

Lesson 9: Route planning and hazards

.....

Bikes are for everyone!

Anyone can ride a bike. However, some students may require additional assistance in the form of modified equipment and differentiated teaching. Suggestions for activity differentiation are provided throughout the lesson plans. Some students may also benefit from learning support aids such as social stories and other resources. If you would like further information on options for equipment modifications, adaptive bicycles and assistive technology, and learning support aids to assist with the delivery of Bike Ed, please email bikeed@transport.vic.gov.au.



SUGGESTED STAGE

While this Unit is designed for Years 3 and 4 (age range 8-11 years), you may choose to use these lessons for a different age range, depending on the development, maturity and existing bike riding experience level of your students.



SUGGESTED DURATION

This is the ninth of ten lessons for Unit 2 – Getting ready to ride on paths.
Suggested lesson duration: 45 minutes.



LEARNING INTENTIONS

- For students to plan (with assistance) the route for lesson 10, identifying the hazards and alternatives.



SUCCESS CRITERIA

- Map the route using technology.
- Identify and minimise hazards on the route.
- Retell the planned route with others.



EQUIPMENT

Workbooks, pen, video projector, worksheets, maps. Permission forms (to be returned for next class).



CURRICULUM LINKS

The Bike Ed program is designed to support all students by emphasizing the importance of safety and promoting independent travel skills. The Bike Ed program caters for all students and recognizes the need to teach safety and independent travel for all. Acknowledging the diverse needs of learners, we are committed to providing tailored assessment materials for students working at levels below the Foundation stage (A-D curriculum). For more information please email bikeed@transport.vic.gov.au.

CONTENT DESCRIPTORS

(Geography)

VC2HG4S02 locate, collect and record information and data from a range of sources, including from fieldwork, maps, photographs and graphs.

(HPE)

VC2HP4M01 practise and refine fundamental movement skills in different movement situations, including indoor, outdoor and aquatic settings.

VC2HP4M02 practise and apply basic movement strategies to achieve movement outcomes.

VC2HP4M03 demonstrate how movement concepts related to effort, space, time, objects and people can be applied when performing movement skills.

VC2HP4M06 participate in physical activities in outdoor environments and aquatic settings to examine contextual factors that can influence their own and others' safe participation.

VC2HP4M10 perform a range of roles in respectful ways to achieve successful outcomes in group or team movement activities.

ACHIEVEMENT STANDARD (EXTRACT)

(Geography)

By the end of Level 4, students:

- develop questions and locate, collect and record information and data from a range of sources in a range of formats. They represent and analyse the information collected and draw conclusions

(HPE)

By the end of Level 4, students:

- apply personal and social skills and strategies to interact respectfully with others.
- refine and apply fundamental movement skills and demonstrate movement concepts across a range of situations. They apply movement strategies to enhance movement outcomes. They perform movement sequences using fundamental movement skills. They examine contextual factors that influence safe participation in physical activity and propose strategies to incorporate regular physical activity into their own and others' lives.

LEVEL 3 – 4 RUBRIC: BIKE ED

By the end of Level 2	Progressing towards Level 4	By the end of Level 4
Students can describe how to safely fit a helmet and do a safety check to assist others.	Students can identify safety issues with their bikes, clothing or equipment.	Students can identify safety issues with theirs and others' bikes, clothing or equipment.
Students can use both brakes to safety and smoothly stop the bike in a group situation.	Students use hand signals safely most times whilst maintaining control of the bike. Students can safely negotiate a T intersection (leaving safe distance and using safe speed). Students can follow basic traffic rules of riding on the left side of the road.	Students can perform a head scan Students use hand signals safely at all times whilst maintaining control of the bike. Students can follow basic traffic rules of riding on the left side of the road, giving way to the right and obeying road signs.

Continued overleaf.



LEVEL 3 – 4 RUBRIC: BIKE ED (Continued)

By the end of Level 2	Progressing towards Level 4	By the end of Level 4
Students can use power position to start. Students can perform controlled turns on their bike at various speeds.	Students can use gears and control their riding (speed and distance) according to conditions. Students can identify hazards in a simulated school setting.	Students can safely negotiate a T and cross intersection (leaving safe distance and using safe speed). Students can identify and mitigate hazards in a simulated school setting. Students can plan a safe travel route with assistance (including identifying hazards). Students can follow instructions and work as a group in the outside school grounds ride.

Tuning in activity. Outline group ride & anticipated hazards.

Approx. 5 minutes

Activities & Differentiation

Begin with a pre-ride briefing of all the important rules for the ride.

- Overview of the route we will be riding.
- What obstacles/intersections/hazards we are expecting to encounter.
- The distance we are covering.

Brainstorm: What important things should we know before the ride?

Explain the rules for the group ride.

