**Instruction:** List the title of the unit of work in the first column and then tick the check box of the content description/s addressed by it, which can be done electronically. Once completed, fill out the ‘Assessments’ table.   
For detailed notes regarding the purpose of this template and further instructions for completion, refer [here](http://www.vcaa.vic.edu.au/Pages/foundation10/viccurriculum/viccurr-resources.aspx)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Strand** | **Digital Systems** | | **Data and Information** | | | | | | | | **Creating Digital Solutions** | | | | | | | | | |
|  | **Content Description** | Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems [(VCDTDS045)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDS045) | | Analyse simple compression of data and how content data are separated from presentation  [(VCDTDI046)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI046) | | Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements  [(VCDTDI047)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI047) | | Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data [(VCDTDI048)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI048) | | Manage and collaboratively create interactive solutions for sharing ideas and information online, taking into account social contexts and legal responsibilities  [(VCDTDI049)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI049) | | Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs  [(VCDTCD050)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD050) | | Design the user experience of a digital system, evaluating alternative designs against criteria including functionality, accessibility, usability and aesthetics  [(VCDTCD051)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD051) | | Design algorithms represented diagrammatically and in structured English and validate algorithms and programs through tracing and test cases [(VCDTCD052)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD052) | | Develop modular programs, applying selected algorithms and data structures including using an object-oriented programming language [(VCDTCD053)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD053) | | Evaluate critically how well student-developed solutions and existing information systems and policies take account of future risks and sustainability and provide opportunities for innovation  [(VCDTCD054)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD054) | |
| **Sequence of Lessons / Unit** | **Semester/ Year** | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # |
| Internet of Things (IoT) | Semester 1 / Year 9 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Creating web sites | Semester 1 / Year 9 |  |  |  | 2 |  | 3 |  |  |  | 4 |  |  |  |  |  |  |  |  |  |  |
| Spreadsheets | Semester 1/ Year 9 |  |  |  |  |  | 3 |  | 3 |  |  |  |  |  |  |  |  |  |  |  |  |
| Python programming | Semester 1 / Year 9 |  |  |  |  |  |  |  |  |  |  |  | 5 |  | 6 |  | 6 |  | 6 |  |  |
| Programming evaluation | Semester 1 / Year 9 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 7 |

|  |  |
| --- | --- |
| **Levels 7 and 8 Achievement Standard** | **Levels 9 and 10 Achievement Standard**  Separated by line. Number in brackets, e.g. (3), can be used as an identifier in various parts of the template. |
| By the end of Level 8   * Students distinguish between different types of networks and their suitability in meeting defined purposes. * Students explain how text, image and sound data can be represented and secured in digital systems and presented using digital systems. * They analyse and evaluate data from a range of sources to model solutions and create information. * They manage the collaborative creation of interactive ideas, information and projects and use appropriate codes of conduct when communicating online. * Students define and decompose problems in terms of functional requirements and constraints. * They design user experiences and algorithms incorporating branching and iterations, and develop, test, and modify digital solutions. * Students evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability. | By the end of Level 10   * Students explain the control and management of networked digital systems and the data security implications of the interaction between hardware, software and users. (1) * Students explain simple data compression, and why content data are separated from presentation. (2) * They take account of privacy and security requirements when selecting and validating data and use digital systems to analyse, visualise and model salient aspects of data. (3) * Students share and collaborate online, establishing protocols for the legal and safe use, transmission and maintenance of data and projects. (4) * Students define and decompose complex problems in terms of functional and non-functional requirements. (5) * They design and evaluate user experiences and algorithms, and develop and test modular programs, including an object-oriented program. (6) * Students evaluate their solutions and information systems in terms of risk, sustainability and potential for innovation. (7) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Level 9 Assessments** | | |  | **Level 9 Assessments** | | |
| **Unit (Title)** | **Assessment** | **Achievement Standard/s** |  | **Unit (Title)** | **Assessment** | **Achievement Standard/s** |
| Internet of Things | Report:  Networking requirements for IoT. | 1 |  | Python programming | Folio/Test:  Submission of programming exercises and a practical test. | 5, 6 |
| Creating web sites | Folio:  Submission of a simple web site that presents data and uses CSS. | 2, 3, 4 |  | Programming evaluation | Report:  Discussion as to how the programming solution met requirements. | 7 |
| Spreadsheets | Folio:  Submission of spreadsheets and graphs. | 3 |  |  |  |  |

