain the purpose of the Scratch project, intended audience, what problem it solves and the benefits of using it?

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Note: This is an example of some ways to explore assessment, based on a Year 4 year level: drawing on the Level 3 ICT Capabilities examples and Band Years 3-4 Digital Technologies.

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Assessment of ICT Capabilities

- **Define and plan information searches**: locate, retrieve or generate information using search facilities and organise information in meaningful ways.

- **Generate ideas, plans and processes**: use appropriate ICT to collaboratively generate ideas and develop plans.

- **Recognise intellectual property**: apply practices that comply with legal obligations regarding the ownership and use of digital products resources.

- **Understand computer mediated communications (CMC)**: understand that there are various methods of collaboration through CMCs that vary in form and control.

Assessment of Digital Technologies

- **Investigate how digital systems represent text, image and audio data in binary** (ACTDIK024)

- **Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance** (ACTDIK023)

- **Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account** (ACTDIP032)

Note: This example of some ways to explore assessment, based on a Year 8 year level: drawing on the Level 5 ICT Capabilities examples and Band 7-8 for Digital Technologies.
Assessment of ICT Capabilities

Define and plan information searches: locate, retrieve or generate information using search facilities and organise information in meaningful ways. Have students used appropriate information systems (library books, databases, trusted websites) to locate information? Have students organised their information in a logical manner? Have students presented their information in a meaningful way, to suit their audience?

Generate ideas, plans and processes: use appropriate ICT to collaboratively generate ideas and develop plans. Have the students selected an appropriate ICT to deliver their information (e.g. presentation software). Have they demonstrated their ability to collaborate using ICT?

Recognise intellectual property: apply practices that comply with legal obligations regarding the ownership and use of digital products resources. Do students select images with appropriate copyright and state ownership? Do students include a bibliography of work used to inform their presentation?

Understand computer mediated communications (CMC): understand that there are various methods of collaboration through CMCs that vary in form and control. Can students explain the types of CMCs they used in teamwork and what type they are (synchronous or asynchronous)?

Assessment of Digital Technologies

Investigate how digital systems represent text, image and audio data in binary (ACTDIK024). Can the students explain that characters in text correspond to numbers defined by the character set, for example ‘A’ corresponds to 65 in the ASCII? Can the students explain binary and provide an example of converting to and from binary?

Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance (ACTDIK023). Can students describe the process of how data is transmitted and stored across networks? Can students identify the components in networks that control the movement of data (e.g. hubs, switches)?

Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account (ACTDIP032). Have the students presented documentation of their teamwork process, including identifying considerations such as sequencing of tasks to complete, roles and responsibilities. Have the students identified and used safety and social protocols for communicating online? Have students planned their teamwork communication strategy?

Digital Data Group Presentation

Note: This example of some ways to explore assessment, based on a Year 8 year level: drawing on the Level 5 ICT Capabilities examples and Band 7-8 for Digital Technologies.

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