Teaching Points

Rules for the class ride:

- Keep to the left side of the path.
- Ride in single file (unless the leader calls you to 'Double Up!').
- If one rider stops, then all riders stop. This must be communicated by voice to the leader ('Stopping!').
- No overtaking.
- Groups ride at the speed of the slowest rider.
- Two bike lengths between bike riders.
- Any others you find important.

Activity 1. Virtual ride through.

Approx. 10 minutes

Resource Requirements

Computers (or tablets) for students, at least one per group of two.

Safety

N/A

Activities & Differentiation

Distribute tablets or computers for each student or one between two.

Using Google Street View, students should do a virtual bike ride through the route.

Teaching Points

Teachers should focus on map reading skills in addition to gaining familiarity with the route and riding from a bike riders' perspective.



LESSON PLAN

Unit 2 Lesson 9: Route planning and hazards



Students should rank the key locations by difficulty, writing this down on the maps.

After ranking, talk through the most challenging areas of the ride with the class. Show how we will be negotiating them and providing strategies on negotiating similar locations.

Modification

- If IT is unavailable, the activity can be teacher led using a screen at the front of the classroom.

Progression

- If time allows challenge students to find a better route to ride or plot their own route to ride from their home to school or a recreational activity. The criteria should be:
 - Easy to ride (i.e., not too hilly).
 - Safe to ride (safe roads, safe intersections, identify potential hazards).
 - The right length to fit in class (approx. 60 minutes).
 - Plot the ride on a fresh map. Provide a justification for the ride that addresses the key criteria.

Key Questions

- Why did you rank this as the most difficult location?
- Which was the easiest place to ride? Why?

Activity 2. Hazard videos.

Approx. 10 minutes

Resource Requirements

Teacher: TV or projector, computer and hazard videos.
Student: Pen and workbook.

Safety

N/A

Activities & Differentiation

This is a brief revision of what we learned about hazards in Lesson 5. Provide a definition of what a hazard is and an example.

- For example, another bike rider or a car on the road is a hazard because it could be unsafe, and we have to avoid them. Or a slippery water puddle is a hazard, because we may slip and fall off the bike.

A series of videos have been provided of riding along a path from a bike rider's perspective. Each contains approximately 30 seconds of riding footage.

The first half of the video is unedited footage from the rider's point of view (POV).

- Tell the students to watch the videos and remember the hazards that they see.
- Pause the video after the unedited rider POV section has finished.

Teaching Points

What a hazard is:

- Something that is, or has the potential to be, dangerous.

Scanning:

- Keep moving your eyes around the area rather than staring at only one spot.

Potential hazards:

- Look at things that might be dangerous when you get there, not just things that are already dangerous.

Things to look for:

- Cars, bike riders, pedestrians on the road or near the road, animals, road surface changes, like potholes, water, dirt or leaves, stop/give way signs and traffic lights.

Avoiding hazards:



LESSON PLAN

Unit 2 Lesson 9: Route planning and hazards



- Ask students which hazards they saw and why they think they are a hazard.

The second half of the video is the same footage slowed down and highlights the main hazards the rider faced.

- Were any of these hazards surprising?
- Could the students see any other hazards that weren't highlighted?
- How would the students change their riding behaviour to negotiate the hazards?

Repeat this activity for as many videos as you find are useful.

There are six videos of the rider on a shared path, which can be selected in any order.

Video 1: Easy ride on path with minimal hazards.

Video 2: Easy ride, finishing with approach to a busy road.

Video 3: Easy ride, with cyclist crossing a road.

Video 4: Starts at traffic lights with other pedestrians and bike riders.

Video 5: Approaches and crosses at traffic lights with other pedestrians and bike riders.

Video 6: Rides around blind corners on shared path.

- You may either slow down/stop or move to avoid the hazard.
- It's better to slow down since moving may put you in danger from cars or other bike riders driving nearby.

Key Questions

- Where are you looking to see the hazards? (i.e., always scanning around the scene).
- Which hazards do you think are the most common?
- How would you avoid the hazards?

Activity 3. Hazards worksheet.

Approx. 15 minutes

Resource Requirements

Hazards on our ride worksheet, video projector, worksheets, and pencil.

Safety

N/A

Activities & Differentiation

A brief discussion of the hazards, revising from the previous class on hazards and hazard perception.

Hand out the worksheet, where students will need to identify common hazards that they think they will find in the outside ride next class.

They also need to have a plan for how they will avoid the hazards that they encounter. Focus on:

- Slowing down as they approach the hazard.
- Using communication (bells, voice etc) to warn the hazard and fellow riders of the hazard.
- Be predictable.
- Avoid sudden movements.

Teaching Points

Key understandings are:

- Becoming more familiar and comfortable with the complicated parts of the riding route.
- Identifying hazards and potential hazards
- Appropriate reactions to hazards

It's good for students to get a better idea of what riding a bike outside school looks like from the rider's perspective.

