

# BikeReady Lesson 2

Demonstrate skills for starting and stopping, and riding along

## PLANNING FOR LESSON 2

### Skills focus

Starting and stopping, and riding along.

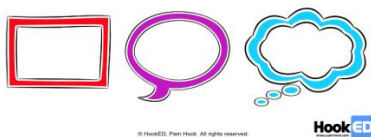
- Which side of the bike should you stand on?
- Getting on and off.
- Starting off and pedalling.
- Stopping the bike.
- Riding along independently for at least a minute.
- Making gentle turns.
- Steering the bike.

### Reflection on skills training session

#### Share new learning with classroom teacher

**Identify** experiences students enjoyed when taking part in cycle skills training on starting and stopping, and riding along. Record your findings on a SOLO Strip.

**Draw** pictures (take photographs or video) in response to the following prompts.



- What did you enjoy when you were taking part in the cycle skills training? [SOLO Multistructural – rectangle]
- Why do you think it was like that? [SOLO Relational – speech bubble]
- What does it make you wonder about cyclists or cycling? [SOLO Extended abstract]

**Add to the class list** of all the enjoyable experiences students encountered during cycle skills training.

Identify any **new terms and vocabulary** introduced into the cycle skills training session. Highlight new terms and vocabulary.

E.g. stationary, stopped, moving, turn left, turn right, on, off, travel, straight line, fast, slow, pedal, speed, velocity, constant speed, accelerate, decelerate, speed up, slow down, same, change, left, right, north, south, east, west, quarter turn (clock), half turn (clock)

Add the terms and their meanings to the class/group glossary. Identify unfamiliar terms and use them in a Frayer Vocabulary Chart.

## Opportunities for community engagement

*Make connections with people and organisations in the local community with experience in **measuring distances travelled, and mapping and creating bike trails.***

Make connections with people and organisations in your local community.

They might volunteer to visit or host students wanting to find out more about starting and stopping, riding distances, and mapping cycle routes or bike trails in the local community.

For example, contact locals who develop bike tracks in schools, through local forests or in local communities. Invite them to speak to students or involve them in trail creation projects.

Also contact locals who form casual friendship cycle groups and go on bike trips in their free time.

## Alignment to NZC learning areas

Refer to NZC Learning Areas Overview. Refer to the resource for Achievement Objectives and Learning Intentions (L1 to 4).

English	Listening, Reading and Viewing		Speaking, Writing and Presenting		
The Arts – Drama	Understanding the Arts in Contexts	Developing Practical Knowledge	Developing Ideas	Communicating and Interpreting	
Health and Physical Education	Personal Health and Physical Development A – A3 Safety Management		Healthy Communities and Environments S – D2 Community Resources		
Mathematics and Statistics	Geometry and Measurement				
	Measurement		Shape	Position and orientation	
Science	Nature of Science				Physical World
	Understanding about science	Investigating science	Communicating in science	Participating and contributing	Physical inquiry and physics concepts
Social Sciences	Identity, Culture and Organisation	Place and Environment	Continuity and Change	The Economic World	
Technology	Technological Practice		Technological Knowledge	Nature of Technology	

## CLASSROOM ACTIVITIES

Acquire surface and deep understanding needed to support cycle skills sessions.

Building student understanding about position and motion – starting, stopping and distance when riding a bicycle.

### 2.1 Re-visit the class discussion from the previous classroom lesson 1.

[Bringing in ideas]

[Links to NZC Learning Areas: Mathematics and Statistics; Health and Physical Education]

**Review** the cycle skills training session.

Use photos or video taken during the training to help students recall what they did, and what new things they learned about **position** and **motion** for safe riding.

### 2.2. Where's-the-Cyclist?

Find the cyclist. Different perspectives on position.

[Relating ideas and extending ideas]

[Links to NZC Learning Areas: Mathematics and Statistics – Statistical Investigation, Statistical Literacy]

Ask students to work in groups of 2-3. Give each group 2 objects or images (models, drawings or photographs). One object/image represents a bicycle, the second a cyclist.

#### Change-the-Position game

One group gives directions for another group to follow. They ask the second group to change the position of the cyclist in relation to the bicycle.

For example, place the cyclist *above*, *behind*, *in front of*, *underneath*, *next to*, *to the left* or *to the right* of the bicycle, or *in between* the bicycle and another bicycle/cyclist.

The other groups check the changes in position are correct.

Then different groups repeat the activity.

### Collage or scene

Ask groups to create a class collage or scene using all the bicycles and cyclists.

Take turns in describing the position of a cyclist in different ways (from different perspectives).

Can students position a cyclist so that they can be described as being in all of these positions: *above* a bicycle, *behind* a bicycle, *in between* a bicycle and another bicycle or cyclist, *next to* a bicycle, *to the left* of a bicycle, *to the right* of a bicycle, *in front of* a bicycle and *underneath* a bicycle?

### Extension

Students create directions (programmable code) to change the position of a robot or avatar.

## 2.3. Changing direction

Mapping positions and motion.

[Bringing in ideas, relating ideas and extending ideas]

[Links to NZC Learning Areas: Mathematics and Statistics – Measurement]

Ask students to work in groups of 2-3.

Each group follows directions to find bicycle tokens hidden across a large area in the school.

When each group has found their token, they hide it in a new location in the same area. They write directions to their token from a new location in the school.

