

Lesson 3: Intersections

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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 7 and 8 (age range 12-15 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 third of nine lessons for Unit 4 – Riding independently.
Suggested lesson duration: 45 minutes.



LEARNING INTENTIONS

- For students to analyse and demonstrate ways to safely navigate more complex intersections (in a simulated school setting).



SUCCESS CRITERIA

- Use safe distance and use safe speed at intersections.
- Ride on left side of the road, giving way to the right and obeying road signs.



EQUIPMENT

Bicycles (at least one per two students), helmets (one per student), cones, measuring tape, and stop and give way signs.





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)

VC2HG8S02 collect, organise and process information and data from primary and secondary sources, including fieldwork, and using geospatial technologies and digital tools as appropriate.

VC2HG8S03 represent and describe information and data using a range of formats, including maps constructed with geospatial technologies.

(HPE)

VC2HP8M01 refine and transfer movement skills in a variety of movement situations, including indoor, outdoor and aquatic settings.

VC2HP8M02 design and demonstrate how movement strategies can be manipulated to improve movement outcomes.

VC2HP8M03 demonstrate and explain how movement concepts related to effort, space, time, objects and people can be manipulated to improve movement outcomes.

VC2HP8M04 adapt and perform movement sequences in a variety of contexts, demonstrating how the movement elements of time, effort, space, people and objects can enhance performance.

ACHIEVEMENT STANDARD (EXTRACT) (Geography)

By the end of Level 8, students:

- collect, organise, process and represent information and data from primary and secondary sources using geospatial technologies.

(HPE)

By the end of Level 8, students:

- apply and transfer movement skills and movement concepts across a range of situations. They implement and evaluate the effectiveness of movement strategies on movement outcomes. They propose and evaluate strategies designed to promote personal health and wellbeing outcomes.



LEVEL 7 – 8 RUBRIC: BIKE ED

By the end of Level 6	Progressing towards Level 8	By the end of Level 8
Students can identify safety issues in their own and others' bikes, clothing, and equipment, and suggest practical solutions to improve safety.	Students can undertake some of the basics of bike maintenance: <ul style="list-style-type: none"> · change a flat tyre · check tyre pressure · adjust seat height to fit individual · clean and oil the chain · fix a punctured tube 	Students can undertake all of the basics of bike maintenance: <ul style="list-style-type: none"> · change a flat tyre · check tyre pressure · adjust seat height to fit individual · clean and oil the chain · fix a punctured tube
Students demonstrate successful communication to other riders whilst riding outside of the school (head scan, head checks, hand signals, voice commands).	Students demonstrate successful communication to other riders whilst riding outside of the school (head scan, head checks, hand signals, voice commands) and are beginning to take the lead or serve as role models for others.	Students demonstrate and can lead successful communication to other riders whilst riding outside of the school (head scan, head checks, hand signals, voice commands).

Continued overleaf.



LEVEL 7 – 8 RUBRIC: BIKE ED (Continued)

By the end of Level 6	Progressing towards Level 8	By the end of Level 8
Students obey all road safety rules whilst riding outside the school (Keep to the left side of the road, leave at least 1 metre space from the parked cars, give way to the right, obeys all traffic signals and signs).	Students obey all road safety rules whilst riding outside the school (Keep to the left side of the road, leave at least 1 metre space from the parked cars, give way to the right, obeys all traffic signals and signs) and are beginning to take the lead or serve as role models for others.	Students lead others in adherence to all road safety rules, instructions and norms whilst riding outside the school (Keep to the left side of the road, leave at least 1 metre space from the parked cars, give way to the right, obeys all traffic signals and signs).
Students obey all road safety instructions and norms whilst riding outside the school (follows all instructions from the teacher ride in single file and does not overtake unless instructed, maintains safe space between riders of two bike lengths).	Students obey all road safety instructions and norms whilst riding outside the school (follows all instructions from the teacher ride in single file and does not overtake unless instructed, maintains safe space between riders of two bike lengths) and serve as role models for others.	Students lead others in obeying all road safety instructions and norms whilst riding outside the school (follows all instructions from the teacher ride in single file and does not overtake unless instructed, maintains safe space between riders of two bike lengths).
Students can identify and mitigate hazards in a community setting with assistance. Students can plan a safe travel route using a range of technologies and information (with teacher oversight)	Students can plan a safe travel route using various geospatial technologies and information (with teacher oversight) based on current conditions, hazards and the environment.	Students can plan several safe travel routes alternatives using various geospatial technologies and information (with teacher oversight), choosing the best and safest route based on current conditions, hazards and the environment.

