Take action so more people ride bikes

NCEA Level 1 Physical Education

Introduction

The purpose of this unit is for students to develop a greater understanding of why cycling is important. Initially, it focuses on why students cycling to schools decreased over recent decades. It examines the benefits of cycling and the potential hazards.

Students are then given the opportunity to work with younger students, either from their own school or a nearby primary school. Students put together an action plan to enhance younger students' cycling abilities by creating and running a three-session cycling development programme.

The related assessment resource supports assessment against:

Achievement Standard 90969 – Take purposeful action to assist others to participate in physical activity.

Practical matters

Bikes and helmets are needed. Schools may have a set or rely on students bringing in their own. Two students per bike is a minimum; 1:1 is better. Charitable trusts may assist in some regions.

In terms of safety, caregivers of younger students taking part in the cycling development programme will need to be informed about the practical component, and consent obtained. It is essential to check that bikes and helmets are roadworthy and correctly fitted prior to any of the physical activities (especially if they have been out of use for a while).

Lesson structure

Ideally this unit should take 16-20 hours, spread over 4-5 weeks. Adapt as necessary.

The first 4-5 lessons are about understanding cycling in the local community. Students should gain a greater understanding of the benefits of cycling to hauora of self, others and society. For students to fully participate, it's important to understand why action needs to be taken, while also looking into hazards and ways these can be avoided. While not crucial, it's helpful if the class uses bikes and helmets for a couple of lessons so students get a first-hand appreciation of cycling on the road. They can observe the range of abilities within their own class and learn skills to pass on to the younger students.

The next 3-4 lessons are on understanding the needs of potential participants in the bike skills courses. This involves visiting the younger students to interview them about their interest and bike skills and getting them to take part in practical activities to assess ability. Then they will create an action plan to meet the needs of the younger students.

The students will plan and facilitate lessons prior to taking the participants through the programme. It would be advantageous to take the students through skill development lessons using any skill e.g. learning to juggle. You can model different teaching techniques and strategies. Students will also understand more about identifying risks so risk management can be applied to action plans.

Once the action plan is created and reviewed, students will lead participants in the cycling development programme. Each session within the development programme will last for approximately 30 minutes.

The last couple of lessons allow students to reflect on their actions and create a presentation.

An important aspect of this unit is encouraging students to work with and help others. Two SOLO Taxonomy Rubrics created by Pam Hook from HookED have been included in the unit. These rubrics focus on Hellison's Model of Social Responsibility and offer a helpful method of self and peer assessment.

New Zealand Curriculum links

Values

Innovation, inquiry, and curiosity, by thinking critically, creatively, and reflectively.

Students should gain a more critical understanding of how the road is used and the place bikes play in it while creating plans to encourage others to cycle more.

Community and participation for the common good.

This unit aims to enhance the number of people riding bikes and increase people's confidence on them.

Key Competencies

Thinking: as students start to make connections between different elements to do with cycling and start to see why more should be done to encourage people to cycle.

Using language, symbols, and texts: reading and understanding key text that relates to road safety such as the code for cycling.

Managing self: when riding to ensure safe choices are being made. Individually to ensure action plan and final presentation are completed.

Relating to others: skills relating to others are essential when students work with younger students during the cycling development programme.

Participating and contributing: students taking action to improve the skills and knowledge of other students to enable more people to ride bikes.

HPE achievement objectives level 6

A1 Personal growth and development: *investigate and understand reasons for the choices people make that affect their well-being and explore and evaluate options and consequences.*

Exploring how hauora is affected by cycling and how the choices we make relating to cycling could relate to our hauora.

A3 Safety management: *demonstrate understanding of responsible behaviours required to ensure that challenges and risks are managed safely in physical and social environments.*

Preparing safety action plans for all physical activities that are designed and carried out.

C3 Interpersonal skills: *plan strategies and demonstrate interpersonal skills to respond to challenging situations appropriately.*

Students are required to plan and implement their own session plans which involves interacting with younger students and dealing with challenging situations.

D1 Societal attitudes and values: *analyse societal influences that shape community health goals and physical activity patterns.*

Analysis of reasons behind the decrease in the number of school students riding bikes is required, as well as reviewing positive outcomes for the community's wellbeing if this number increases.

