MINISTRY OF EDUCATION
TE TĀHUHU O TE MĀTAURANGA

Digital Technologies Learning Matrix

Curriculum Level 6

Learning Area Whakataukī:

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.*

Big Ideas			
The discipline of Digital Technologies embodies whanaungatanga. Outcomes are made by people, for people, within cultural, social, and environmental contexts	**Digital outcomes are created for a purpose by following established processes**	**The discipline of Digital Technologies embodies auahatanga. Outcomes solve problems and enhance and expand human possibilities**	**All digital technologies are underpinned by algorithms and computer science principles**

Significant Learning

- ākonga will understand how digital technologies impact on end users by considering the following mātāpono Māori: kotahitanga, whanaungatanga, manaakitanga, wairuatanga, kaitiakitanga, and tikanga
- ākonga will anticipate and find solutions to problems
- ākonga will demonstrate learner agency and persevere when things fail
- ākonga will work collaboratively and engage in talanoa, korero, and wānanga to share perspectives and values
- ākonga will recognise that through kotahitanga and creative and critical thinking they can develop new and innovative solutions to existing problems
- ākonga will use appropriate strategies to manage their time and resources for completing a project
- ākonga will be aware of relevant occupational safety and health practices.

At Curriculum Level 6, ākonga will…

- 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 cultures
- investigate and consider possible digital solutions for authentic contexts or issues
- follow a technological process to design, develop, and document digital outcomes
- apply appropriate tools and use information from testing to improve the quality of digital technologies outcomes
- prioritise user experience in design – practise manaakitanga by applying relevant design principles, mātāpono Māori, and usability principles
- use appropriate standards and conventions for digital technologies domains
- evaluate the fitness for purpose of digital technologies outcomes by considering manaakitanga, kaitiakitanga and the outcomes' social and physical environments
- understand that digital devices can collect, store, and share data, and the related ethical issues
- understand how compression enables widely used technologies to function
- understand the nature of computation and apply appropriate reasoning about the behaviour of basic programs
- apply basic computational thinking skills (decomposition, abstraction, pattern recognition, algorithms, logic, and evaluation) to write and debug computer programs
- determine the cost (or computational complexity) of two iterative algorithms for the same problem size.