
Bike-to-work skills workshop manual for cycle trainers

Prepared for *Bike Now* by
Lifecycle
Marianne Draijer
New Zealand

With assistance from
Carolyn O'Fallon
Pinnacle Research & Policy Ltd

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C1 Introduction for cycle instructor's workshop

The following feedback from a participant gives a good description of the course:

Before I did the cycle skills course at University I was somewhat sceptical about how much I would learn – given I consider myself a reasonably experienced commuter cyclist. But I went into it with an open mind and found that several things of great value were brought to my attention. This is because the course focuses on the basic principles of riding a bike – hence the content is applicable for all riders (not just beginners).

I have gained knowledge of the course content and understanding of how to run the course. I could see how you had developed the coaching material since the training course at University. I now feel confident that I could run a cycle skills course myself.

I was interested in all aspects of the course, although I especially appreciated the time spent discussing road riding and intersection scenarios.

The course content reflects knowledge, experience and an enthusiasm for cycling.

C2 Handling challenging participants

Because we have a range of different people with different abilities, experience and perceptions, we need to be ready to respond to the different challenges that arise.

Physiological challenges are:

- fear
- previous experiences
- preconceived ideas
- character traits.

Physical challenges are:

- fitness
- disabilities
- prior injuries.

Show empathy and offer solutions when able. Be firm at times.

Remember that your first priority is the safety and well-being of ALL participants. If any one participant is putting the others at risk, you may request that they leave.

C3 Preparation before sessions

C3.1 Know your participants

Use a registration form (see annex B) or do telephone interviews.

- 1 Evaluate what participants require of you.
- 2 Be prepared to modify the programme order or length of time to suit participants before and during the sessions. Remove doubts. Answer all questions, or promise to try and get the information.
- 3 Have all the equipment that is required.
- 4 Have a fully equipped first aid kit.
- 5 Allow extra time in your schedule.
- 6 Arrange an area the size of a netball court, preferably on tarmac or concrete, but grass is all right (more tiring on grass though).
- 7 Have a wet weather plan, eg indoors or postponement.
- 8 The 'Know your bike' section is written to educate the rider about what can go wrong and know how to look for faults. Its objective is to instill confidence in the participants to recognise an unsafe bike before it is too late, as well as to learn that bikes require little maintenance and therefore are safe.

Participants should have their bikes checked/fixed before they come to the course. **We are not there to fix their bikes.**

In the workshop, we go through the checking process and get participants to check their bikes while we explain what to look for. This way they get to know their bikes. And we get the WOW factor: for example:; 'Wow, I thought that lever was to release the back wheel'!

C3.2 Equipment used during sessions

Have the following equipment on hand to use during the sessions:

- leader's instructions sheet
- whistle
- bright clothing
- ankle straps
- gloves
- shorts
- helmet
- pump
- tools: seat spanners - 13mm, 14mm, 15mm, Allen keys, screwdriver (to leverage off roller from rear brake), adjustable crescent
- large cones (30 or more) 4 or 8 with a different colour

- six 2 or 3l drink bottles half filled with water
- 1 fence paling, 1.2 metres long
- 2 lengths of decking timber, 1 metre long
- wooden garden edging (300mm high and .5m in length) - this may be tricky as it sometimes is only sold in 5m lengths
- bits of narrow carpet (1.000mm long x .200mm wide) - should be able to get it free from a carpet layer
- runner boards - five pieces of timber (.500mm long x .050mm wide) nailed or bolted together - three across and two down underneath
- high piece of wood (1m - no shorter as slips around too easily already). Like a half round but a little higher if possible.
- whiteboard
- vinyl roadmap (optional) - to provide a visual illustration of intersection and other road traffic rules.

Chalk or spray paint can be used to make the course clearer, although this takes time and permission is needed beforehand.

