Technology Submission Guide

This guide serves as a strategic framework for educators, stakeholders, and community members to evaluate the Draft Technology Curriculum (October 2025). As the curriculum moves through its consultation phase, it is vital to ensure that the final document is technically robust, pedagogically sound, and practically achievable within the diverse landscape of New Zealand schools.

The following sections provide a structured approach to drafting personalised feedback by identifying seven high-priority themes

By utilizing the key questions and "deep dive" prompts within this guide, you can highlight the structural and practical issues most relevant to your context, helping to shape a curriculum that empowers all ākonga as capable creators and critical thinkers.

Key Questions

Disciplinary Identity and Foundations
This section questions whether the curriculum maintains a unified identity or becomes fragmented.
- The "Spine": Is there a clear foundational "anchor" for technical knowledge at each phase?
- Theory vs. Practice: Is there a healthy balance between "knowing about" technology and the practical "knowing how" to create it?
- Breadth of Education: Does limiting Years 9 & 10 to only two technological areas "shrink" departments and reduce student exposure to diverse Technology pathways?

Cognitive Architecture and Progression
Focuses on the logical flow of learning and whether transitions are manageable for students.
- The "Cognitive Cliff": Does the jump in difficulty between Phase 3 (Year 5–6) and Phase 4 (Year 7–8) feel like a manageable step or an overwhelming cliff?
- Continuity: How can teachers ensure continuity when the names of strands and elements change across different phases?
- Scaffolding: Is there enough repetition in early years (1–6) to master concepts before complexity increases?

Domain Balance and Digital Integration

Addresses the weighting of different subjects and the evolution of Digital Technologies.

- Alignment: Are Materials Technology and Processing Technology aligned enough to be treated as a single area?
- Digital Threshold: When does a student move from conceptual "unplugged" foundations to actually using digital tools?

Assessment and Future-Proofing

Examines how success is measured and how the curriculum stays relevant.

- Mastery: Are there clear, measurable benchmarks for teachers to define "mastery" at each phase?
- Process vs. Outcome: Does the wording prioritise documenting the process over the actual quality of the final product?

Technology as Human Intervention

Views technology as a purposeful intervention rather than just a set of tools.

- Authentic Context: Does the curriculum require projects to be grounded in real-world, human-centered problems rather than generic exercises?
- Belonging: Are there explicit prompts to include diverse role models (e.g., Māori and Pacific innovators) to inspire students?

Ethics and Socio-Technological Evolution

Encourages students to be critics of technology, not just consumers.

- Critique: Does the draft ask students "If it can be done, should it be done?" regarding unintended social or environmental consequences?
- Indigenous Knowledge: Is Mātauranga Māori presented as a living system of contemporary innovation rather than just a historical artifact?

Equity, Infrastructure, and Implementation

Considers the "real world" feasibility of the rollout and the potential for a resource divide.

- Feasibility: Can this be taught within the suggested 1.5 hours per week?
- Resource Gaps: Will the curriculum amplify existing disparities between schools with specialist workshops and those without?
- Specialist Knowledge: Does the draft assume a level of specialist teacher knowledge that may not be available in every school?

Questions to delve deeper

Disciplinary Identity and Core Foundations

The fundamental "why" and "what" of Technology. Think about whether the draft maintains a strong, unified identity or if the essence of the discipline is lost within fragmented domains.

- What is the fundamental "spine" that holds these different domains together, and where does that spine sit within this draft?
- If we were to establish a foundational "anchor" for all technical knowledge at each phase, what would that look like in practice?
- How might the current distribution of domains impact kaiako and student's ability to see the overarching identity of the subject?
- To what extent is "Design and Innovation" a specialised skill versus a universal building block for all technological learning?
- How does the draft prepare students to be critical critics of technology, rather than just proficient users or makers?
- When reviewing the progress outcomes, what is the balance between 'knowing about' technology (theory) and 'knowing how' to create it (practice)?
- Does the draft provide enough 'pedagogical space' for iterative prototyping, where a student fails, learns, and tries again, or is the focus on a linear path to a final product?
- Does the 'Knowledge' and 'Practice' content clearly reflect why a student is undertaking a task, or does it focus primarily on the technical 'how' at the expense of human-centered purpose?
- To what extent are the principles of the Nature of Technology (the 'why' and 'so what' of technological development) woven into the progress outcomes, rather than being treated as an optional or superficial introduction?
- How does limiting the requirement to only two technological areas in Years 9 & 10 impact the breadth of a 'broad general education' and the exposure students have to diverse STEM pathways?
- What is the risk that requiring only two strands will lead to a 'shrinking' of Technology departments, and how might this subsequently reduce opportunities for senior students?