Tuning in activity. Sharing the road.

Approx. 5 minutes

Activities & Differentiation

In groups of 2 or 3, revise basic road rules. Think/pair/share what they remember from last lesson.

- What road rules affect them as bike riders? Consider things like traffic signs/signals and road markings, footpaths, pedestrian crossings, stopped trams, etc.
- Who gives way at different types of intersections?

Share with the group, ensuring key road rules are covered.

Teaching Points

Make sure the following points are covered:

- Signs: Stop, give way, no entry, traffic lights.
- Riding on footpaths: Only allowed if you are 12 or under or riding with someone 12 or under.
- Helmets are mandatory.
- Giving way: You must give if you face a stop, or give way sign, or a line (solid or dotted) at an intersection. If there is nothing to tell you what to do (signs, lines etc.) then you must give way to those on your right.



LESSON PLAN

Unit 4 Lesson 3: Intersections



Safety Checks.

Approx. 5 minutes

Resource Requirements

Bicycles (at least one per two students), helmets (one per student), helmet fit guide, and ABCD check guide.

Safety

- If using a class set of helmets, ensure that the helmets have been cleaned for hygiene.
- Dropping the bike should only be from a very small height (approx. 5-10cm).
- Ensure bike seats are at the appropriate height for the student.

Activities & Differentiation

Helmet & clothing check

Reminder from the teacher how to correctly put on helmet and check that they are wearing correct clothes.

- Two finger check (above eyebrow, under chin strap and forming a 'V' at the ear) and tighten the dial.
- Clothing is brightly coloured, for good visibility.
- Long pants are close fitting at the base, so stop it catching in the chain.
- Shoes are sturdy, close toed and non-slip, for stopping and protection.
- Students will put on their own helmets.

** For suggestions regarding safety considerations and how to adapt the helmet and clothing safety check to accommodate students with specific religious or cultural clothing, please email bikeed@transport.vic.gov.au.*

ABCD bicycle check

Each student completes a check of their bicycle, as led by the teacher. Use ABCD check guide. The ABCD check is as follows:

- A. Is there air in the tyres? Squeeze the tyre walls.
- B. Do the brakes work? Squeeze each brake whilst lightly pushing the bike.
- C. Does the chain move smoothly? Inspect the chain and move the pedals.
- D. Is anything loose on the bike? Check with a very small drop (whilst still holding on to the bike).
- E. You may also choose to add "E" for handlebar Ends: check that the end caps at the ends of the handlebars are not missing or damaged, as the hollow pipe of the handlebar can cause injury in a fall.

Attitude check

Try your best, have fun, respect others.

Teaching Points

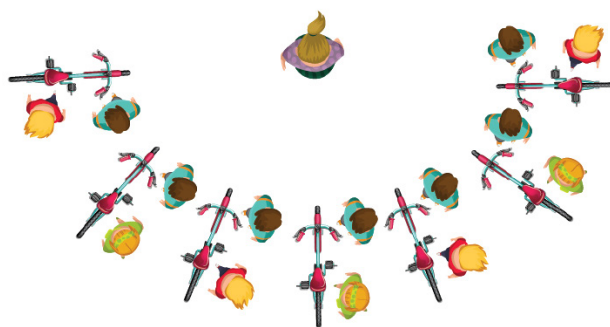
We must always wear a helmet when on a bike because it protects our head and our very important brain. Just as important, is for the helmet to be fitted correctly, otherwise it won't work properly.