D2 Community resources: *advocate for the development of services and facilities to meet identified needs in the school and the community.*

Students are encouraged to advocate for cycling to become a more viable option for the school and community.

Learning intentions

- Critically understand why fewer school students are riding bikes to school.
- Understand what the benefits would be if more people were riding bikes.
- Develop cycling skills.
- Take action to assist others to cycle more by carrying out a cycling development programme.
- Learn how to create a safe learning environment.
- Understand how to manage time and people when teaching or coaching others.

Online resources

It's official: cycling makes you happier (Cycling Weekly UK)

Benefits of cycling to work outweigh damage caused by pollution, study claims (Cycling Weekly UK)

Tips for everyday bike riding - beginners to advanced (BikeReady)

Bike riders save economy $21 on each commute (Sydney Morning Herald)

Benefits of cycling (Grownups)

Benefits of investing in cycling in New Zealand communities (Waka Kotahi)

25 Years of New Zealand Travel (Ministry of Transport)

Bike maintenance videos (Auckland Transport – YouTube)

The code for cycling

Why the Dutch ride bikes

Health benefits of cycling (YouTube)

What is hauora? (Health and PE)

EOTC safety management plan template

Lesson 1 – why take action regarding cycling?

Big ideas and key skills

- Introduction to the unit.
- Look into why we need action to encourage community members to cycle.
- Interpret information from text and infographics.

Activities

An introduction should emphasise how students can make a difference in their local community by improving their own bike skills as well as others. Ideally it should motivate students to cycle to school and to become advocates for cycling.

Check how many students can bring bikes and helmets to school over the next week (ideally this should be done in the weeks prior to ensure some parts of the unit are viable).

Check what previous experience students have had with cycling e.g. who is currently riding a bike to school, who rode a bike to primary school. Find out what has changed if people are not riding a bike to school now but used to.

Create a continuum activity allowing people to move to different areas which correspond with different answers. Give students the opportunity to explain why they are standing at a particular point.

Example questions:

- Who rides a bike during the week? Continuum from all the time, sometimes to never.
- Ask prompting questions to gain more information and understanding e.g. why is this the case?
- If you had a bike and helmet who would ride to school? Ask students to stand on a continuum from all the time, sometimes or never.
- Ask prompting questions to gain more information and understanding.

You could take your lead from some of the reasons students give to put different scenarios to the students to help the class gain a more complete picture of the reasons people have for either riding or not riding a bike.

Give students (either in paper or in digital form) a Hooked ED Solo Describe map (attached) to complete regarding the statistics from:

25 Years of New Zealand Travel

Make the infographic below from the study the main feature in the centre of the Solo Describe Map.

Using this HookED Solo Describe Map (found at the end of this document), ask the students to interpret what they have found, why they think that is the case and what they think as a result.

Ask them to generalise to what they thought the activity was about. Ask the students to share their thoughts with others to compare the similarities and differences in responses.

Come together as a class and ask students to share their reflections.

The amount of discussion you have following the Solo Map activity will determine if you need to delve deeper into this area. If time and situation permits, you could pose questions:

- Why are fewer people riding bikes to school compared with 25 years ago?
- How might more people riding bikes impact on people's own live, society, the environment?
- What needs to change in our society to allow more people to ride bikes to school?
- What could we as a class do?

Remind the students to bring their bikes and helmets into school for the next lesson if they can.

Teacher notes
Following a brief introduction, the questions or continuum activity you do will allow the students to learn from each other why people are riding or not riding a bike to school. This helps you gauge the previous experience your students have with riding bikes, so you can tailor the rest of the programme according to their needs.

The Solo Describe Map lets you provide feedback on the level of understanding for students and to know the students' next steps.

In the final discussion, depending on how your class operates, you may like to give the questions mentioned above out to the students and allow them time to come up with their own thoughts before having a full class discussion. You could also get students into groups and have them discuss the questions before sharing back with others.

Resources
Continuum questions, Solo Describe Maps (either paper or digital).

Lesson 2 – getting on the bikes

Big ideas and key skills

- Bike basics overview.
- Introduction to helpful skills and knowledge.
- Review potential risks involved in a cycling development programme.

Activities

Go over the main components of a bike to ensure every student understands how bikes are set up, how to maintain them and simple tips for riding them. These tips will be valuable when working with participants later in the unit. You could allow students to use these clips as they go over this information.