Figure C3 Garden edging
- run of boards



Figure C1 High board
boards

Figure C4 Floor stand
for bicycle



Figure C5 Carpet

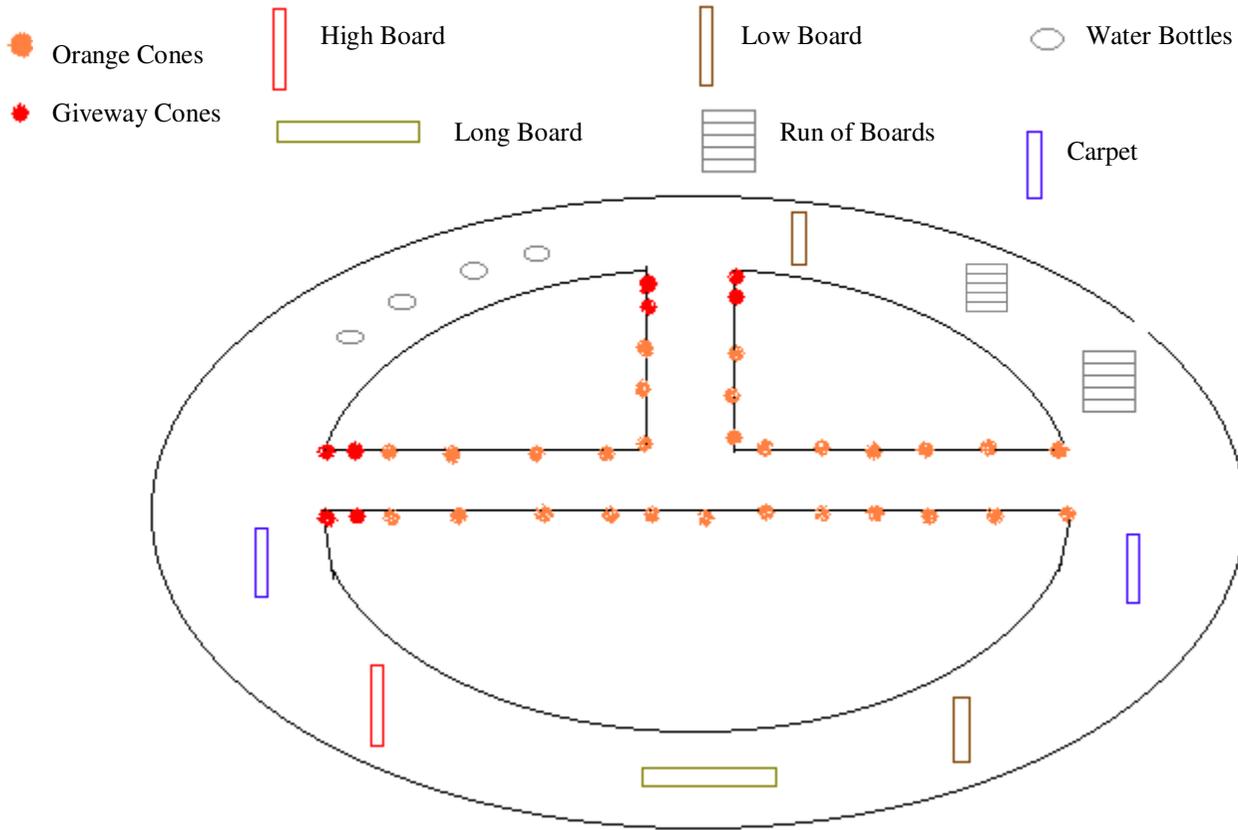
Figure C2 Run of



Figure C6 Vinyl road map



Figure C7 Circuit map for riding training



C4 Course schedule

Table C 1 Contents for cycle skills workshop/outline for one-day course

Section	Topics	Least amount of time (in minutes)
C5.1	Welcome and Introduction	5
C5.2	Helmet	10-15
C5.3	Bicycle to fit the rider	30-40
C5.4	Riding techniques	10
C5.5	Riding skills	15
C5.6	Know your bike	30
C5.7	Circuit riding	30
C5.8	Clothing	10
C5.9	Kitting out bikes for the ride to work	10
C5.10	Motivational techniques	10
C5.11	Bike control	15
C5.12	How to fall off	10
C5.13	Circuit riding with road rules	30
C5.14	Road riding tips	20
C5.15	Road intersections	30
C5.16	Guide to gearing	20
C5.17	Road ride now	60

The course may be offered as one whole day (six hours) or as a two- or three-day workshop, using the following guidelines. Where necessary, it may be offered in a four-hour version over two sessions.

C4.1 Whole day course

C4.1.1 One day

If the 6-hour course is run in one day, the programme and timing is as outlined in table C1 above.

C4.1.2 Two 3-hour sessions

Session 1

- Welcome and introduction
- Helmets
- Bicycle to fit the rider
- Riding techniques
- Riding skills
- Know your bike
- Circuit riding

- Clothing
- Kitting out bikes for the ride to work
- Motivational techniques
- Bike control

Session 2

- How to fall off
- Circuit riding with road rules
- Road riding tips
- Road intersections
- Guide to gearing
- Road ride now

C4.1.3 Three 2-hour sessions

Session 1

- Welcome and introduction
- Helmets
- Bicycle to fit the rider
- Riding techniques
- Riding skills
- Know your bike

Session 2

- Circuit riding
- Clothing
- Kitting out bikes for the ride to work
- Motivational techniques
- Bike control
- How to fall off
- Circuit riding with road rules

Session 3

- Road riding tips
- Road Intersections
- Guide to gearing
- Road ride now

C4.2 Four-hour course

This is usually run as two 2-hour sessions over two days, but could be done on one day with a coffee or tea break in the middle.