The team that locates the most bike tokens wins.

Translate the directions into a **visual map** of the area with annotations giving clues to the location of bike tokens.

Ask students to:

**Define** 'direction'. (What is direction?)

**Describe** different ways to find your way.

Develop a vocabulary list of the word specific to mapping and direction (turns, half turns, quarter turns etc.).

Set up an obstacle course in the classroom, and in pairs get some students to write directions.

Blindfold the other students and see if they can direct the blindfolded ones through the course using only the written directions.

You can repeat this activity in a large outside area, for example, by drawing a street system on a court area.

Get students to have several attempts at writing new sets of directions.

**Define** 'co-ordinates'. (What are co-ordinates?)

**Create** a game of Battle Bikes on grid paper so students can experience the use of co-ordinates to locate an object.

**Define** 'quarter turn' and 'half turn' using a clock. (What is a quarter turn? What is a half turn?)

**Create** a string map. Run string lines across the classroom and place objects and people at coordinates.

Describe the location of individuals and objects using coordinates.

## 2.4 Go bicycle go!

[Bringing in ideas, relating ideas and extending ideas]

[Links NZC Learning Areas: Mathematics and Statistics – Measurement; Technology]

How far do people bike? Sharing distances on a map of the local area.

Explore measurement in terms of distances travelled on a bike.

Cycling is learning to wobble. Every 50cm cycled independently represents a great achievement when students are learning to cycle. However, in the local school community some cyclists are better wobblers – they regularly wobble many kilometres each day.

Ask students to recall that feeling of excitement when they first cycled a small distance without help.  
Ask students to:

**Define** ‘length’. (What is length?)

**Record** the responses on SOLO Hexagons or Post-it notes. Add any measuring language that the students know.

**Describe** all of the things they need to measure in their lives. Add these ideas and symbols to the SOLO Hexagons.

Get students to select/mark out distances in the area where they learned to cycle, using a hand-drawn map or Google Maps. Discuss how they could measure them.

**Brainstorm and record:** if we did not have a metre ruler, how else could we measure these items? (Blocks, hands, feet, string, walking steps, rotations of bike wheel etc.).

Provide appropriate ways to measure these and record the measurements.

- Get students to estimate the distance they cycled independently and then measure this distance using conventional and unconventional methods.
- For example, use paces (two steps or each time your right foot touches the ground) or the number of complete wheel rotations as a measure of distance.
- Become a human tape measure. Keep an even stride and work out how many paces you take to cover a measure of 10 metres. Use pace to measure the walking distance between places in the school and local area.
- Become a human cycle measure. Work out how many rotations of the pedal or wheel you take to cover 10 metres. Why do the two measures differ?
- Invite other local cyclists, visitors to the school or people in the local community to talk about the unconventional measures they use to judge cycling distances.

**Create a ‘rough and ready’ measurement guide for bike riders wanting to estimate how far they have cycled when they are out ‘having fun and keeping safe’ riding a bike.**

Ask students to:

- Find students who have consistently reliable and valid results when estimating cycle distance measurements. Ask them how they estimate distances cycled.
- Use this and other information from cycle skills training to make a prototype (a device, a song or a visual measure) for estimating how far cyclists travel when cycling.

For example:

- Develop a method of counting wheel rotations or pedal rotations as an unconventional measure of the distance between places in the school and local area.
- Develop a mailbox or lamp post count for a given distance in metres.
- Develop a 'Lamb Chops' by Shari Lewis cycling singalong like 'The song that never ends' and measure how far you travel after 20, 50 or 100 iterations.  
[Song that never ends \(10 hours – YouTube\)](#)
- Develop a simple measure of your average cycle speed e.g. how far you travel in 30 minutes.

Invite other local cyclists to become human measuring devices. Compare the range of different rotations needed to cover 10 metres.

Convert cycling distances measured in metres to kilometres and millimetres.

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Use the Google Maps line tool to measure the distance student cycle to school each day.

[Measure distance between points \(Google Maps Help\)](#)

**Define** map. (What is a map?)

**Describe** the attributes of a map.

Explore different forms of mapping (map of school, map of local area, road maps, Google Maps, treasure maps, early world maps, navigational charts, contour maps, topographical maps etc.).

**Create** a rough local map for your cycle distance measures or **identify** positions or locations and distances on an existing map of your local area.

## WRAP UP

### Session reflection

What do you know you don't know about measuring and mapping distances travelled when biking?

What have you learnt that is new to you about distances travelled when biking?

What do you wonder about distances travelled when biking?

Use the student responses to make decisions about follow-up sessions.

## Key competency self-assessment rubric

Thinking	Managing self	Participating and contributing	Relating to others	Using language symbols and text
Develop a critical eye (situational awareness) for unsafe environments and unsafe actions when out on your bike.	Act appropriately when on and around bikes.  Act in ways that create and maintain 'bike fun and safe environments'.	Display an awareness of local issues around riding bikes.  Be actively involved in community issues around having fun and keeping safe when riding bikes  Contribute to physical environments and local events to make them 'bike fun and safe'.	Interact with others to create 'fun and safe' biking environments at school and in the local community.	Interpret messages in communications about 'bike fun and safe environments'.  Use language symbols and text to communicate messages about 'bike fun and safe environments'.

For more about key competency self-assessment rubrics, see Appendix B.