Bike maintenance videos (Auckland Transport – YouTube)

Basics to include:

- fitting helmet
- adjust seat to fit
- how to change gears
- when and how to use brakes
- ensuring brakes are on and quick release levers are secured tightly
- how to get the chain back on if it falls off
- how to pump the tyres up and how much air is need for the type of riding
- how to change a tyre.

Some basic skills you could go over and get the students to practice over a designated course are:

- slowing down and braking
- riding up and down hills
- changing gears
- leaning into corners
- hand signals for turning, stopping and going around roundabouts.

If time permits, you may choose to set up some relays that require students to use some of the above skills while riding. Ensure students are taking necessary care to correctly adjust bikes and helmets if sharing.

Discuss risks that could occur during a practical bike session. Ask the students to get into small groups and identify risks or hazards in today's session. With each risk, come up with an appropriate way to minimise or eliminate these from a session they might run.

Get the students to share ideas with the class.

Teacher notes
The purpose of covering the bike basics is to ensure all the students are equipped with knowledge to share with participants later in the unit. Bike basics could be taught by direct instruction or by asking the students to work through a checklist which requires skills to be signed off.

Getting the students moving is important for engagement and will allow students to make relational links between different ideas. During the practical activities, ensure they adhere to safety of self and others. This is a great modelling opportunity for the teacher with the cycling development programme in mind. Challenge the students to practice different skills. For those who find some of these activities very easy, ask them to help others.

If students are sharing bikes and helmets, make sure they are correctly adjusted prior to use.

When you ask the students to identify potential risks from the lesson you may get points such as: people not wearing the helmet correctly, people going too fast downhill, coming off a bike while going on uneven ground. From there, ask students to explain how they would minimise or eliminate these risks from the session. An example – make sure that each time a person rides their bike, another student checks their helmet.

Only those who feel comfortable and in control can go down the hills. Lastly, cones should be put over and around areas of ground that are uneven and those areas are pointed out prior to cycling.

Resources
Bikes, helmets, cones other markers for a potential bike course, sports fields and or tennis courts, bike pump, student device, or paper and pen.

Lesson 3 – what are the benefits of cycling?

Big ideas and key skills

- Gain a wider understanding for how an increase in cycling could impact society.
- Interpret text.
- Relate to others.

Activities

Watch the clip about cycling in the Netherlands to set the scene.

Why the Dutch ride bikes

Ask what students were surprised to see, what they were interested in or how cycling seems to compare to New Zealand.

Invite the students to form small groups. Provide each group with a reading from the list below. Ask them to read over the text and perform a PMI (Positives, Minuses and what was Interesting) about the given text.

It's official: cycling makes you happier (Cycling Weekly UK)

Benefits of cycling to work outweigh damage caused by pollution, study claims (Cycling Weekly UK)

Bike riders save economy $21 on each commute (Sydney Morning Herald)

Benefits of cycling (Grownups)

Benefits of investing in cycling in New Zealand communities (Waka Kotahi)

Ask students to share their reflections with the rest of the class.

Mini debates

Divide students into small teams to come up with arguments they could use in a debate. Divide the class and get half the of groups to argue for the continued use of cars in our local communities while the other half argue for cycling becoming the main mode of transport.

Teacher notes
By watching the clip about the Netherlands, the students are starting to think about and ask questions about the prevalence of cycling in their own community.

The text examples all paint a very rosy picture of cycling. From a critical perspective, it may be worth adding some conflicting text or at least encourage students to challenge some points.

The debates should allow points from the previous readings to emerge and give students the chance to express their own perspectives.

Resources
Screen, devices or handouts of readings, devices or paper for PMI activity.

Lesson 4 – on the bikes

Big ideas and key skills

- Recap bike basics.
- Gain understanding around cycling with others.
- Road rules for cyclists.
- Keep ourselves and others safe on the road.

Activities

Recap basics – ask students to pair up and review the key points from the previous practical lesson as if they were teaching their partner and then swap over.

Share with students:

The code for cycling

Ask them to come up with rules they believe are the most important to ensure cyclist keep themselves safe while on the road.

Get the students to practice riding in small groups on the sports field or tennis courts. Get them to practice hand signals and explain the importance of communication while riding with others e.g. hand signals for turning, slowing down or stopping and pointing out hazards.