Session 1

- Welcome and introduction
- Helmets fit and safety (10 mins)
- Clothing - visual safety (10 mins)
- Manage route to work
 - road riding tips (10 mins)
 - claiming and holding your space on the road (20 mins)
 - eye contact with the driver (10 mins)
- Identify black spots (10 mins)
 - road intersections
- Bike control
 - using front and back brake correctly (20 mins)
 - using gears (10 mins)
 - using bike lights (10 mins)
- Your bike - commuting, safety and skills (20 mins)
 - know your bike
 - kitting out your bike for the ride to work
 - motivational techniques
- Bicycle to fit the rider (20 mins)

Session 2

- Riding techniques
- Riding skills (including circuit riding and on-road riding)
- How to fall off

C5 Course content

C5.1 Welcome and introduction of tutor

Explain your experience with cycling previous and/or present. Stay away from negative statements, peoples' negative perceptions and safety problems.

C5.2 Helmets

Quality

Check for cracks and damage by examining the inside helmet area and pulling it apart. Also look for cracks in the outer shell. Older helmets and helmets which have received some impact should be replaced as the polystyrene is weakened.

Fit

Check helmet fit on head with straps loose. Ask participants to move their heads in the yes and no directions. If the helmet shifts on the head while doing this then it is a wrong fit.

The fit may be adjusted to suit the head shape and size. Modern helmets offer more options for doing this.

The following are ways helmets can be adjusted to fit the head firmly.

Older version with only pads:

- Replace older worn pads.
- Replace thin padding with thicker padding.
- Replace padding with thicker pads in areas that need more support.

Head strapping joined with Velcro on helmet:

- Adjust by moving the strap forward.
- Replace padding with thicker pads.

Head strapping adjusted by dial tension or clip tension at the back of the helmet:

- Alter setting – note that the helmet should not be too tight on the head, causing pressure points.
- Replace padding with thicker pads in areas that need more support.

Check position of strap tension holders. This is the clip that holds the back and front straps together and stops the helmet from falling forward or backward. Move the tension holders till they are just under the ear and adjust straps so that the helmet is not able to move backwards or forwards more than one to two centimetres when the buckle is done up.

Next check the buckle under the chin. Participants should be able to put one finger between the strap and their chin. Tighten or loosen the buckle strapping to achieve this.

C5.3 Bicycle to fit the rider

When checking the rider's body in relation to the bike, begin with just the seat height method (see C5.3.1) and then if the bike is too big or too small explain what affects the body position (see C5.3.2).

C5.3.1 Seat height

To set the seat higher to an ideal position use the following method:

- Have the person sit on the bike while you hold the bike upright, ie 'Please sit on the seat while I hold the bike'.
- To hold the bike and weight of the person upright, grab the back of the seat. Apologise if you touch the person's bottom.
- Position the pedal crank down on the side where you are.
- Ask the person to put their heel on the pedal. You may have to rephrase it by saying 'put the back of your foot on the pedal'.

- When they are in this position there should be a slight bend in the knee.
- Raise the seat height if the knee is too bent.
- Check it again in the altered position.

Note: Some people will not want their seat height raised. Older people may be particularly fussy about this. Acknowledge their reluctance and concerns, and then explain that they will be more comfortable and better balanced with the seat at the correct height. You will receive a lot of thanks later for having done it!

Let participants know that if they fit new pedals to their bike or move their seat forward on the rail, they will need to have their seat height re-checked.

C5.3.2 Frame size

The size of the frame will affect the rider's comfort, ability and health. Therefore, it is important to have the right frame size.

General recommendations suggest when standing over the frame with the feet flat on the floor, there should be an inch between the person's crutch and the frame for on-road riding (or two to three inches for off-road riding).

There are other ways to measure the person for the correct size. If a participant has any concerns, recommend they go to a bike shop.

Reach for the rider: The length of the top tube dictates the length of reach for the rider to the handle bars and therefore the body position. If a participant is having difficulty with reach or is uncomfortable, suggest they go to a bike shop and have it sorted there. For example, a shorter handle bar stem can alter this length or the position of the seat rails on the seat pillar will alter the length of reach and body position.

C5.4 Riding techniques

This first exercise concentrates on balance and skills. The use of gears will be explained in more detail later. If someone pushes hard to know more, then share the knowledge now.

- Start with the chain in one of the smallest cogs (tarmac riding; if on grass, use larger cog) at the back derailleur and on the middle chain ring (number 2) at the front derailleur.
- When getting on a bike make sure the ground is level or that bike is mounted on uphill side of the bike. Lean the bike over to get on the bike or step on it off a kerb.
- Start with right-hand pedal up, parallel with the frame down tube
- Have the ball of the foot over the middle area of the pedal.

C5.5 Riding skills

Riding in a straight line

- Using cones, set up two straight lines 1m apart from each other and 50m in length.
- Have participants follow each other riding through the middle of the cones. Following others helps them to focus ahead.
- Participants must learn to:

- look up ahead, focusing in the distance (just like driving a car)
- maintain a reasonable speed, not too slow
- Once all participants have ridden through the cones move the cones to 0.5m apart. Have the participants ride through the cones applying the same principles.

