



Rangi Ruru  
Girls' School  
BE YOU. BELONG.

# Year 11 Digital Technology Programme of Learning 2024

*Kaua e rangiruatia te hāpai o te hoe; e kore tō tātou waka e ū ki uta.*

*Don't paddle out of unison; our canoe will never reach the shore.*



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## *Course Overview*

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Digital Technology at NCEA Level 1 focuses on providing the foundational level of understanding for some of the key skill sets that enable students to design and create a range of authentic digital solutions suitable for end-users. With an emphasis on problem-solving and creativity, students will build website development skills, computer programming skills, and develop the ability to analyze and critique design elements of existing digital solutions.

Each skill set will be introduced with examples and supporting materials, followed by mini-projects for students to complete during class time. The class learning activities and the prescribed mini-projects reiterate skills several times to help students build fluency and depth of understanding.

The practice assessment scheduled before each NCEA Achievement Standard begins provides students an opportunity to consolidate the skills delivered in class and familiarize themselves with the assessment requirements. Students are encouraged to work collaboratively and to seek assistance as much as needed to gain the widest possible exposure to the potential solutions space. Practice assessments are not submissions for NCEA.

During the NCEA assessment period, formative checkpoint opportunities will be offered to students to gain feedforward comments and suggestions before the summative submissions. For the External Achievement Standard, the final date for submitting or sitting the External assessment will be communicated by NZQA during Term 1.

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## *Rangi Ruru Values and Dispositions*

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In your Digital Technology class, your Rangi Ruru values and Rangi Graduate dispositions will be demonstrated through:

- **Whakaute - Respect:** understand that inquiry, action, and development processes require the consideration of different perspectives.

- **Aroha:** Take opportunities to work with others in a supportive way.
- **Rikarika - Endeavour:** have the courage to seek new information or try new techniques — they will feel free to 'fail safe, fail fast'
- **Ngaana - Enthusiasm:** practise perseverance and resilience
- **Manaakitanga - Generosity of Spirit:** communicate and collaborate with others around the development of an outcome
- **Tika - Integrity:** Be honest about your own work and be responsible for your own behaviours; manage their time and resources effectively, to see a project to conclusion

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*What will you begin to understand in Digital Technology this year?*

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- Understand the impact of digital technologies on users, acknowledging cultural principles like unity, relationships, care, spirituality, and guardianship.
- Recognize that collaboration and critical thinking lead to innovative solutions, applying appropriate time and resource management strategies.
- Acknowledge that digital technologies are shaped by creators and their environments, influencing people, societies, and cultures.
- Explore and develop digital solutions for authentic issues, following a structured technological process.
- Prioritize user experience by applying relevant design principles and usability standards.
- Evaluate digital outcomes considering care, guardianship, and their social and physical contexts, while also applying basic computational thinking skills for programming.

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*What will you know and do in Digital Technology this year?*

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### **Website Design**

- Understand the human and contextual influence on digital technologies and their impact on societies.
- Follow a technological process, adhere to standards, and utilize tools for developing digital outcomes.
- Recognize the ethical implications of data collection and usage.

### **Website Development**

- Investigate digital solutions for real-world issues, following a structured process for design and development.
- Prioritize user experience, drawing from design principles and Māori values. Utilize tools and testing data to enhance outcomes, fostering innovation through creative problem-solving.
- Understand the impact of digital technologies on users, considering Māori principles.
- Anticipate and address challenges, evaluating outcomes based on their effectiveness and ethical considerations.

## Computer Science Topic – Human-Computer Interaction

- Understand that digital technologies and the concepts that underpin them are influenced by the people that create them and the contexts in which they are developed
- Understand that digital technologies and the concepts that underpin them have an impact on people, societies, and culture
- Prioritise user experience in design — practise manaakitanga by applying relevant design principles, mātāpono Māori, and usability principles
- Recognise that new and innovative solutions to existing problems are developed through kotahitanga, and creative and critical thinking

## Python Programming

- Understand computation and apply reasoning to program behavior.
- Utilize computational thinking skills for programming, debugging, and algorithmic design.
- Recognize computational complexity variations in iterative algorithms.
- Demonstrate resilience and problem-solving abilities. Employ effective time and resource management strategies for project completion.

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### Assessment Summary

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Achievement Standards Number	Subject Reference	Version Number	Topic/Title	Mode of Assessment	Credits
92007	1.4	3	Design a digital technologies outcome	External	5
92005	1.2	3	Develop a digital technologies outcome	Internal	5
92004	1.1	2	**Create a computer program	Internal	5
92006	1.3	2	**Demonstrate understanding of usability in HCI	External	5

\*\*Students choose one of the standards to be assessed.



## 2024 Level 1 - DigiTech Course Calendar

Term 1		Term 2		Term 3		Term 4	
Wk	Content	Wk	Content	Wk	Content	Wk	Content
1A	Introduction	1B	Web Development	1A	Python Learning	1B	HCI Revision NZQA DCAT Examination
2B	Waitangi Day Web Design	2A	1.2 Develop a digital outcome	2B	Python Learning	2A	Wrap-up the year
3A	Web Design	3B	1.2 Develop a digital outcome	3A	Python Learning	3B	Labor Monday 28th Oct Last Day - 30th Oct (Wednesday)
4B	Web Development	4A	1.2 Develop a digital outcome	4B	Python Learning		
5A	Web Development	5B	1.2 Develop a digital outcome Teacher Only Day	5A	Python Learning		
6B	1.4 Design a digital outcome	6A	King's Birthday 1.2 Develop a digital outcome Due Date: Friday 14th June 1.2	6B	1.1 Create a computer program		
7A	1.4 Design a digital outcome	7B	Human Computer Interaction (HCI)	7A	1.1 Create a computer program		
8B	1.4 Design a digital outcome	8A	Matariki HCI	8B	1.1 Create a computer program		
9A	Good Friday 1.4 Design a digital outcome	9B	HCI Practice 1.3 NZQA DCAT Examination (option1)	9A	1.1 Create a computer program Due Date: Friday 27th September 1.1 HCI Revision		
10B	Easter Monday & Tuesday Due Date: Friday 29th March 1.4 Web Development						
11A	Web Development						