Also, get the students to practice keeping a safe distance between each rider's wheels. If there is extra time, team time trials could be set up to give the students a competitive activity. The focus of the time trial should be the better they work as a group the better they will perform.

Discuss the implications of riding with others on the road; what do they need to be mindful of when riding with others in relation to safety and sharing the road with others.

Full class discussion – how could we take the important points around road rules and safety and put this into a cycling development programme?

Teacher notes
Recapping the basics ensures everyone has a good understanding so they can empower others with that knowledge later in the unit.

When looking at the code for cycling, steer students in the direction of the rules and responsibilities sections if time is limited.

Practical demonstrations will be important when explaining points regarding cycling in groups.

Resources
Bikes, helmets, cones other markers for a potential bike course, sports fields and or tennis courts, bike pump, student device, or paper and pen.

Lesson 5 – the impact that increased cycling could have on hauora

Big ideas and key skills

- Explore the four dimensions of hauora and impact cycling could have on them.
- Express ideas creatively.

Activities

Watch this short video to set the scene for a quick full class discussion on how cycling could positively impact on hauora of self and others:

Health benefits of cycling (YouTube)

For the remainder of this lesson, the students will create a presentation such as a poster, movie or animation to show how their own or others hauora could be enhanced by an increase in cycling.

Teacher notes
With the focus on how cycling could positively impact on hauora it's important you have a good understanding of this concept. Hauora is the Māori name for total wellbeing.

What is hauora? (Health and PE)

The Hauora creation allows students to spend time exploring how their hauora could be enhanced.

Resources
Screen, devices, paper, pens, magazines etc.

Lesson 6 & 7 – preparing to meet the participants

Big ideas and key skills

- Create the schedule for the pre-cycling development programme meeting.
- Create simple practical pre-tests, interview questions, safety action plan for the meeting, and caregiver permission form.

Activities

Over the next couple of lessons, students prepare for when they meet the participants of their cycling development programme. This meeting will allow the students to get an idea of the participants' previous experience with bikes, their ability and skills or knowledge they may want to enhance.

The students will get 30 minutes with the participants on the day of this meeting. The students need to schedule in how they will introduce themselves, the practical bike tasks they will do with the participants to gauge their ability, what questions to ask the participants to find out previous experiences.

The students will create a permission letter that explains to each participant's caregivers the purpose of the cycling development programme. This will explain what the participant is likely to be doing, while also seeking permission for the participant to take part. Consent will be given for any photo or video taken of the participant to be used for the assessment phase. Students will also need to find out about any health issues. This form will need to be given to the participants prior to the first lesson of the cycling development programme.

Lastly, the students need to prepare a Safety Action Plan for the meeting given the practical nature of parts of this meeting.

Teacher notes
It may be useful to give some students a lesson plan template for how they could use the 30 minutes.

The specifics of what goes into the permission letter may be discussed as a class to ensure there is consistency.

The EOTC safety management plan template. Students will understand this process better if they complete these prior to the programme starting.

Resources
Devices or paper and pen, access to SAP template.

Lesson 8 – meeting the participants

Big ideas and key skills

- Meet the participants of the cycling development programme.
- Introduction of self.
- Ask questions.
- Assess ability.

Activities

Students introduce themselves, assess the participants' cycling ability, find out about their previous cycling experience and assess their future needs.

Teacher notes
While the students meet with participants, it's a good chance to complete the Teacher Recording Sheet (Resource A).

Resources
Bikes and helmets for the participants, devices, paper and pens, cones and any other markers or objects required for the practical component.

Lesson 9 – how do I run a lesson?

Big ideas and key skills

- Learn how to present and demonstrate skills and knowledge to others.
- Learn how to plan and schedule different activities into one lesson.
- What is feedback, how and why do we give it?

Activities

Using any physical skill, take the students through a 30-minute lesson which allows them to learn a new skill while also being modelled how to use that time effectively. The skill could be anything but choose ones that you can give good demonstrations of (e.g. learning how to juggle or kick with your non-dominant foot).

Discuss as a class the following points: how skills were demonstrated, how time was used, how instructions were given, how people were organised, in what way were people given feedback and what effect did this have on people.

Give students the opportunity to reflect on points from today's lesson that they will need to be mindful of when they plan their lessons.