Stopping

- Apply back brake, then the front brake.
- Participant starts riding towards the line, coming to a complete stop with the front wheel of the bike just behind the line. This exercise makes them aware of how long it takes for their bike to stop, and gives them stopping confidence.
- Practice emergency stopping – riding and coming to a complete halt when the whistle is blown.

Also mention to use the brakes before they need to be used when riding in wet conditions, so as to dry the rim off, especially if the bike has steel rims.

Looking back

- Use a mirror on the right-hand side.
- Bend the left elbow. This drops the left shoulder down and tilts the neck with the shoulders.
- Place the right arm on the right thigh.

C5.6 Know your bike

Go through the check sheet below with the bike in a workshop/floor stand or later have someone hold the bike up when checking gears.

C5.6.1 Bicycle mechanical check list

1 Frame

- a No cracks
- b No bent areas
- c No damaged mounts



2 Tubes

- a Firm pressures
- b Straight valve



3 Tyres

- a No cracks, slits
- b Sits evenly on the rim, not raised

4 Hubs

- a Smooth turning on axle
- b No side to side play, no loose axle cones
- c Correct tension of nuts or QR
- d Coaster back foot brake engages promptly

5 Wheels

- a No broken or loose spokes
- b Runs in straight line with no kinks or flat spots

6 Brakes

- a No major play at pivot points
- b Callipers arms are not loose
- c Disc brake disc is tight
- d Firm response when pull brake lever
- e Cables moving smoothly



7 Bottom bracket

- a Axle has no side to side play
- b Smooth turning
- c No cracking/creaking noise
- d No cracks in parts

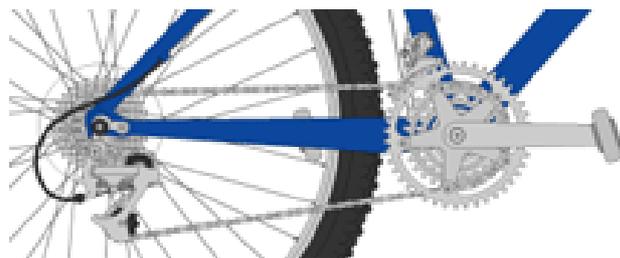


8 Cranks

- a Not loose on bottom bracket axle
- b Chain rolling firm on chain wheels
- c Chain rings not bent
- d Chain ring teeth not damaged.
- e Note: some teeth are made shorter for smoother gear changing

9 Chain

- a Not slipping
- b No stiff links
- c Lubricated



10 Pedals

- a No bent/broken parts
- b Not loose on pedal axle
- c Not stiff when spinning

11 Gears

- a No bent/broken parts
- b Changing smoothly into gear

- c Cable moving smoothly

12 Freewheel

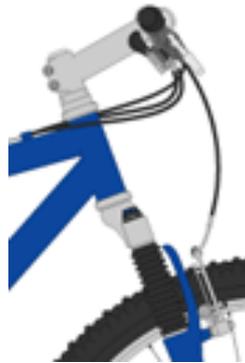
- a Freewheeling smoothly
- b Engaging when pedalling forward

13 Front forks/head set

- a No play from top to bottom when applying front brake, Note; suspension may give similar feeling or a loose front brake disc.
- b Smooth turning
- c No bent or cracked parts

14 H/bars height

- a Height to suit rider
- b Correct tilt
- c Not loose
- d Not bent



15 Seat/seat post adjustments

- a Height to suit rider
- b Level with the ground or to suit riders personal preference (comfort or medical reasons)
- c Tight bolt and nuts or QR



16 Extra fittings on cycle

- a No loose parts or objects
- b No bent parts or objects

17 Reflectors

- a Tight
- b Visible

18 Extra bolts and nuts

- a Check tight bolts and nuts

19 Now explain and show how a quick release works and a safe way to lock the bike.

C5.6.2 Bicycle test sheet

Name_____

Bike make and model_____

Item	Up to standard?		Requires
	Yes	No	
Reflector front	Yes	No	Need
Reflector rear	Yes	No	Need
Handle bar plugs	Yes	No	Need
Handle bar grips	Yes	No	Replacement
Tight handle bars	Yes	No	Tighten centre
Tight handle stem	Yes	No	Tighten centre
Tight steering system	Yes	No	Adjustment – replacement
Fork	Yes	No	Replacement
Frame	Yes	No	Replacement
Chain wheel set	Yes	No	Replacement R L
Bottom bracket	Yes	No	Adjustment – replacement
Pedals	Yes	No	Replacement
Chain tension	Yes	No	Adjustment
Cluster/freewheel	Yes	No	Adjustment – replacement
Tyres	Yes	No	F or R replacement
Wheels	Yes	No	F or R replacement Spokes Straighten
Brakes	Yes	No	F or R pads/disc F or R cable L or R lever adjustment bolt
Gears	Yes	No	F or R cable L or R lever
Seat and seat pillar	Yes	No	Adjustment – replacement
Accessories	Yes	No	Adjustment – replacement

C5.7 Circuit riding

Use the circuit plan outer circle only with obstacles. You can park the car in the area of the obstacle course and open the driver's door, but remember to warn the cyclists that you will be doing this.