If we aren't dressed properly then we can't be seen easily, so someone might run into us.

We must check the bike before we ride. If the bike has a problem, then it might be unsafe to ride on.

Key Questions

- Why do we wear a helmet?
- What are the best ways to make sure that cars and other riders can see you?
- Why do we do a bike check before we ride?



Activity 2. Figure 8 riding.

Approx. 10 minutes

Resource Requirements

Bicycles (at least one between two students), helmets (one per student), cones, stop/give way sign.

Safety

- Ensure that other students are clear of the bikes as they are being ridden around.
- Provide ample space between riders.
- Ensure that the speed of the riders is low.
- Teachers should focus on the conflict point of the figure 8. Provide students with guidance as to appropriate gaps.

Activities & Differentiation

This demonstrates what is required when you give way.

- Set up a figure 8 course as per the diagram. It should be at least 10-15 m long. If the class is large, then you may wish to set up two or more courses.
- Riders will ride around the course in a single direction.
- At the centre intersection, riders must give way to the right. Walk through this with students.
- Switch riding directions at various stages.

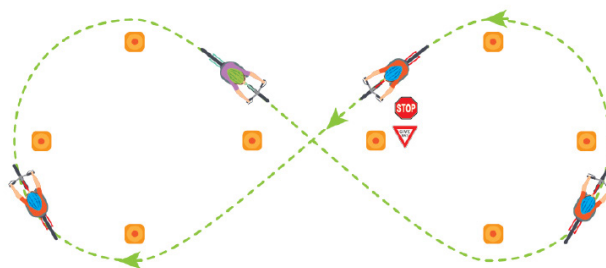
Modifications

- Students who are not yet able to balance and pedal can still participate in this activity using a balance bike (refer to additional resources).
- Set up a separate, larger course for slower riders (and balance bikes) so they are not intimidated by more confident riders.
- Students struggling or nervous may wish to begin by riding around the outside of the figure 8 instead, and observing other students completing the task, before entering the figure 8.

Progressions

- You may wish to include a 'stop' or 'give way' sign at the intersection, and occasionally switch the side that will be required to give way.

Activity Setup



Teaching Points

This activity, as well as helping to practice turning, also provides a revision of giving way on the bike.

In the figure 8, there is a point where riders must give way. Mark this with a different coloured cone or, if available, a 'give way' or 'stop' sign.

Riders will only have to give way to the right, unless presented with a sign telling them otherwise.

Key Questions

- What do we mean by 'giving way'?
- Why do we give way?



Activity 3. T-intersections.

Approx. 10 minutes

Resource Requirements

Cones and stop and give-way signs.
Chalk can be used to create line markings, draw stop and give way signs, and draw directional arrows on the ground. Signs may be printed and laminated, with beanbags used to stop them blowing away.

Activities & Differentiation

This activity will involve students riding their bicycles through a T-intersection, stopping at the stop/give way signs, and making a right or left turn that the intersection, then continuing around the outside of the course back to the intersection.

- Firstly, have the students walk their bikes through the course slowly. Explain that the stop sign or give way sign means that they must stop at the line and then wait for the intersection to be clear before they can proceed and turn right or left.
- Students should start by riding around the outside of the course (anti-clockwise only), and more confident riders can be invited to enter the intersection when they feel ready. Once they have negotiated the intersection, they must give way before re-entering the outer circuit.
- When approaching the intersection, the student may be instructed to turn left only, or as they progress, may be allowed to choose to turn either left or right.
- Students should practice indicating before turning.
- The teacher should be at the intersection, observing and providing feedback to students as they negotiate the intersection.