**Instruction:** List the title of the unit of work in the first column and then tick the check box of the content description/s addressed by it, which can be done electronically. Once completed, fill out the ‘Assessments’ table.   
For detailed notes regarding the purpose of this template and further instructions for completion, refer [here](http://www.vcaa.vic.edu.au/Pages/foundation10/viccurriculum/viccurr-resources.aspx)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Strand** | **Digital Systems** | | **Data and Information** | | | | | | | | **Creating Digital Solutions** | | | | | | | | | |
|  | **Content Description** | Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems [(VCDTDS045)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDS045) | | Analyse simple compression of data and how content data are separated from presentation  [(VCDTDI046)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI046) | | Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements  [(VCDTDI047)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI047) | | Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data [(VCDTDI048)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI048) | | Manage and collaboratively create interactive solutions for sharing ideas and information online, taking into account social contexts and legal responsibilities  [(VCDTDI049)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI049) | | Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs  [(VCDTCD050)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD050) | | Design the user experience of a digital system, evaluating alternative designs against criteria including functionality, accessibility, usability and aesthetics  [(VCDTCD051)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD051) | | Design algorithms represented diagrammatically and in structured English and validate algorithms and programs through tracing and test cases [(VCDTCD052)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD052) | | Develop modular programs, applying selected algorithms and data structures including using an object-oriented programming language [(VCDTCD053)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD053) | | Evaluate critically how well student-developed solutions and existing information systems and policies take account of future risks and sustainability and provide opportunities for innovation  [(VCDTCD054)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD054) | |
| **Sequence of Lessons / Unit** | **Semester/ Year** | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # |
| Networks Task | Semester 1 / Year 10 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Image Optimisation | Semester 1 / Year 10 |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Data and Collaboration Task | Semester 1 / Year 10 |  |  |  |  |  | 3 |  | 3 |  | 4 |  |  |  |  |  |  |  |  |  |  |
| Design Task | Semester 1 / Year 10 |  |  |  |  |  |  |  |  |  |  |  | 5 |  | 6 |  | 6 |  |  |  |  |
| Programming Task | Semester 1 / Year 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |  | 7 |

|  |  |
| --- | --- |
| **Levels 7 and 8 Achievement Standard** | **Levels 9 and 10 Achievement Standard**  Separated by line. Number in brackets, e.g. (3), can be used as an identifier in various parts of the template. |
| By the end of Level 8   * Students distinguish between different types of networks and their suitability in meeting defined purposes. * Students explain how text, image and sound data can be represented and secured in digital systems and presented using digital systems. * They analyse and evaluate data from a range of sources to model solutions and create information. * They manage the collaborative creation of interactive ideas, information and projects and use appropriate codes of conduct when communicating online. * Students define and decompose problems in terms of functional requirements and constraints. * They design user experiences and algorithms incorporating branching and iterations, and develop, test, and modify digital solutions. * Students evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability. | By the end of Level 10   * Students explain the control and management of networked digital systems and the data security implications of the interaction between hardware, software and users. (1) * Students explain simple data compression, and why content data are separated from presentation. (2) * They take account of privacy and security requirements when selecting and validating data and use digital systems to analyse, visualise and model salient aspects of data. (3) * Students share and collaborate online, establishing protocols for the legal and safe use, transmission and maintenance of data and projects. (4) * Students define and decompose complex problems in terms of functional and non-functional requirements. (5) * They design and evaluate user experiences and algorithms, and develop and test modular programs, including an object-oriented program. (6) * Students evaluate their solutions and information systems in terms of risk, sustainability and potential for innovation. (7) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Level 10 Assessments** | | |  | **Level 10 Assessments** | | |
| **Unit (Title)** | **Assessment** | **Achievement Standard/s** |  | **Unit (Title)** | **Assessment** | **Achievement Standard/s** |
| Networks Task | Written report:  Students respond to network case study and test creating a network diagram using an online or offline tool that identifies key components, relationships and transmission media. | 1 |  | Design Task | Folio:  Students decompose a problem into functional and non-functional requirements. They design a user interface and select a preferred design using criteria. Produce and test algorithms for the solution. | 5,6 |
| Image Optimisation | Report and folio:  Students record and investigate various compression techniques to optimise images. | 2 |  | Programming Task | Folio:  Students progressively create and test modules using testing tables and other techniques. They then evaluate how software solutions met the requirements and wider needs such as risk, sustainability and innovation. | 6,7 |
| Data and Collaboration Task | Folio:  Students acquire data via a survey, manipulate data and present findings in the form of a collaborative web site that demonstrates an understanding of CSS layout and formatting as well as working through agreed protocols ensuring data and security are protected. | 3,4 |  |  |  |  |