Exercises:

Riders will learn to negotiate gentle curves, weaving, tight turns, going over obstacles.

- 1 Ride around the obstacle course in single file, maintaining a reasonable speed, not too slow
- 2 Teach participants to deal with obstacles comfortably and safely by:
 - a keeping up the momentum
 - b having the crank/pedal position up on the side of tall obstacles
 - c when cornering, having the crank/pedal position up on the inside of the corner, as it helps with balance and not hitting raised objects
 - d standing on the pedals when going over bumps, by having the pedals level with the ground. Once competent the rider can also stand on pedals in any position if there is a firm shoe grip
 - e standing on pedals and having slightly bent knees when riding over big bumps
 - f first looking down to line up the front wheel and then looking up ahead when riding through long narrow spaces and over long narrow obstacles
 - g looking into the distance most of the time to stop steering wobble when riding through a dark tunnel
 - h lining up the front wheel straight onto an object. If the bicycle wheels are on an angle, they may slip out from under the rider. This is especially true for slippery surfaces, such as train tracks, drain piping, road markings, tree roots etc. Wet items can be slippery
 - i not looking directly at the cones or objects such as trees, but looking beyond or next to them
 - j dealing with opening doors by looking in the right-hand door mirror of the car to see if the driver is moving.

C5.8 Clothing

Tell workshop participants that the over-riding principle is: '**Be safe be seen**'. Discuss the following safety clothing with them.

- Always wear bright or light-coloured clothes:
 - to demonstrate, nominate a person with bright clothing (or yourself) and someone with dark clothing to stand 4m or more away. Ask the audience who stands out more. Highlight the fact that lighter brighter colours stand out more
 - car drivers have lots to look out for, so cyclists do not always stand out
 - recommend fluoro and reflective clothing to be seen
 - ankle straps are effective as the movement attracts attention

- Choose light-weight jacket and light-weight leggings (overpants). A hood on the jacket can be really useful if it is raining, windy and/or cold.

Good quality cycling jackets are designed not to be too hot and are a good wind shield. Check whether they are rated as showerproof or water resistant and choose whichever is appropriate.

- Cycling shorts are a great comfort factor during longer rides as they take away the sweat and stop some chaffing. There are Lycra tight-fitting shorts or baggy shorts made with casual material, both have a chamois lining in them.
- Solid shoes should be worn, taking into account the following:
 - non-slip shoes, no jandals
 - shoe laces should be tucked in the side at the outside heel position or through lower lacing cross pattern.
 - cycling specific shoes are available. They have a hard sole to stop flexing and therefore retain more pedalling power than a standard shoe. There are different types for different riding, such as road, MTB, BMX, downhill etc.
- Riding gloves give an increased grip on handle bars, help keep hands warm and protect them from abrasions, scrapes and buckling from vibrations. A standard pair of light-weight thermal gloves is recommended underneath riding gloves in the winter.
- Trousers can be kept safe by tucking them into socks or by wearing trouser bands/straps to stop them getting caught on the front chain rings and other items. There are reflective trouser bands available which are very good. They keep a firm hold of trousers and their reflective qualities work well at night, making the movement of the legs clearly visible.

C5.9 Kitting out bikes for the ride to work

There are many accessories and tools designed to be used on bikes for commuting to work that you can tell workshop participants about. Invite them to share any tips or accessories that they know about too. Key ones to highlight include:

- **A pannier rack (carrier)** can be mounted to either the front or rear of the bicycle frame or a rear carrier can be mounted to the seat post. A frame-mounted rack carries more weight than a seat post mounted rack.

The lower the pannier rack/panniers are to the ground the easier the bike is to handle because of gravity.

Bicycle trailers are another option. They carry more weight, but extra length is added to the bike.

- **Panniers** (they are generally bought in pairs) have hidden pockets and carry a lot when packed well. There are some pannier bags specifically designed for laptop computers. Some laptop computer bags come with rack mounting straps.

Panniers should be padlocked or zippy tied on if they're not going to be taken off or if they move forward too much causing the rider's feet to hit them.

- **Mudguards** – there are full mudguards or half guards. Also, a ‘crud catcher’ (piece of plastic) can be zippy tied on the frame just behind the front wheel.

Some racks (carriers) come with a solid centre that also stops water and mud coming onto the rider’s bottom. If no centre piece is present on the rack, a piece of plastic (one side of a milk bottle) zippy tied on does the same job.