The best way to deal with hazards is to plan for them in advance.

Key Questions

- How do we know what the hazards are?



LESSON PLAN

Unit 2 Lesson 9: Route planning and hazards



Summary of potential hazards on route

Bring class together to go through the worksheet.

- Which hazards might we see?
- How will we negotiate them?

Speak about ways to negotiate these hazards on the road.

- Does it have the potential to affect our riding path? Such as a car crossing the bike lane, or dog, or a slippery bit of road?
- How should we be reacting to them?
 - Don't make sudden movements, like swerving, as you may put yourself in the way of other road users behind you.
 - Slow down in a controlled manner, and ride at a speed where you can easily deal with the hazard.

Optional. Follow the leader.

Approx. 7 minutes

Resource Requirements

Bicycles (at least one per two students), helmets (one per student) and cones.

Safety

- Students must maintain at least two bike lengths distance to other bike riders.

Activities & Differentiation

If you wish to (and have the ability to) get the students out of the classroom and onto their bikes then this activity has students following the teacher on bikes. This is what they will be doing next class on their outside ride, so this is a good skill to practice.

** Ensure full safety checks are completed prior to any riding activity, as per previous lessons.*

Practice ride for next class

- Ask students about what is important when you are riding with other people?
 - Keeping space between yourself and the bikes around.
 - Keep at least two bike lengths between yourself and the bike in front.
- Remember signaling and head checks.

Follow the leader

Set up a large square or oval circuit for students to ride around.

Students ride in a single file around the course.

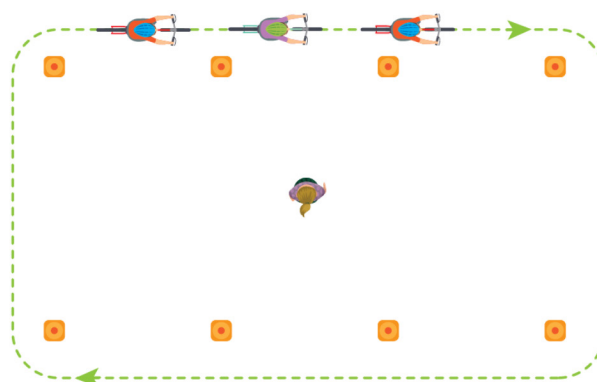
- Students must be careful to maintain the two bicycle lengths between them and the bike in front.

An alternative is for the teacher to lead a ride around the school ground or surrounds. This is preparation for the out of school ride next class.

Modifications

- If there are students who are nervous about riding in

Activity Setup



Teaching Points

The teacher or assistant should lead the ride since moderating the speed will be important.

Signaling

- Communication is very important so that group members and other road users (cars etc.) are not going to be surprised by our movements.
- Use both voice and arm signals.

Head checks

- The head check should be smooth and brief, just long enough to see what's around.
- The tendency is for riders to drift in the direction they are performing the head check in. Make sure that the riders keep riding straight.



LESSON PLAN

Unit 2 Lesson 9: Route planning and hazards



single file with the rest of the group, encourage them to leave more distance behind the rider in front, and also have less confident students at the back of the line so that they don't feel intimidated by confident students riding behind them.

- Students who are not yet able to balance and pedal can still participate in this activity using a balance bike (refer to additional resources).
- You may wish to set up a separate group for the more nervous or balance bike riders so that they can still practice riding in a line, without feeling intimidated being in the main group with more confident riders. Encourage these riders to take turns leading so they can set the pace, and also gain confidence in their bike skills.

Progressions

- Include hand signals and voice calls that need to be passed back along the group – such as hand signals for turning, and calls for “slowing”, “stopping”, or pointing out obstacles (pot-holes, posts, speed humps, sticks, rocks, dogs, potential car doors, etc).

Key Questions

Why do we need to keep space between the bikes?

- To help us prevent collisions.
- Safe attitude!

Why do we signal?

- So that other people can know what we are going to do, so they can avoid us.
- To be safe!

Why do we do a head check?

- Because we want to make sure that nobody is coming when we turn or change lanes.
- We can't see behind us, so we need to do a quick look so that we know what's coming.
- To be safe!

Reflection & closure.

Approx. 2 minutes

Activities & Differentiation

What things do we need to know before we go for a ride?

- Write the different responses on the board with a brief explanation about why we need to know it.

Administration for the ride:

- Permission forms, bikes, helmets etc.
- Make sure that permissions forms are completed prior to the ride.

Thumbs up/down/sideways: Are you confident negotiating the hazards we will be seeing on the class ride?

Key Questions

- What are the potential hazards we might have to deal with on the community ride next lesson?
- What are some techniques we can use to avoid these hazards?
- What one piece of advice would you give a rider who hasn't ridden outside of the school grounds before?