Cognitive Architecture and Learning Progression

Think about the student's journey. Examine how knowledge is built over time and whether the "pathway" through the years is logical, manageable, and coherent.

- How easily can a student or teacher trace the evolution of a single concept from its introduction to its mastery?
- What are the cognitive demands on a student moving from Phase to Phase and Year to Year?
- If we look at the transition between phases, what ensures that the prior year's knowledge serves as a necessary scaffold for the next?
- What is the logical thread that connects these two levels of learning?
- How does the toggling between merged and split subjects support a student's cognitive journey?

- At what point in a student's development does specialisation begin to outweigh the benefits of cross-disciplinary knowledge?
- Identify a specific skill (e.g., using tools or analysing data). Does the jump in difficulty between each Phase feel like a 'step' or a 'cliff'?
- Does the curriculum provide enough 'scaffolding' and repetition in Years 1–6 to ensure foundational concepts are mastered before the significant increase in complexity at Year 7 & 8?
- Is the 'step up' between Phase 3 (Year 5–6) and Phase 4 (Year 7–8) a manageable progression, or does it represent a 'cognitive cliff' that risks leaving students behind?
- Is there evidence of 'spaced repetition', where key concepts like materials properties or systems thinking are revisited and deepened across different year levels?
- How does the decision to limit Years 1–6 to a single strand affect the development of a broad technological literacy compared to the multi-strand approach in later years?
- Is there a clear, visible map that shows how a specific 'element' or 'strand' in the primary years evolves into the differently named strands at secondary level? If not, how can teachers ensure continuity of learning?
- Does the changing nomenclature of strands and elements across phases create unnecessary 'translation work' for teachers and confusion for students as they transition between schools?
- How can a Year 7 teacher accurately assess a student's prior knowledge if the foundational strands they are teaching were not explicitly required or named the same way in the Year 1–6 curriculum?
- From a teacher's perspective, is the documentation and assessment requirement for multiple strands and elements sustainable, or does it add an unreasonable administrative workload that detracts from hands-on teaching?

Domain Balance and Digital Integration

Think about whether there is specific "weighting" of different subjects, and the risk of under-representing certain fields.

- When we look at the breadth of the technology sector, what determines the "weight" or depth we give to one specific domain over another?
- What core areas of technology are currently visible, and which are less so?
- Does Materials Technology and Processing Technology have enough alignment to be one area?
- To what extent does this new iteration of Digital Technologies build upon the specific pedagogical shifts established in the 2018 curriculum review?
- What is the intended learning outcome of alternating between integrated and specialised pathways for Digital Technologies?
- What is the pedagogical threshold at which a student moves from conceptual "unplugged" foundations to the application of digital tools?
- What defines the transition point between 'thinking like a computer' and 'using a computer'?
- How does the draft bridge the gap between 'writing code' and the 'human-centered design' of digital interfaces?

Assessment and Future-Proofing

Look at the practical "tools" of the curriculum, how we measure success, the examples we use to teach, and how the document remains relevant in a fast-moving world.

- What does "mastery" look like at each phase, and how does the draft provide clear, measurable benchmarks for kaiako?
- Is there a risk that the current wording prioritises the documentation of the process over the functional quality of the technological outcome?
- What is the functional difference between a mandatory curriculum requirement and a supporting pedagogical resource?
- How can the curriculum maintain its relevance over a ten-year cycle without becoming a static historical document?
- How might the choice of specific case studies influence a student's perception of who "belongs" in the field of innovation?