- **Lock(s):** cable lock and ‘U’ lock. If the bicycle is parked in a high-risk area, the front wheel should be removed and the bike secured with the lock going through the frame to a firm stand/object. Also, if the seat has a quick release seat bolt, it should be locked. The bike must not be locked to a parking meter.
- **Bicycles lights:** white for the front and red for the rear. Ideally these should be flashing lights. Lights are required by law where biking will take place during dawn or dusk hours or in the dark.
- **Bicycle bell:** to warn people that a bicycle is approaching, the bell should be rung no further than 5m away. When passing the people the rider can say ‘thank you, just warning you so that you don’t get a fright’.
- **Air horn:** this is solely to warn vehicles and dogs. They are too loud for pedestrians.
- **Mirror:** if the bike has only one mirror, it should be mounted on the right-hand side.
- **Stand:** the bike might tip over if the weight is not balanced.
- **Spare tubes** (1 or 2): Keeping the tyres firm eliminates punctures. If punctures become persistent then a tyre liner should be installed or an anti-puncture product (ie slime) put in the tube.

If riding over rough roads, placing talcum powder between the tyre and tube will help.

- **Mini air pump.** A pump is only necessary if the rider also carries a tube.
- **Tools** to carry include tyre levers, Allen keys, chain breaker with two plates, Phillips screwdriver, screwdriver flat head. These come as individual items or as a compact folding tool.
- **Clip in pedals and shoes** create more even riding strokes, using energy more efficiently. They also make it easier to jump the bike over obstacles as the feet do not slip off bicycle pedals.
- **Extra padded/gel seat:** seats can be replaced or covered for more comfort.

C5.10 Motivational techniques

Often when we have the motivation to ride, we do not have the time and when we have the time, we do not have the motivation. Therefore it is important to explore some techniques that will serve to encourage or enthuse participants to take up and/or continue to cycle to work.

For example, you can point out that people ride to work for a variety of reasons, including to:

- be able to ride with someone they admire for his or her ability or dedication
- lose weight
- get fit or to keep fit
- train for an event (eg Taupo or Taranaki cycle challenge; or for a cycling holiday)
- be able to ride frequently when they go on holiday

- be out in the fresh air
- see more scenery
- set an example for others (eg their children, friends, colleagues)
- save travelling costs
- get to work faster than driving or taking public transport
- save the environment
- enjoy themselves.

One motivational technique is to set a goal (getting fit, losing weight, cycling a certain number of kilometres) and keep a riding journal to record progress. Some points to record include:

- date of last ride
- date of this ride
- speedometer results
- weather conditions
- traffic influences (drafting behind a tractor)
- health problems
- route rode
- aim (eg fitness or transport)
- road condition
- bike used.

C5.11 Bike control

Mark out two lines 5m apart with chalk or cones.

Have participants ride from one line to the other line as slowly as possible. This is achieved by balancing the bicycle with the use of the following:

- brakes
- freewheeling backwards
- pedals most of the time level to the ground for body balance
- body weight positioning
- keeping the frame in an upright position.

C5.12 How to fall off safely

By using this method the handle bars and pedal may get scratched, but they cost about \$15.00 each. Ask participants which they think is more valuable: their body or pedals and grips?

Instructions for falling safely are as follows:

- Extend the leg on the falling side two or three feet, walking or running off the bike, then let go of the handle bars and drop the bike on the ground.
- The initial speed of the bike will dictate walking or running.

C5.13 Circuit riding with road rules

Exercise 1

Use the complete obstacle course plan.

There are two places where riders must look and give way to the right.

Exercise 2

Use the different coloured cones as give way indicators.

Include obstacles in the same places as previously.

Practising this will help develop cyclists' skills and confidence.

C5.14 Road riding safety tips

Share these safety tips with participants:

- Obey the road rules for cyclists and vehicles. Write up the web-link for the cycling road code (www.nzta.govt.nz/resources/roadcode/) on the whiteboard so participants can look it up at home.
- Study the traffic and the road ahead. **LOOK! LOOK! LOOK!** Especially when the traffic is slow, as some cars will stop to let other cars through and then the cyclist's path would be obstructed. Stand on the pedals to see over cars.
- Indicate intentions clearly with **hand signals! Do the expected, not the unexpected.**
- Keep left of the outer white line when possible, or where there is no outer line, as far left as is practically safe. The NZTA wording is 'keep as far left as you safely can'.
- Do not ride near the gutter as there are uneven surfaces, glass and other sharp objects unfriendly-to-bicycle-wheels, storm water covers etc.
- Ride to the right of parked vehicles. Do not weave in and out of parked vehicles as cyclists are not always visible to traffic.
- If moving near the speed limit and the lane is too narrow for vehicles to safely overtake, or if avoiding a parked car door or other road side hazards, ride in the vehicle lane. Drivers of vehicles would rather the cyclist take the lane, than teeter on the outside in the rough where they are not sure of what the cyclist is going to do. The rough would slow the bike down.
- Stay off the footpath unless it is designated for cyclists as a cycle path. Vehicles generally pull out of driveways or intersections without first stopping prior to the footpath.
- Have an assertive riding attitude!
- **Have a self-defensive riding style!**
- Use the bus lane, as long as there isn't a sign forbidding this.
- Go straight across tram or train tracks at a 90° angle to the track.
- Go over straight edged objects or pipes at a 90° angle to the object/pipe.

