

Kia pai tō haere

Hangarau

Possible contexts for kaupapa: Keeping whānau safe on a journey is everyone's work. Safe journeys. Safe: spiritually, physically and mentally.

Technological practice: Design and plan safety devices for whānau to help keep them safe when they work and travel within the transport system: high visibility clothing.

Ngā putanga ako tauwhāiti – whāinga paetae achievement objective	Aromatawai: intended learning outcomes/learning intentions
<p>Ka tāea e te ākonga te:</p> <p>Taumata 1</p> <p>Te Whakaharatau Hangarau</p> <p>Ka tūhura, ka tautohu i:</p> <ul style="list-style-type: none">• ngā hua hangarau whānui;• te take me te whakamahi i ngā momo hua <p>Taumata 2</p> <p>Te Whakaharatau Hangarau</p> <p>Ka rangahau, ka whakahiato i ōna hiahia hei mahere. Ka whakaarohia ēnei:</p> <ul style="list-style-type: none">• he hātepe;• ngā mātāpono;• ngā momo rawa. <p>Taumata 3</p> <p>Te Whakaharatau Hangarau</p> <p>Ka whakaraupapatia he mahere hoahoa whitake.</p> <p>Taumata 4</p> <p>Te Whakaharatau Hangarau</p> <p>Ka whakamahia he mahere, ka whakamātauria kia kitea:</p> <ul style="list-style-type: none">• te whanaketanga;• te tōtika o te mahi.	<p>Level 1</p> <p>Identify colours that are suitable for high visibility.</p> <p>Design a high visibility item: vest, belt, hat, headband.</p> <p>Explain why they have used a particular colour.</p> <p>Level 2</p> <p>Identify which material are best suited for high visibility.</p> <p>Design and construct a high visibility item: vest, belt, hat, headband, sign, reflector.</p> <p>Explain why they have used a particular type of material.</p> <p>Level 3</p> <p>Research which manmade materials are best suited for high visibility.</p> <p>Design, plan and construct a high visibility item: vest, sign, reflector, car panel.</p> <p>Explain why a particular type of material is better suited than another.</p> <p>Level 4</p> <p>Research natural materials that are suitable for high visibility.</p> <p>Design, plan and construct a high visibility item from natural materials.</p> <p>Explain why particular types of natural materials are better suited for high visibility.</p>

Raupapa mahi: possible learning intentions and learning experiences

Your school will have its own criteria for developing learning intentions. Emphasise the learning intentions that best match the abilities of your students.

LI: Investigate colours and materials suitable for high visibility

LE: High Visibility

Use a Y chart to predict what being safe while travelling in the dark (low visibility environments) as a pedestrian or cyclist would look like, feel like and sound like. Complete the reverse for what it would be like to be unsafe in this situation.

Y chart

Link the risks related to travelling in the dark (low visibility environments). Include physical, environmental, behavioural. Record on a graphic organiser.

Complete a survey of classmates and the general public to find out why people are reluctant to wear existing high visibility clothing in low visibility environments.

Gather information that would help to design 'cool' high visibility clothing.

Create an information poster that highlights the benefits of wearing high visibility clothing, equipment.

Colours

Recall colours and materials which are easier to see from a distance. Test this over a variety of distances. Discuss what this could mean when choosing colours for high visibility clothing, equipment.

Design a colour chart ranking colours for their visibility strength.

Question why people never wore high visibility clothing etc in the past? Why do we need them now.

Materials

Research to identify manmade materials that are highly reflective.

Investigate natural materials that are reflective and would qualify as highly visible. Research which of these materials could be 'processed' or 'adapted' to become reflective or highly visible, i.e. coated with a substance, dyed, polished.

Record the characteristics of these natural and manmade materials.

Investigate price and ease of working with these materials to create high visibility clothing. Rank which materials would be best suited on all factors.

Complete a science fair investigation to prove which natural and or manmade materials are more reflective than others and why.

Complete a SWOT analysis (identifying strengths, weaknesses, opportunities and threats) of their materials. Use this to help select best materials to use.

Wonder

Create songs, chants or raps containing safety messages about being seen while travelling.

Write and publish a story of a future world where our skin naturally becomes reflective when out walking at night.

Complete these Thinker's Keys activities: The Invention Key – invent a substance that activates and glows when out in darkness. The Alternative Key – List natural ways to be seen in the dark. The Ridiculous Key – what would happen if we could only travel after dark? etc

Student inquiry

Your task

Use the technology design process to create and market a high visibility natural material clothing range for students of their kura. Include colour range, price and school tohu in their brief.

Ngā rauemi: resources

Print

Pātaka Tūmahi Hangarau

He Pukapuka Āwhina mā te Pouako

Hei Āwhina i te Pouako

Te Tūhono Tahi Series

Electronic

[He Tauaromahi Hangarau](#): Exemplars

[He Rauemi Hangarau \(DVDs\)](#)

[Hangarau \(TKI\)](#)

Assessment for learning: teacher/peer/self

Teachers to highlight learning experiences above that will be used for assessment for learning throughout the unit. These can be recorded in portfolios/school management systems.

Example self-assessment rubric

Teachers to code in the first column the symbols that they use in the school for assessment.

These could be against levels, MOE guidelines or internal criteria. The rubric can be written against the AOs or rewritten as success criteria for children depending on the preference of the school.

Highlight the relevant phrases at each step. This is an example of one dimension only.

Example: Selecting colours/materials for high visibility clothing.

Extended Abstract	I use several strategies to select colours suitable for high visibility and I know when and why to use them. AND I can teach others to select colours suitable for high visibility. I seek feedback on how to improve how I can select colours suitable for high visibility.
Relational	I use several strategies to select colours suitable for high visibility and I know when and why to use them.
Multistructural	I use several strategies to select colours suitable for high visibility but I am not sure when and or why to use them.
Unistructural	I can select colours suitable for high visibility if I am prompted or directed.
Prestructural	I need help to select colours suitable for high visibility