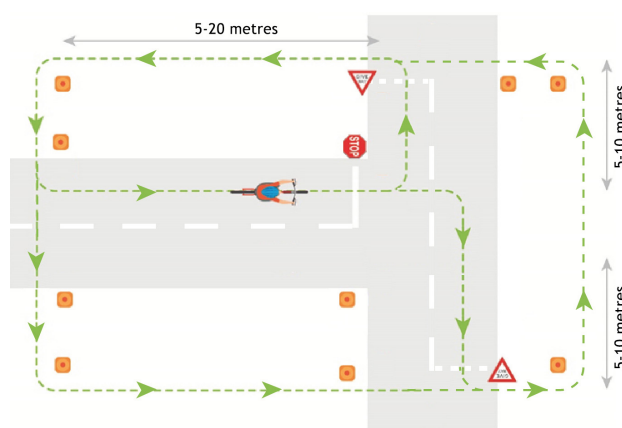
Modifications

- The teacher may wish to limit the number of bike riders using the intersection at first to allow easier gaps to be picked.
- Less confident or nervous riders can choose to continue riding around the outside of the course (anti-clockwise only), until they feel ready to enter the intersection. They will still learn by observing how other students navigate through the intersection.
- Students who are not yet able to balance and pedal can still participate in this activity using a balance bike (refer to additional resources), or maybe choose to be pedestrian traffic until they gain the confidence to participate on a balance bike.

Safety

- Must be completed at low speed.
- Students must maintain at least two bike lengths distance to other bike riders.

Activity Setup



Teaching Points

When students approach the intersection on a bike, they should do the same thing that they do as a pedestrian.

- Stop
- Look (for road users, left and right)
- Listen (for road users)
- Think (who has priority, what are the other road users doing, is it safe to move)

Students making decisions at the intersection.

- Provide opportunities for students to make decisions and pick safe gaps in traffic when they are ready.

Key Questions

Why do we stop at the stop line?

- It's the law.
- So that others can safely predict our behaviour. Safe, predictable behaviour means that people can avoid us on the road.
- To give us time to make a safe decision at the intersection, such as picking a safe gap to ride into.



LESSON PLAN

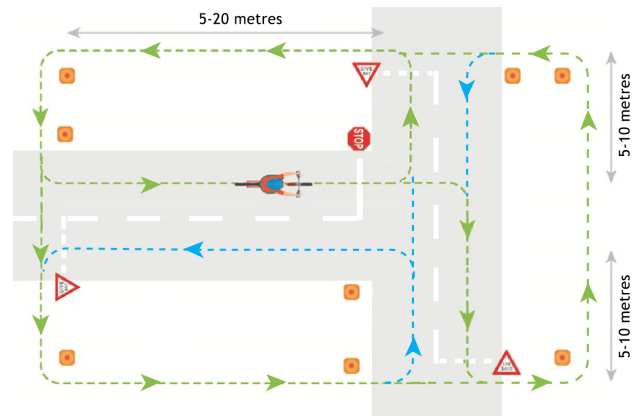
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Progressions

- The teacher may call 'left' or 'right' when students approach the stop line, to indicate the direction they should turn.
- The course may be set up to allow students to enter other areas to the T-intersection (blue lines) to create 'traffic', so that riders must pick safe gaps in the traffic.
- The traffic may be bike riders, or students without bikes may be pedestrian traffic.

Progression Activity Setup



Activity 4. Cross intersections.

Approx. 10 minutes

Resource Requirements

Cones and stop and give-way signs.
Chalk can be used to create line markings, draw stop and give way signs, and draw directional arrows on the ground. Signs may be printed and laminated, with beanbags used to stop them blowing away.

Safety

- Must be completed at low speed.
- Students must maintain at least two bike lengths distance to other bike riders.
- Pedestrians must walk at a consistent speed to provide predictability for bike riders.
- Pedestrians should be wearing brightly coloured clothing.