Drafting

Explain to participants how 'drafting' can help riders save energy. This involves riding closely behind someone else. The closer the second rider is to the first, the more they benefit from drafting. The front rider breaks the air barrier and therefore makes riding easier for the follower. The front person can also be a wind break if the follower is positioned correctly and the wind is coming from in front or from the side at a 45° angle. A slow moving vehicle can also be used. Riders must watch carefully though. Whatever they are following can and will slow down or stop at some point.

When a truck goes past it causes a draft. When going uphill this is very handy. However, being next to a truck in a bend going downhill is dangerous and must be avoided. The draft from the truck in a bend literally sucks the cyclist in and, therefore, under the truck.

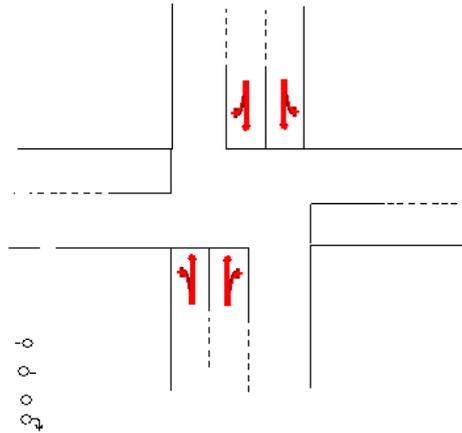
C5.15 Road intersections

Use the obstacle course (cones can stand in as signs or traffic lights), and demonstrate for participants the following skills. Have them practice the skills too.

- Controlling the bike while indicating at stop or give way signs:
 - indicate a left-hand turn or right-hand turn 5m (or four bike lengths) before give way and stop signs
 - for stopping/slowing down hand signal, raise the hand when passing the give way or stop sign and then lower when 2m away from (give way, stop) line.
- Controlling the bike while indicating at traffic lights:
 - when approaching the traffic lights start indicating a left-hand or right-hand turn at 10m (or eight bike lengths) up to 5m (or four bike lengths) away from the stop light.
 - for a stopping/slowing down hand signal, raise the hand at 5m away from the stop light.
- Shadow riding with cars (ie going through the intersection with a car as a safety barrier) can be used as a defence at certain intersections
- Yielding – yield to the cars coming when changing lanes or making any side movements
- Wise decisions at crossroad intersections – use a white board to show participants how to respond in the following situations (including which hand signals to use):
 - single lane with left-turning vehicle and left-turning cyclist
 - single lane with vehicles turning left and vehicles going straight through, cyclist wishes to go straight through
 - single lane with straight through arrow and right lane turning arrow, the cyclist wishing to turn right
 - two lanes with the left lane having a left-turning arrow, right-hand lane having a straight through arrow and right-turning arrow, the cyclist wishes to go straight through
 - two lanes with the left lane having a left-turning arrow, right-hand lane having a straight through arrow and right-turning arrow, the cyclist wishes to go right

- two lanes left lane having a straight through arrow and left-turning arrow, the right lane has a right-turning arrow, the cyclist wishes to go straight.

Note: the motorists' speed and rate of courteousness will affect decisions. Therefore what is suggested above must be undertaken with forethought, practice and assertiveness.



- Wise decisions at roundabouts – use a whiteboard to show participants how to respond in the following situations (including which hand signals to use):
 - single lane with left-turning vehicle and left-turning cyclist
 - single lane with vehicles turning left and vehicles going straight through, cyclist wishes to go straight through
 - single lane with straight through arrow and right lane turning arrow, the cyclist wishing to turn right
 - two lanes with the left lane having a left-turning arrow, right-hand lane having a straight-through arrow and right-turning arrow, the cyclist wishes to go straight through
 - two lanes with the left lane having a left-turning arrow, right-hand lane having a straight-through arrow and right-turning arrow, the cyclist wishes to go right
 - two lanes with the left lane having a straight through arrow and left-turning arrow, the right lane has a right-turning arrow, the cyclist wishes to go straight
 - two lanes with the left lane having a straight-through arrow and left-turning arrow, the right lane has a straight-through arrow, the cyclist wishes to go straight.

Note: motorists' speed and rate of courteousness will affect decisions. Therefore what is suggested above must be undertaken with forethought, practice and assertiveness.

C5.16 Guide to gearing

Teach the participants that to change gears, there must be sufficient pedalling speed. If there is not enough pedalling speed, a rough change will occur. This will cause unwanted stress to the chain and derailleur. Do not change the gears too late. Anticipate what gear is needed to create an easier and smoother ride.

Participants should use the following as a guide for selecting the appropriate gear to use

- the big chain-ring (by the pedal cranks) for downhill riding (if riding a mountain bike on-road the chain-ring may need to be engaged earlier as it is smaller than a road bike's).
- the middle chain-ring for on-the-flat-riding
- the smallest chain-ring for uphill riding
- the back gears (on the back wheel) for finer adjustment, such as for wind, grass, gravel, head wind etc
- the big chain-ring if there is a good tail wind.

