

# Kia Pai Tō Haere

## Pāngarau

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

**Ahuatanga:** position and orientation - direction and coordinates

Ngā putanga ako tauwhāiti – whāinga paetae achievement objective	Aromatawai: intended learning outcomes/learning intentions
<p>Ka tāea e te ākonga te:</p> <p><b>Taumata 1</b></p> <p>Te Wāhi me te Ahunga</p> <p>Ka whai, ka hoatu hoki i ngā tohutohu mō te nekeneke e whai wāhi mai ana:</p> <ul style="list-style-type: none"><li>• te tawhiti;</li><li>• te ahunga;</li><li>• te hurihanga (hurihanga</li></ul> <p>0, 1–4, 1–2, 3–4, 1, 11–4, 11–2 ...).</p> <p>Ka whakamārama i te wāhi noho o tētahi mea.</p> <p><b>Taumata 2</b></p> <p>Te Wāhi me te Ahunga</p> <p>Ka hanga, ka whakamahi mahere māmā:</p> <ul style="list-style-type: none"><li>• ka whakaatu taunga;</li><li>• ka whakaatu ahunga;</li><li>• ka whakamārama</li></ul> <p>huarahi;</p> <ul style="list-style-type: none"><li>• ka whakamārama</li></ul> <p>tirohanga.</p> <p>Ka whakamārama taunga, ahunga hoki o ngā wāhi matua o te kura, te tāone me te rohe.</p> <p><b>Taumata 3</b></p> <p>Te Wāhi me te Ahunga</p> <p>Ka hanga, ka whakamahi pūnaha ki te:</p> <ul style="list-style-type: none"><li>• whakaatu taunga;</li><li>• whakaatu ahunga;</li></ul>	<p><b>Level 1</b></p> <p>Use the language of position to describe how to get from one place to another.</p> <p>Give and follow instructions using the language of position and direction; for example, under, over, on, left, right, ¼ turn. ½ turn, up, down.</p> <p>Classify signs and symbols into categories.</p> <p>Describe movement in their own language; for example, forward, back, walk, half, etc..</p> <p>Estimate length of movement with non-standard units.</p> <p><b>Level 2</b></p> <p>Give and follow directions using left, right, up, down, north, south, east and west.</p> <p>Draw and follow a path on a grid to show a route to get from A to B.</p> <p>Identify landmarks and features from a given location on a map.</p> <p>Describe pathways between map locations.</p> <p>Label and follow legends on a map.</p> <p>Create a set of movement and direction instructions to get from A to B.</p> <p>Use compass directions to describe how to find particular landmarks.</p> <p><b>Level 3</b></p> <p>Use co-ordinates to describe the location of an object.</p> <p>Give and follow directions involving turns (left and right) and compass directions.</p>

<ul style="list-style-type: none"> <li>• whakamārama huarahi.</li> </ul> <p>Ka whakamahi i ngā tōpito matua ki te whakamārama taunga, ahunga hoki</p> <p><b>Taumata 4</b></p> <p>Te Wāhi me te Ahunga</p> <p>Ka whakaatu, ka whakamārama, ka whakamahi i te wāhi noho (taunga) o tētahi mea, me te ahunga:</p> <ul style="list-style-type: none"> <li>• ngā tōpito;</li> <li>• ngā koki o te kāpehu;</li> <li>• ngā āhuatanga o te taiao;</li> <li>• te tukutuku (takirua raupapa);</li> <li>• te mahere.</li> </ul>	<p>Give and follow instructions involving distances by interpreting simple scales.</p> <p>Draw and interpret simple scale maps.</p> <p><b>Level 4</b></p> <p>Use positive and negative co-ordinates to describe the location of an object.</p> <p>Perform calculations to convert metres into kilometres and vice versa for distances travelled.</p> <p>Solve movement multiplication problems using doubling and halving strategies.</p> <p>Recall known multiplication facts to solve mapping and location multiplication problems.</p>
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## 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: Identify the language of position and direction used to safely get from one place to another [Unistructural]**

LE: List the language of position and direction. Recall times when you have used the language of position and directions to safely get from one place to another. Use the language of position and direction to direct the movement of a person or an object around the classroom/playground. Play games using the language of position and direction. E.g. Simon says ...

### **LI: Describe using the language of position and direction to safely get from one place to another [Multistructural]**

LE: Recall a time when you or your family used the language of position and direction to get safely from one place to another.

### **LI: Sequence movement using the language of position and directions to safely get from one place to another [Relational]**

LE: Look at pictures or images of the movement of an object or person moving safely from one place to another. Sequence or order the images, annotating each step with the instructions for the position and direction. Explain why sequencing the steps in this order will help ensure safe travel.