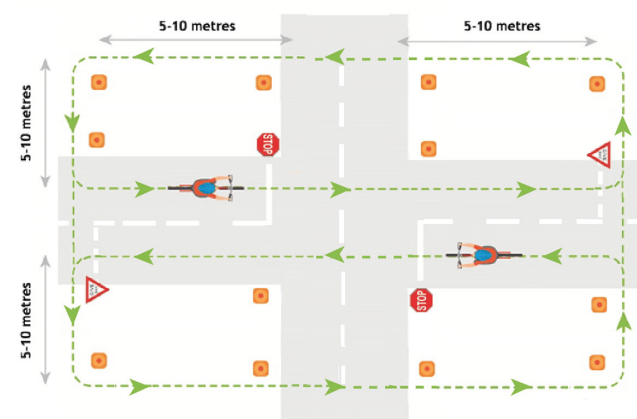
Activities & Differentiation

This course setup is a minor alteration to the T-intersection, so you can use the same setup for both activities.

This activity will involve students riding their bicycles through a cross-intersection, stopping at the stop/give way signs, and proceeding through the intersection, then continuing around the outside of the course back to the intersection.

- Firstly, have the students walk their bikes through the course slowly. Explain that the stop sign or give way sign means that they must stop at the line and then wait for the intersection to be clear before they can proceed though to turn right or turn left.
- Students should start by riding around the outside of the course (anti-clockwise only), and more confident riders can be invited to enter the intersection when they feel ready. Once they have negotiated the

Activity Setup



LESSON PLAN

Unit 4 Lesson 3: Intersections



intersection, they must give way before re-entering the outer circuit.

- When approaching the intersection, the student may be instructed to go straight over only (not turning left or right).
- Students should practice indicating before turning (when re-entering the outer circuit).
- The teacher should be at the intersection, observing and providing feedback to students as they negotiate the intersection.

Modifications

- Less confident or nervous riders can choose to continue riding around the outside of the course (anti-clockwise only), until they feel ready to enter the intersection. They will still learn by observing how other students navigate through the intersection.
- Students who are not yet able to balance and pedal can still participate in this activity using a balance bike (refer to additional resources), or maybe choose to be pedestrian traffic until they gain the confidence to participate on a balance bike.
- The teacher may wish to limit the number of bike riders using the intersection at first to allow easier gaps to be picked.

Progressions

- Once students are comfortable making the movements, allow students to enter the through-road (blue lines), so that riders must pick safe gaps in the traffic. The traffic may be bike riders, or students without bikes may be pedestrian traffic.
- As an extension activity as students become more confident, they may be allowed to choose to turn left at the intersection to begin with, and then add in the option of turning right, or may still go straight ahead. Students will need to indicate their intentions in this instance. (see "Intersection Course" in lesson 4 for more details).

Teaching Points

Students should be approaching this intersection in the same way they as the T-intersection, except that there is an extra intersection exit.

- Stop,
- Look (for road users, left and right),
- Listen (for road users),
- Think (who has priority, what are the other road users doing, is it safe to move).

Students making decisions at the intersection.

- Provide opportunities for students to make decisions and pick safe gaps in traffic when they are ready.

Key Questions

Who goes first?

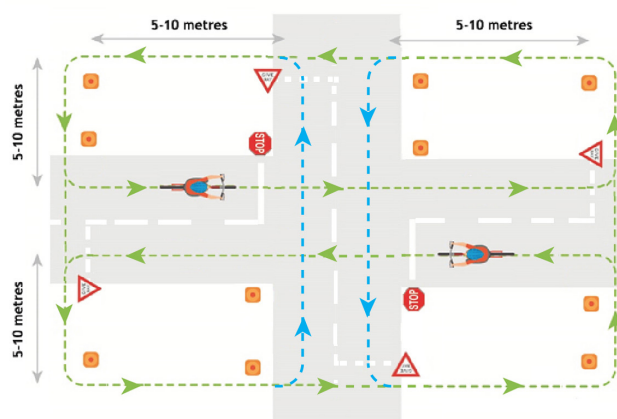
- At the intersection, those at the stop sign must wait.
- If there are two people opposite each other at the stop sign, the person turning right must wait until the other people have gone.

If both riders are turning right, who goes first?

If one is turning left and one is turning right, who goes first?