Teacher notes
Getting the students active will keep engagement up.

The skill you choose don't need to relate to cycling as you are helping the students learn how to plan and manage a lesson.

This lesson provides a great chance for students to be modelled basic teaching and coaching skills they can use in their action plans.

Resources
Dependent on the skill or skills being learned.

Lesson 10 – how to run a safe lesson

Big ideas and key skills

- Lesson planning.
- Safety and risk management.

Activities

Just as in the previous lesson, the first 30 minutes of this lesson are an opportunity for the students to learn new unrelated skills while they model best practice regarding lesson management and managing safety.

Once the first half of the lesson is finished, discuss how safety was managed during the lesson. What was done to keep people safe? Identify possible areas of risk.

Give students the opportunity to reflect on points from today's lesson that they will need to be mindful of when they plan their lessons.

Teacher notes
Choose a skill that involves some degree of risk that needs to be managed.

Discuss where you set things up and why (keeping risk in mind), how you organised people, what you said in your instructions with regards to keeping people safe and how you ensured the environment stayed safe throughout the tasks.

Resources
Dependent on the skill or skills being learned.

Lesson 11 & 12 – creation of action plan

Big ideas and key skills

- Build a participant profile.
- Develop aims, lesson plans and safety action plans.

Activities

Over the next two lessons, students create an action plan for participants of the cycling development programme.

The following features need to be in the action plan:

- participant Profile - who are they and what are their needs.
- aims for the 3 cycling development programme sessions.
- what students will be doing with participants (3 session plans) and why they are doing these activities.
- safety action plan (SAP) for the 3 sessions.

The students need to ensure both session plans and safety action plans are checked by the teacher before the end of the two lessons.

Teacher notes
The participant profile should go into detail about each participant's previous experience with bikes, current ability, what they would like to learn more about in relation to cycling.

Aims should be based around meeting the participants' needs judged by what the student knows about them and what they think they can do with them.

Session plans should detail what is going to be happening over the 3 sessions and consider how participants will be managed throughout this time to ensure they are always in a safe learning environment.

Using the SAP templates, students need to identify what could go wrong and explain how they will eliminate or minimise the risks.

EOTC safety management plan template

Resources
Devices or paper and pens. SAP handout or access to it.

Lesson 13,14,15 – take action

Big ideas and key skills

- Create and maintain a safe learning environment.
- Seek feedback from participants.

Activities

Over the next 3 lessons, the students will carry out their action plans by working with the participants on the session plans they have created.

Throughout each session, the students should be collecting feedback from the participants about what they are learning, if they are enjoying the sessions, what don't they like and what else they would like to see. This will allow the students to be responsive to meeting the needs of participants.

Teacher notes
While the students work with the participants this is a chance to collect evidence for the students using the teacher recording sheet (Resource A).

Resources
Bikes, helmets, cones and any other resources need for the sessions.

Lesson 16-20 – reflection and presentation

Big ideas and key skills

- Reflection on how participants found the three-session programme and the impact that it may have had on them.
- Collate information.
- Create a presentation.
- Where to next?

Activities

Students spend the remainder of the time reflecting on the three-session programme they just led and how the action they took assisted the participants. They create a short presentation showing how the action that was taken assisted the participants with cycling.

The presentations could be a speech, PowerPoint, movie, poster or other format.

Time permitting, challenge students to think about how they could now increase the numbers of people cycling in their community.

Teacher notes
It may be useful to have a full class debrief following the cycling development programme sessions. Review what went well and allow students to share personal experiences that they learnt from or found interesting.

As you view or listen to the student's presentation, holistically assess the grade that the student receives.

Given the experience and knowledge the students have gained, how could they become true advocates for cycling in their community? It could be an ideal opportunity for students to do design thinking for social change.

Resources
Student feedback e.g. photos, questionnaires, videos.

