

Lesson 3: Intersections

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 5 and 6 (age range 10-13 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 ten lessons for Unit 3 – Getting ready to ride on the road.
Suggested lesson duration: 45 minutes.



LEARNING INTENTIONS

- For students to use voice calls and signals in a variety of environments.
- For students to safely navigate T and cross intersections.



SUCCESS CRITERIA

- Leave safe distance and use safe speed at intersections.
- Riding on the left side of the road, giving way to the right and obeying road signs.
- Use stop, moving or slowing; left and right voice calls.



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)**

VC2HG6S02 locate, collect and organise information and data from primary and secondary sources, including from fieldwork.

(HPE)

VC2HP6M01 adapt movement skills across a variety of situations, including indoor, outdoor and aquatic settings.

VC2HP6M02 transfer familiar movement strategies to different movement situations.

VC2HP6M03 investigate how different movement concepts related to effort, space, time, objects and people can be applied to improve movement outcomes.

VC2HP6M06 participate in physical activities that enhance health and wellbeing in outdoor environments and aquatic settings and investigate the steps and resources needed to promote safe participation.

VC2HP6M10 participate positively in groups and teams by contributing to group activities, encouraging others and negotiating a range of roles and responsibilities.

ACHIEVEMENT STANDARD (EXTRACT)**(Geography)**

By the end of Level 6, students:

- develop questions, and locate, collect and organise information and data from a range of primary and secondary sources

(HPE)

By the end of Level 6, students:

- refine and modify movement skills and apply movement concepts across a range of situations. They transfer movement strategies between situations and analyse the impact on movement outcomes. They apply the elements of movement when creating movement sequences. They propose strategies to promote safe physical activity participation that enhance health and wellbeing.

**LEVEL 5 – 6 RUBRIC: BIKE ED**

By the end of Level 4	Progressing towards Level 6	By the end of Level 6
Students can identify safety issues with theirs and others' bikes, clothing or equipment.	Students can identify safety issues in their own and others' bikes, clothing, and equipment, and suggest some practical solutions to improve safety.	Students can identify safety issues in their own and others' bikes, clothing, and equipment, and suggest practical solutions to improve safety.
Students can perform a head scan and use hand signals safely at all times whilst maintaining control of the bike (in a simulated school environment).	Students demonstrate successful communication to other riders whilst within 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).

Continued overleaf.



LEVEL 5 – 6 RUBRIC: BIKE ED (Continued)

By the end of Level 4	Progressing towards Level 6	By the end of Level 6
Students can follow basic traffic rules of riding on the left side of the road, giving way to the right and obeying road signs (in a simulated school environment).	Students obey all road safety rules in a simulated school environment (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).
Students can safely negotiate a T and cross intersection (leaving safe distance and using safe speed) (in a simulated school environment) Students can follow instructions and work as a group in the outside school grounds ride.	Students obey all road safety instructions and norms in a simulated school environment (follows all instructions from the teacher, ride in single file and does not overtake unless instructed, maintains safe space between riders (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 (two bike lengths)).
Students can identify and mitigate hazards in a simulated school setting.	Students can identify and mitigate some hazards in a community setting with assistance.	Students can identify and mitigate hazards in a community setting with assistance.
Students can plan a safe travel route with assistance (including identifying some hazards) in their community.	Students can plan a safe travel route using one form of technology and other information (with teacher assistance).	Students can plan a safe travel route using a range of technologies and information (with teacher oversight).

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 3 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:

- Is there air in the tyres? Squeeze the tyre walls.
- Do the brakes work? Squeeze each brake whilst lightly pushing the bike.
- Does the chain move smoothly? Inspect the chain and move the pedals.
- Is anything loose on the bike? Check with a very small drop (whilst still holding on to the bike).
- 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 1. Venn Ride-agram.

Approx. 5 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 on two overlapping square circuits. Where the circuits overlap, students must give way to the right.

- Remind students of the Figure 8 activity completed previously where they had to give way to other riders.
- You may wish to first 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 continue.
- The teacher should be at a position to observe both intersections, ensuring safety and providing feedback to students as they negotiate the intersections.

Modifications

- The teacher may wish to limit the number of bike riders using the rectangles at first to allow easier gaps to be picked.
- The course can be set up with stop signs at the intersections, or give way signs, a mix, or no signs at all (unsigned 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.