If one is turning right and one is going straight, who goes first?

Progression Activity Setup



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Unit 4 Lesson 3: Intersections



Optional. Intersection course.

Approx. 10 minutes

Resource Requirements

Cones and stop and give-way signs.
Chalk can be used to create line markings, draw stop and give way signs, and draw directional arrows on the ground. Signs may be printed and laminated, with beanbags used to stop them blowing away.

Activities & Differentiation

Set up course as per the diagram (and is the same setup as the previous “Cross intersection” activity).

- Students should start by riding around the outside of the course (anti-clockwise only), and more confident riders can be invited to enter the intersection (from the 2 arms shown only) when they feel ready. Once they have negotiated the intersection, they must give way before re-entering the outer circuit.
- Students may turn left or right at the intersection only (not straight over), as shown in the diagram. Students should practice indicating before turning (and when re-entering the outer circuit).

Modifications

- Less confident or nervous riders can choose to continue riding around the outside of the course (anti-clockwise only), until they feel ready to enter the intersection. They will still learn by observing how other students navigate through the intersection.
- Students who are not yet able to balance and pedal can still participate in this activity using a balance bike (refer to additional resources), or maybe choose to be pedestrian traffic until they gain the confidence to participate on a balance bike.

Progressions

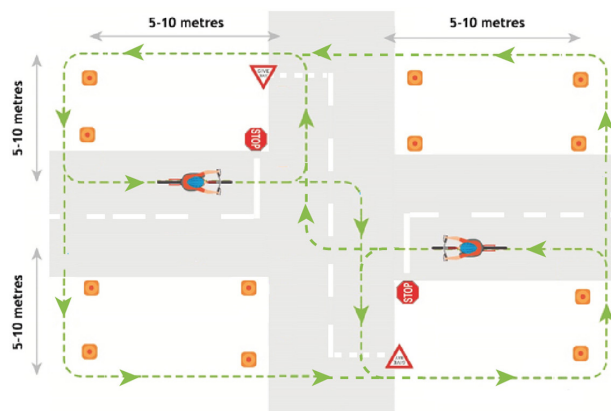
- Once students are comfortable making the movements, allow students to enter the intersection from the other 2 arms (blue lines) as through-traffic, so that riders must pick safe gaps in the traffic. The traffic may be bike riders, or students without bikes may be pedestrian traffic. Initially, those on the through-road are not allowed to turn at the intersection and may continue straight only (as shown by the blue lines).
- As students become more confident, as an extension activity they may be allowed to choose to turn left or right from the through-road at the intersection

Safety

- Students must maintain at least two bike lengths distance to other bike riders.
- Non-riders/helpers are to stay off the riding areas.
- Limit riding to a safe speed.

Activity Setup

Lanes should be at least 3m wide and up to 30 metres in length (depending on space constraints).



Teaching Points

This is a good activity to repeat when time is available. It provides opportunities for riders to make decisions and perform variety of skills in different situations, as they would on roads and paths.

Using the intersection:

- Students will give way to the right at the intersection.
- Signal prior to making a turn so that others know your intentions.

Key Questions

- Who has right of way at the middle intersection/side intersections?
- What will we need to do as we approach each intersection to ride safely?
- How do we negotiate the intersections safely?



as well. This will get quite complicated, so ensure all students are ready for this progression.

- The internal intersection can be modified to other types.
- Other hazards and skill stations may be placed on the external circuit, such as performing head checks/one handed riding etc.

Reflection & closure.

Approx. 5 minutes

Activities & Differentiation

What worked well and what were the challenges in doing the intersections?

Thumbs up/down/sideways: How confident are you in understanding the requirements at each type of intersection?

Key Questions

Provide scenarios that were practiced and ask how to respond.

- What do we do at a T-intersection? How has priority/right of way?
- What do we do at a cross-intersection? How has priority/right of way?
 - The person facing the stop/give way sign/red light must give way.
- What do we do at an unsigned intersection?
 - Give way to the bike rider/car on your right.

