Primary Trait Analysis: Digital Technologies Project examples

Related Learning sequences

* Year 9 Collaborative project with a programming focus [CREATING A DIGITAL GAME](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/user-design-and-programming/creating-a-digital-game)
* Year 10 Collaborative project with a programming focus [ROBOTICS AND EMBEDDED SYSTEMS](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/user-design-and-programming/robotics-and-embedded-systems)

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| **Year Level:** 9-10 | **Title:** Digital Project | **Name** |
| **Standards of Achievement**  | **Take account** of privacy and security requirements when selecting and validating data.**Define** and **decompose** complex problems in terms of functional and non-functional requirements.**Design** modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities.**Design** user experiences and algorithms.**Implement** modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities. |
| **Assessment Summary** | This Primary Trait Analysis is designed for the purpose of assessing student design documents for their Digital Technologies project and a 5 minute presentation of their project that has been recorded on video. The teacher reviews the student’s design documents and the student video recording, allocating marks according to how they have addressed the criteria.  |

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| **Scoring** |
| 50-45=Well above Satisfactory44-41= Above satisfactory40-37= Satisfactory36-34= Below satisfactory33-0= Unsatisfactory |

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| **Problem definition** | **Demonstrated achievement of…**  | **Score** **(mark out of #)** | **Comments** |
| Collecting, managing and analysing data | **Take account** of privacy and security requirements when selecting and validating data.* Data Privacy/security considerations included in the design phase.
* The student describes a suitable process of selecting and validating their data.
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| Investigating and defining | **Define** and **decompose** complex problems in terms of functional and non-functional requirements.* Non-functional requirements addressed in design documents/presentation.
* Functional requirements addressed in design documents/presentation.
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| Designing, Producing and  | **Design** modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities.* Design documents have required detail for another person to understand.
* Design documents include flowcharts or pseudocode.

**Design** user experiences and algorithms.* Design documents include identified user-interactions.
* Student is able to articulate how the user interacts and the relevant algorithm (in plain language).
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| Implementing | **Implement** modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities.* Student uses object-oriented programming language
* The program is working.
* The program includes data structures involving modular functions.
* Appropriate data is used in the program.
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Related Learning sequences

* Year 9 [MANAGING A GROUP PROJECT: AUGMENTED REALITY](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/interactions-and-impacts/managing-a-group-project)
* Year 10 [COLLABORATIVE PROJECT: WHAT MATTERS TO YOU?](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/interactions-and-impacts/collaborative-project)

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| **Year Level:** 9-10  | **Title:** Teamwork Project | **Name:** |
| **Standards of achievement** | * **Plan** digital projects using an iterative approach.
* M**anage** digital projects using an iterative approach.
* **Share** and **collaborate** online, establishing protocols for the use, transmission and maintenance of data and projects.
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| **Assessment Summary** | This Primary Trait Analysis is designed for the purpose of assessing student teamwork, including the team planning and management of a project. The teacher reviews the team’s design documents and views the team presentation. In the presentation, students are required to share how they worked as a team (planning, roles, management, etc). Students are also asked to write a reflection on their contribution to the team and evaluation of their teamwork.  |

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| **Scoring** |
| 50-45=Well above Satisfactory44-41= Above satisfactory40-37= Satisfactory36-34= Below satisfactory33-0= Unsatisfactory |

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| **Problem definition** | **Demonstrated achievement of…**  | **Score** **(mark out of 100)** | **Comments** |
| Planning | **Plan** digital projects using an iterative approach.* Students present a sufficient team timeline plan, that reflective of an iterative approach a phase of feedback gathering and redesign is evident).
* Students have assigned appropriate deadlines for stages of their project.
* Students have assigned tasks fairly to team members.
* Students use a suitable software or way of documenting their plan their project.
 | /5 |  |
| Project Management | M**anage** digital projects using an iterative approach.* The team nominated a project manager.
* The team have assigned teamwork roles with clearly defined responsibilities and tasks.
* The team use team management software (e.g. SLACK) appropriately to monitor progress.
 | /5 |  |
| Communication and Collaboration | **Share** and **collaborate** online, establishing protocols for the use, transmission and maintenance of data and projects.* The team collectively established appropriate teamwork rules for the project.
* The team used appropriate online collaborative software to communicate and participated equally.
* The team used appropriate online management software to save and share project sources.
* The team used appropriate file organisation to organise their projects online.
 | /5 |  |

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