Technology as Human Intervention

Look at the definition of technology as "purposeful intervention by design" rather than just a collection of tools. As well as about understanding the "life" of a product or system.

- What defines the boundary between a "natural" object and a "technological" outcome in this draft?
- How does the curriculum encourage students to identify the human intent (the "why") behind a piece of technology before they learn to use it?
- To what extent does the draft explore technology as an extension of human capability (e.g., a wheel as an extension of the foot) versus just a modern consumer product?
- Does the Future Literacies strand provide enough breadth for students interested in creative digital fields (like photography, web design, or film), or is it heavily weighted toward computer science?
- How effectively does the curriculum require students to ground their projects in authentic contexts? Is there a risk that the learning becomes a series of generic exercises rather than solving real-world, human-centered problems?
- Does the draft help students distinguish between the physical nature (what it's made of) and the functional nature (what it does) of an outcome?
- How does the curriculum address malfunction and failure, not as a mistake in the workshop, but as a critical data point for understanding the nature of a design?
- What prompts are provided to help students understand that a technological outcome "belongs" to its context and may lose its fitness for purpose as the world changes?
- Are there explicit prompts to include diverse, relatable role models (contemporary New Zealanders, young entrepreneurs, Māori and Pacific innovators) to inspire a sense of belonging in STEM?
- To what extent does the curriculum allow students to see themselves as current creators and technologists, rather than just consumers of existing technology or students of past inventions?

Ethics and Socio-Technological Evolution

Technology doesn't happen in a vacuum; it is shaped by culture and history. Technology should ask students to be critics, not just consumers.

- Where in the draft are students asked to ponder: "If it can be done, should it be done?"
- How does the curriculum support students to identify the unintended consequences (social, environmental, or cultural) of a successful technological "solution"?
- How are students encouraged to evaluate "fitness for purpose" in its broadest sense, including its impact on the planet and future generations?
- How does the draft illustrate that technology is socially embedded, meaning it is shaped by the values, politics, and needs of a specific time and place?
- In what ways does the curriculum invite students to explore how Mātauranga Māori or other indigenous knowledge systems offer unique perspectives?
- To what extent is Mātauranga Māori presented as a historical artifact versus a living, breathing system of contemporary technological innovation?
- How does the draft bridge the gap between historical innovations and future scenarios, helping students see themselves as part of a continuing human timeline?

Equity, Infrastructure, and Implementation

Think about the "real world" impact on schools. Question the feasibility of the rollout and the potential for creating a "digital or practical divide" based on school resources.

- Can the curriculum successfully be taught in the time allocation at the front end of the curriculum (Technology 1.5 hours per week)?
- How does the curriculum's heavy reliance on written 'identifying' and 'describing' impact diverse learners? Are there enough pathways for these students to demonstrate capabilities?
- What are the essential "readiness indicators" that would signal a school is prepared to transition to this new model effectively?
- If this curriculum were implemented tomorrow, what existing disparities in school resources might be amplified?
- Where does the curriculum assume a level of specialist teacher knowledge (PCK) that might not be universally available in every school?
- What might be the unintended consequences for physical technology spaces (e.g., workshops vs. computer labs) under this model?
- Does the curriculum allow your school to use local stories, local materials, and local experts, or does it feel like a 'one-size-fits-all' national narrative?
- To what extent does the curriculum provide flexibility for schools to align with the unique local landscape of their specific region?
- What specific shifts in teacher pedagogical content knowledge (PCK) are required, and are those shifts supported by the current draft's clarity?
- Looking at the Phase 1 & 2 expectations, could a primary teacher, without specialist workshop or computer lab equipment, reasonably facilitate this learning?
- What specialist equipment (e.g., CNC, 3D printers, commercial kitchens) is mandatory versus optional?

- If schools are only required to offer two strands, how will the curriculum ensure that all ākonga, regardless of their school's size or resources, have equitable access to the full suite of Technology domains (e.g., Processing, Digital, or Materials)?