**Instruction:** List the title of the unit of work in the first column and then tick the check box of the content description/s addressed by it, which can be done electronically. Once completed, fill out the ‘Assessments’ table.   
For detailed notes regarding the purpose of this template and further instructions for completion, refer [here](http://www.vcaa.vic.edu.au/Pages/foundation10/viccurriculum/viccurr-resources.aspx)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Strand** | **Digital Systems** | | **Data and Information** | | | | | | | | **Creating Digital Solutions** | | | | | | | | | |
|  | **Content Description** | Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems [(VCDTDS045)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDS045) | | Analyse simple compression of data and how content data are separated from presentation  [(VCDTDI046)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI046) | | Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements  [(VCDTDI047)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI047) | | Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data [(VCDTDI048)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI048) | | Manage and collaboratively create interactive solutions for sharing ideas and information online, taking into account social contexts and legal responsibilities  [(VCDTDI049)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI049) | | Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs  [(VCDTCD050)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD050) | | Design the user experience of a digital system, evaluating alternative designs against criteria including functionality, accessibility, usability and aesthetics  [(VCDTCD051)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD051) | | Design algorithms represented diagrammatically and in structured English and validate algorithms and programs through tracing and test cases [(VCDTCD052)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD052) | | Develop modular programs, applying selected algorithms and data structures including using an object-oriented programming language [(VCDTCD053)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD053) | | Evaluate critically how well student-developed solutions and existing information systems and policies take account of future risks and sustainability and provide opportunities for innovation  [(VCDTCD054)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD054) | |
| **Sequence of Lessons / Unit** | **Semester/ Year** | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # |
| **Network Theory** | Semester 1 / Year 9 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Imaging Editing** | Semester 1 / Year 9 |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Community Project** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Research and data collection | Semester 1 / Year 9 |  |  |  |  |  | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Creating posters | Semester 1 / Year 9 |  |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  |  |  |  |  |  |
| **Programming Project** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Project management | Semester 1 / Year 10 |  |  |  |  |  |  |  |  |  | 4 |  |  |  |  |  |  |  |  |  |  |
| 1. Analysis - Requirements | Semester 1 / Year 10 |  |  |  |  |  |  |  |  |  |  |  | 5 |  |  |  |  |  |  |  |  |
| 1. Design & development | Semester 1 / Year 10 |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |  | 6 |  | 6 |  |  |
| 1. Evaluation | Semester 1 / Year 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 7 |

|  |  |
| --- | --- |
| **Levels 7 and 8 Achievement Standard** | **Levels 9 and 10 Achievement Standard**  Separated by line. Number in brackets, e.g. (3), can be used as an identifier in various parts of the template. |
| By the end of Level 8   * Students distinguish between different types of networks and their suitability in meeting defined purposes. * Students explain how text, image and sound data can be represented and secured in digital systems and presented using digital systems. * They analyse and evaluate data from a range of sources to model solutions and create information. * They manage the collaborative creation of interactive ideas, information and projects and use appropriate codes of conduct when communicating online. * Students define and decompose problems in terms of functional requirements and constraints. * They design user experiences and algorithms incorporating branching and iterations, and develop, test, and modify digital solutions. * Students evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability. | By the end of Level 10   * Students explain the control and management of networked digital systems and the data security implications of the interaction between hardware, software and users. (1) * Students explain simple data compression, and why content data are separated from presentation. (2) * They take account of privacy and security requirements when selecting and validating data and use digital systems to analyse, visualise and model salient aspects of data. (3) * Students share and collaborate online, establishing protocols for the legal and safe use, transmission and maintenance of data and projects. (4) * Students define and decompose complex problems in terms of functional and non-functional requirements. (5) * They design and evaluate user experiences and algorithms, and develop and test modular programs, including an object-oriented program. (6) * Students evaluate their solutions and information systems in terms of risk, sustainability and potential for innovation. (7) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Level 9 Assessments** | | |  | **Level 10 Assessments** | | |
| **Unit (Title)** | **Assessment** | **Achievement Standard/s** |  | **Unit (Title)** | **Assessment** | **Achievement Standard/s** |
| **Network Theory** | Case study and network diagram using MS Visio | 1 |  | **Programming Project**   1. Project management | Project management plan   * Gantt chart and evidence of online collaboration | 4 |
| **Imaging Editing** | Written report and series of manipulated images demonstrating an understanding of compression | 2 |  | **Programming Project**   1. Analysis - Requirements | Written Report   * Discussion of software solution requirements | 5 |
| **Community Project**   1. Research and data collection | Written report and questionnaire   * Research into a community issue | 3 |  | **Programming Project**   1. Design and development | Mock-ups, algorithms, testing table and software solution | 6 |
| **Community Project**   1. Creating posters | Posters promoting community issues using software | 3 |  | **Programming Project**   1. Evaluation | Written report   * Student evaluation of how software solution met requirements | 7 |