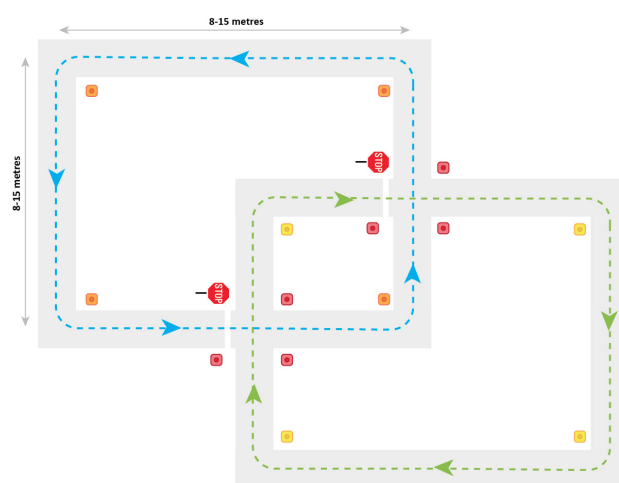
Progressions

- Encourage students to practice signalling and voice calls of “slowing” and “stopping” while riding around the course.
- More confident students can choose to turn left (ensure they are signalling their intentions) at the intersections to swap to the other rectangle.

Safety

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

Activity Setup



Teaching Points

Negotiating your movements with other bike riders and road users on paths is very important. Most important for students is to have a safe attitude, where each bike rider will act in the safest, most predictable way possible to avoid collisions.

Key Questions

How do you avoid collisions in the overlapping courses?

- Safe attitude.
- Low speed.
- Understanding Give Way to the right road rules.
- Controlled stopping
- Communication
- Safe distance between riders

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.



Activity 2. 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.

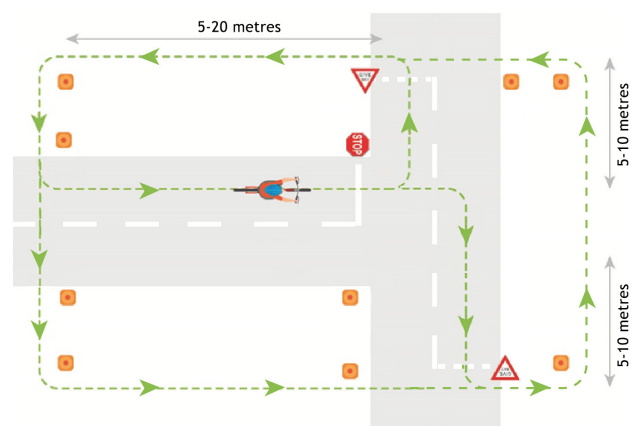
Modifications

- 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

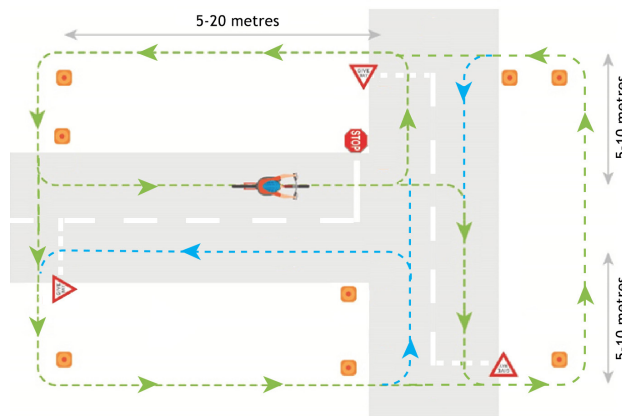
Unit 3 Lesson 3: Intersections



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 3. 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.

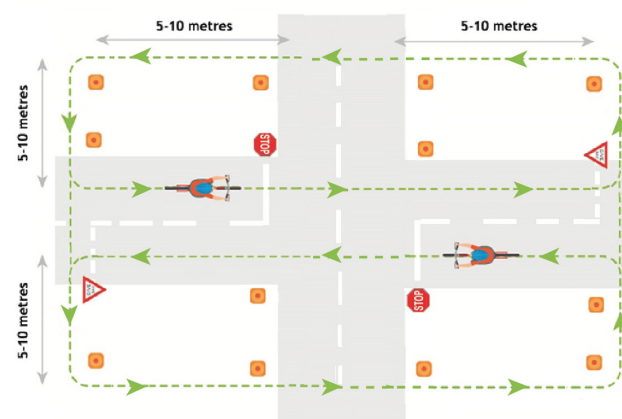
Activities & Differentiation

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 3 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?