Resource A: Teacher Recording Sheet

Student name _____

Action Plan – consisting of: • Participant profile outlining who the participant is and what their needs are in relation to this programme. • Student aims for the three sessions with the participants. • What students will be doing with the participants (three-session plans) and justification for why. • A safety action plan (SAP) for the 3 sessions.				
Did the student take purposeful action to assist others to participate in cycling? Yes/No				
Evidence of this action For example: questionnaires, safety forms, promotional material, permission letters, maps of the course, activity instructions, equipment lists etc.				
Guidance required • Achieved – support/guidance from a teacher • Merit – some support/guidance from a teacher • Excellence – little teacher support/guidance required.				
Presentation of what action was taken to assist the participants with their cycling.				
Overall grade **(final judgement)**	Not achieved	Achieved	Merit	Excellence
Teacher comments				

Demonstrate: social responsibility: respect rights feelings others

Hellison's Model of Social Responsibility					
I can demonstrate RESPECT for the rights and feelings of others. • Show self-control. • Include everyone. • Solve conflicts peacefully. • Does not disrupt the work and play of others.	I need help to know what [RESPECT for the rights and feelings of others] looks like. It is not my problem – everyone for themselves – dog eat dog kind of world – if I didn't do it someone else would've.	I can demonstrate [RESPECT for the rights and feelings of others] if I am reminded. I can care for others if I am directed or reminded.	I use several strategies to demonstrate [RESPECT for the rights and feelings of others] but I am not sure when and or why to use them. *(Trial and error – aware of strategies but not sure why or when to use them so makes mistakes.)* *I can give it a go but I sometimes forget and rely on others.*	I use several strategies to demonstrate [RESPECT for the rights and feelings of others] and I know when and why to use them. *(Strategic or purposeful use of strategies – knows why and when.)* *I am on to it – I keep an eye out for others – explain why, justify.*	AND … I can encourage others to [RESPECT for the rights and feelings of others] I act as a role model for others to help them [RESPECT for the rights and feelings of others] I extend this to other contexts outside of school – e.g. has become part of who I am - habitual – I become irritated if something prevents me from acting in this way e.g. checking my cell phone.
Effective Strategies *[insert strategies suggested by students and teachers]*	*Show them examples.* *Opportunity to practise.*	*Clear instructions (step-by-step).Prompting.* *Situational teaching.* [External feedback]	*Revisit, recap & remind!* *debrief* *Role play* [Internal feedback start]	*Repeated opportunities to practise* [At level]	[Beyond level]

Demonstrate: social responsibility: participation and effort

Hellison's Model of Social Responsibility					
I can demonstrate PARTICIPATION and EFFORT. • Self-motivated. • Tries their best. • Never gives up. • Tries new things. • Persists when going gets tough. • Redefines success. • Can take part as directed and improves efforts to contribute independently. • Participates in games.	I need help to know what demonstrate what [PARTICIPATION and EFFORT] looks like. I am meant to be doing what?	I can demonstrate [PARTICIPATION and EFFORT] if I am reminded. I can try new things if I am directed or reminded.	I use several strategies to demonstrate [PARTICIPATION and EFFORT] but I am not sure when and or why to use them. *(Trial and error – aware of strategies but not sure why or when to use them so makes mistakes.)* *I can give it a go but I sometimes forget and rely on others.*	I use several strategies to demonstrate [PARTICIPATION and EFFORT] and I know when and why to use them. *(Strategic or purposeful use of strategies – knows why and when.)* *I am on to it –- explain why, justify.*	AND … I can encourage others to… [PARTICIPATION and EFFORT] I act as a role model for others to help them. [PARTICIPATION and EFFORT] I extend this to other contexts outside of school – e.g. has become part of who I am. Habitual – I become irritated if something prevents me from acting in this way e.g. checking my cell phone.
Effective Strategies *[insert strategies suggested by students and teachers]*	*Show them examples.* *Opportunity to practise.*	*Clear instructions (step-by-step). Prompting.* *Situational teaching.* [External feedback]	*Revisit, recap & remind!* *debrief* *Role play* [Internal feedback start]	*Repeated opportunities to practise* [At level]	[Beyond level]

HookED SOLO DESCRIBE ++ Map

Describe
Multistructural
See - Senses

Explain
Relational
Think

Reflect
Extended
abstract

Generalise – Extended abstract

What does it make you wonder?

What do you see?

What do you see?

What does it make you wonder?

Why do you think it is like that?

Why do you think it is like that?

Why do you think it is like that?

Why do you think it is like that?

What do you see?

What do you see?

What does it make you wonder?

Overall what do you think it was about?

Overall I think (claim)

because (reason)

What does it make you wonder?

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