### **LI: Classify the language of position and directions to safely get from one place to another [Relational]**

LE: Brainstorm different terms/ways of identifying position and direction. Place each on a different piece of paper and categorise them. Explain why you have sorted the different terms in this way.

**LI: Apply the language of position and directions to allow people to safely get from one place to another [Relational]**

LE: Matatini Central Activity

Introduce mazes to explore the concepts of  $\frac{1}{2}$  and  $\frac{1}{4}$  turns, right and left turns. Find the shortest and longest way through. Set up a simple obstacle course or maze in a safe environment. Create mazes in the classroom with common classroom objects and furniture; create mazes in the playground.

[Maze worksheets](#)

[Mazes \(Maths is Fun\)](#)

In pairs, have students identify a route around the school; for example, from the classroom to the school office. They use the language of position and direction to describe and follow the route, and sketch the route.

In pairs, conduct someone around a given maze, circuit using the language of position and direction. Do this blindfolded. Let teams of blindfolded students crawl through the course in response to instructions (using the language of position and direction) from a team member.

Complete the maze activity on a map, one student gives the instructions while the other draws the route on the map.

**LI: Create resources using the language of position and direction to help someone you care about safely get from one place to another [Extended Abstract]**

LE: Plan routes for people to get from one area to another within the Matatini venue, for example from the carpark to the kaumatua area, from the main stage to the performers warm up area. Record in written and oral form.

[Te Matatini](#)

Design and construct safety signs for hazardous areas, carpark walkways, slippery steps in stadium, entry and exits.

In small groups, construct a 3D model of the Ultimate venue, consider walkways and safe movement for people and vehicles i.e ambulances, police cars.

Create your own venue map, showing all corners, straights, hazards and the finishing and starting points.

Explore directions on the venue map – north, south, east, west – and show them on their map as a legend on a grid or with a compass. Useful activities for practising compass directions are: 'Pirate Island' from Figure It Out: Geometry, Levels 2–3, page 20 (change the pirate theme to a cycling theme).

[How to use a compass \(NZ Mountain Safety Council\)](#)

[Chippy's Journeys](#)

[Compass directions and mazes](#)

Use past and present venue maps, and road maps explore drawing and interpreting simple maps, and specifying location using bearings and grid references.

## Student inquiry - travelling to Matatini central

**Your task: construct directions to help someone you care about safely get to and from Matatini Central.**

Use think, pair, share to think about and discuss what we use maps for. Record ideas as a concept map and add to it as they do other mapping activities.

Use the maps unit on the TKI website to extend work on reading, following directions and planning journeys on simple maps.

### Maps

Use New Zealand Road Maps to find where each group is travelling from to Matatini, tag to show the position. Predict the shortest and longest routes from there to the venue. Test these predictions by using google maps and a variety of Navman devices.

Brainstorm means of travelling to Matatini (for example, car, van, train, bus). As a class, investigate the different seating positions that are possible in a car. (You could demonstrate possibilities on two or three different cars, for example sedan, station wagon, people mover.)

Sketch the different seating positions and identify each one using a coding system you supply, such as D= driver, PF = passenger front, PBD = passenger behind driver, PBPF = passenger behind passenger front, or students could devise their own system.

Challenge ideas of time and distance. Identify alternative routes, brainstorm alternative means of travelling to Matatini (for example, riding a bike, flying, hitch hiking), or identify an alternative route of the same distance. Challenge and reflect, 'Do these alternatives take less or more time to travel? How do you know?'

Brainstorm the hazards, places of interests, road crossings, traffic lights, bridges etc found when travelling one route to the venue. On local area maps, students place signs for each of these features, and create a legend for the map.

Using think, pair, share, practise and solve this coordinate challenge:

### Coordinates

## Ngā rauemi: resources

### **Print**

Te Reo Pāngarau

Poutama Tau Rauemi

Figure it Out Series

He Pūkete Aromatawai Pāngarau

Pipi Pāngarau

### **Electronic**

[NZmaths: Rauemi Maori](#)

## 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: Using the language of position and direction

Extended Abstract	<p>I use several strategies to use the language of position and direction to get from one place to another safely and I know when and why to use them.</p> <p>I can teach others to use the language of position and direction to get from one place to another safely.</p> <p>I act as a role model for others to help them use the language of position and direction to get from one place to another safely.</p> <p>I seek feedback on how to improve how I can use the language of position and direction to get from one place to another safely.</p>
Relational	<p>I use several strategies to use the language of position and direction to get from one place to another safely and I know when and why to use them.</p>
Multistructural	<p>I use several strategies to use the language of position and direction to get from one place to another safely but I am not sure when and or why to use them.</p>
Unistructural	<p>I can use the language of position and direction to get from one place to another safely if I am prompted or directed.</p>
Prestructural	<p>I need help to use the language of position and direction to get from one place to another safely</p>