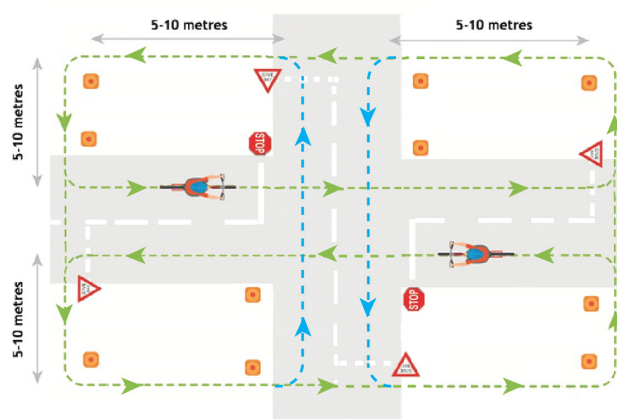
- At the intersection, those at the stop sign must wait.
- If there are two people opposite each other at the stop sign, the person turning right must wait until the other people have gone.

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



LESSON PLAN

Unit 3 Lesson 3: Intersections



Activity 4. Hit the spot game.

Approx. 8 minutes

Resource Requirements

Helmets, bikes, and non-slip ground marking.

Safety

- Ensure that students do not go too quickly and maintain space to other bike riders.
- Use a non-slip ground marking.

Activities & Differentiation

Using these groups, a marker (flat and non-slip) is placed on the ground between the opposing ends of each group.

- Cones may be used to set up 'gates' to ride through, if ground markings are not available. Make wider gates for novice riders.

The setup and structure is as per the earlier 'Straight line riding' activity. Students can walk, glide or ride through the course, depending on their level of development.

Each student must try to roll over the target marker that has been placed on the ground with their front tyre. If they make contact with the target marker with their front tyre, then they will say 'Hit!'

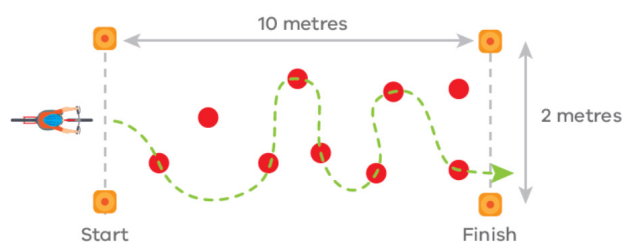
Each student will count the number of 'Hits' that they achieve during the time period.

Use this opportunity to work specifically with those students who are still having difficulty.

Modifications

- The width of the target markers can be adjusted for different groups, with novice riders having large (50cm) targets, whilst vary confident riders may have very small targets (5-10 cm).
- 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 pattern of floor markings as either 'easy', 'medium' or 'difficult', to give goals for different students.
- Use different coloured markers or chalk to differentiate levels.
- Chalk markings or spots can also be different sizes to differentiate between different levels.

Activity Setup



Teaching Points

The focus of the game should be to apply the move in a controlled manner.

Students should focus on control, rather than speed.

Key Questions

How did you steer the bike to make it as easy to hit the mark as possible?

- Slow, smooth steering.

Progressions

- For more skilled and confident riders, add more markers to the area for them to hit.
- Different coloured markers may have different points allocated, or level of difficulty assigned. Students may aim for the same colour markers while avoiding others.
- Use chalk (if possible, on the surface) to draw markers of different sizes and/or colours and allow students to choose which markers to aim for.
- Draw or place obstacles in the area that they must avoid whilst hitting the targets.
- Challenge riders to touch the marker ONLY with their front wheel, or their back wheel, and not the other; or with BOTH tyres to get the points or double points.



LESSON PLAN

Unit 3 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

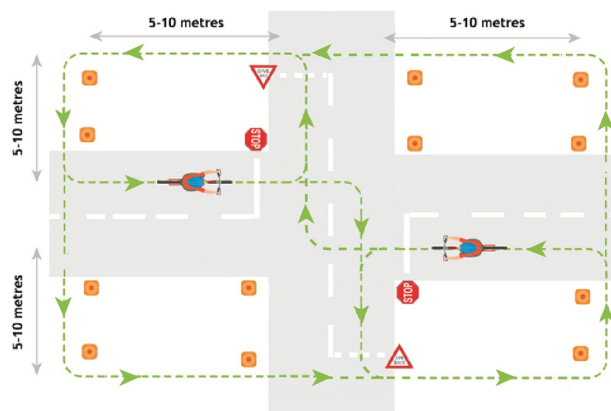
- Once students are comfortable making the movements, allow students to enter the intersection from the other 2 arms (blue lines) as through-traffic, so that riders must pick safe gaps in the traffic. The traffic may be bike riders, or students without bikes may be pedestrian traffic. Initially, those 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.