By using this guide, the chain will never be set on a gearing that is too high. Let participants know that having the chain on a big cog at the back and a big chain-wheel at the front causes stress and extra load on the chain.

On older bikes, be aware of the type of noise made, ie rough if not properly in gear.

If the derailleur is out of adjustment, proper alignment will not occur and gear changes will be 'bumpy' or grinding.

C5.17 Going for a ride on the road

This is done in three parts:

- 1 Go to pre-selected road intersections, and as a group, observe and discuss:
 - a the road layout and its effect on traffic
 - b the road traffic, discussing what the vehicles do
 - c the other cyclists: discuss their wisdom and foolishness, and any lack of consideration.
- 2 Use for (1a) a T-intersection with a right-hand turning arrow if possible and (1b) a roundabout that is not too busy. Lead one or two people at a time through an intersection, putting recommendations into practice.
- 3 Go for a ride around the streets in single file. During the ride, create opportunities to change gears, including go up an incline (on a quiet street). Ride with individuals, reminding them when to change gears.

Annexes: flyers and forms

- A Workshop flyer
- B Pre-registration form
- C Attendance sheet
- D Evaluation form

Annex A: Workshop flyer



Cycle skills workshop

DO YOU.....

- *Want to return to riding but haven't been on a bike for a while?*
- *Want to ride but feel uncertain at intersections or finding a safe route?*
- *Or perhaps you already ride and want to refresh some skills and knowledge?*

Then you will want to be part of this practical workshop available to [organisation] staff as part of the *Bike Now* programme.

The workshop is made up of 2 sessions, each taking around 3 hours

When?	Date and time Date and time
Where?	Venue
Who can attend?	<i>Everyone</i> who works at [organisation]
How to register?	Contact [<i>champion</i>] for a registration form

The workshop will focus on these areas:

- Bike handling techniques
- Traffic skills
- Preventing collisions
- Rules of the road
- Choosing equipment/clothing
- Bike fit
- Dealing with obstacles
- Handling intersections
- Gears



Annex B: Pre-registration form



Bike-to-Work Skills Workshop

Workshop date(s): _____ Venue: _____

Name: _____ Workplace: _____

Phone number: _____ Email: _____

Please answer the following questions so that we can target the workshop to what you want to learn!

Tick below your reason(s) for attending the course (tick all that apply):

- Improve riding skills
- Help with physical barriers (eg health issues, injuries)
- Help with psychological barriers (eg fallen off in past)
- Help with fear of traffic
- Had a cycling accident in the past
- Learn what to do at intersections
- Learn how to ride a bike
- Learn how to be safer on the road
- Other (please describe): _____

In the past year how often have you ridden a bicycle? € weekly € monthly € a few times € not at all

What kind of cycling do you usually do? € mostly cycle paths € mountain biking € on-road € mixture

Are you able to ride with one hand off of the handlebars? € yes € no

The workshop will focus on: What to bring:

- bicycle handling techniques
- traffic skills
- how to prevent collisions
- rules of the road
- how to choose equipment and clothing
- route planning
- mechanically sound bicycle (the course will involve bike riding so your bicycle must be in good working condition)
- helmet (of course!)
- bike lock
- brown bag lunch
- bottled water
- snacks for the road
- rain gear or other appropriate clothing for the weather

Please return this form to: [champion's name]

Annex C: Attendance sheet



Start date _____ Location: _____

	Attendees names	Phone number	Day 1	Day 2	Day 3
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					



Annex D: Evaluation form

Cycling class feedback questionnaire

Please indicate how useful this course has been to you so that we can continue to make change or improvements where needed.

Name (optional) _____ Course venue _____

Question 1 Was the course useful to you? (please circle)

1	2	3	4	5
Not at all useful				Extremely useful

Question 2 What parts of the course were of most interest to you?

Please tick or add any others

- Basic bike skills and riding safely
- Bicycle to fit the rider
- Knowledge of gears
- Knowledge of brakes
- Controlled riding
- Know your bike
- Helmet information
- Clothing information
- What to take on a ride
- Enthusiasm techniques
- How to fall off
- Road riding tips
- Road intersections
- Road Ride Now

Question 3 Have your riding patterns altered as a result of attending this course? (or do you think they will alter from now on?)

- Yes
- No

Question 4 How do you rate your instructor? (please circle)

1	2	3	4	5
poor		average		excellent

Question 5 How do you rate the venue? (please circle)

1	2	3	4	5
poor		average		excellent

Question 6 How did you find out about this course? (tick one or more)

- At my workplace
- Radio/newspaper
- Council websites
- Bike retailers
- Community notices (radio)
- 50+ newsletter
- Other (please specify)_____

Question 7 Are you interested in organised follow up social rides?

- Yes
- No

If yes, please give contact name, email and/or phone for more information:

Question 8 Do you have any other comments about how we could have improved the course?

Thank you for taking the time to complete this questionnaire.