

bike smarts

your guide to teaching bike safety



bike smarts

Call to action!

Bike smarts: a handbook that helps teachers, youth leaders and cycling instructors improve the knowledge, skills and attitudes of children with respect to the safe handling of their first vehicle — a bike.

The handbook consists of six exciting sessions designed in an easy-to-follow format. Instructors with little or no background can assist children ages seven to 13 to learn safe-cycling skills that convert into the habits of a lifetime.

The sessions outlined are based on solid learning principles and curriculum learning outcomes. They emphasize active participation of the learner, appropriate hands-on experiences, a variety of activity and learning options, and individual and group activities.

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Implementing the program

Bike smarts can be implemented in two progressive steps:

Step one: sessions 1–5

May be implemented by any teacher or instructor. Step one is outlined in this handbook, and focuses on classroom and controlled location activities (such as in a school parking lot). On-road activities are not included.

Step two: session 6

May only be implemented by a certified instructor. Session 6 provides critical on-road experiences. For a list of certified instructors, go to the B.C. Cycling Coalition website at www.bccc.bc.ca.

Organization

The six bike smarts sessions include:

Session 1 – Road rules

Session 2 – Bikes and helmets

Session 3 – High-tech handling

Session 4 – Smart signals and road hazards

Session 5 – Intersections and defensive riding

Session 6 – Streets and roads

You are encouraged to pick and choose the sequence of activities that best fit the time allocated for your bike smarts sessions. The ideal program would be presented in six one-hour blocks of time.

Each session includes:

- Introduction
- Main concepts
- Equipment/preparation
- Teaching notes
- Indoor activities
- Outdoor activities
- On-bike activities
- Drills

Curriculum connections

For classroom teachers, *Bike smarts* provides significant curriculum opportunities.

In Personal Planning K–7

- Safety and Injury Prevention

In Physical Education K–7

- Active living
- Movement (Alternative-environment activities)
- Personal and social responsibility

In Social Studies

- Transportation and communication

Note: Encourage community participation. Involve local cycling enthusiasts, health units, bicycle retailers, local police departments, and parents as volunteers.

Children and traffic safety

Although children are a part of the same traffic system as other vehicle users and pedestrians, research tells us that children perceive traffic differently from adults.

- Children are likely to believe that cars can stop instantly, and that if they can see the car, the car can see them.
- Children have difficulty judging speed and distance.
- Young children have underdeveloped peripheral vision.
- Children have trouble telling where a sound (siren/horn) comes from.
- Children often lack a sense of danger.
- Children are often restless and have trouble waiting for things like traffic lights.
- Children have problems paying attention for long periods of time.
- Young children have not developed the ability to think through cause and effect.
- Children have trouble understanding complex chains of events.
- Children tend to focus only on the things that interest them most.
- Children have difficulty discerning myth and reality.
- Children may believe that grown-ups will always look out for them.

Through ongoing skill development and practice, children can significantly reduce the likelihood of injury-causing incidents.

Helmets

Helmets save lives. They absorb the blow that would otherwise hit the skull — in a collision with a tree, a telephone pole, another vehicle, or the ground when cyclists fall off their bikes. One writer described helmets as “brain buckets for cyclists.” In over half of all bicycle incidents, the cyclist’s head hits a hard surface. Such crashes often cause brain or skull damage. Even a fall from as little as two feet off a tricycle can result in severe trauma to the head of a small child.

According to research, helmet legislation has the potential to significantly increase helmet use, thereby reducing the number of deaths and injuries associated with cycling.

session 1 — road rules

Introduction

Begin with what the participants already know. They have been pedestrians and passengers in vehicles since they were very young. Reinforce and practise important road rules.

Main concepts

By the end of the session, participants will be able to explain the following rules and laws of the roads:

1. Obey traffic rules: traffic control signs and hand signals.
2. Keep to the right: ride single file.
3. Shoulder check: look all ways, then shoulder check.
4. Turn with care: look and listen all ways before proceeding.
5. Beware of parked cars: plan for doors to open.
6. Beware of road hazards: look all ways before entering traffic and cross at right angles to the tracks at railway crossings.
7. Watch for pedestrians: people and animals are unpredictable.
8. Be visible: day or night.
9. Avoid heavy traffic: use less heavily-travelled roads.
10. Ride safely: ride defensively.

Equipment/preparation

Photocopy worksheets:

- #1 — bike survey
- #2 — our community walkabout observation sheet
- #3 — picture a rule
- #4 — the safe ride
- #9 — safe-t bingo (cut into cue cards or put on an overhead)

Indoor activities

1. Introduce the bike smarts program.
2. Talk about bikes. Complete bike survey. Discuss the results.
3. Work together to list or draw all of the things that make up a transportation system (e.g., streets, cars, traffic lights, etc.).
4. Talk about how people know what to do when they are part of the transportation system. Then make lists of important road rules.

5. Add the road rules that are important for cyclists.
6. Review traffic sign and signals (include turn arrows, blinking lights and flashing red/green/orange lights).
7. In a classroom or on the playground, simulate a transportation system: streets, signs etc. Pretend you are in a vehicle and practise the rules of the road.

Outdoor activities

1. Do a walkabout at a nearby intersection. Observe traffic, signage, parked cars, driveways, pedestrian crossings, etc. Add to your list of things that make a transportation system (see our community walkabout observation sheet).

Extension

Make up a board game based on the rules of the road.

teaching notes

- Affirm the information and experience participants have had as pedestrians and passengers.
- Correct misinformation and misconceptions.

worksheet 1 — bike survey	
Questions	Answers
<p>Do you have a bike?</p> <p>How many bikes are there in your family?</p> <p>What types of bikes are there in your family? (BMX, ten-speed, trail, tandem, etc.)</p>	<hr/> <hr/> <hr/> <hr/> <hr/>
<p>How do you and the members of your family use your bikes?</p> <ul style="list-style-type: none"> • To go to school • To go to work, the library, the grocery store • To go mountain/trail biking • To exercise • For getting to different places • Just for fun 	<hr/> <hr/> <hr/> <hr/> <hr/>
<p>Bicycle helmets</p> <ul style="list-style-type: none"> • Do I own one? • Do I wear one? • Do I know how to fit it properly? 	<hr/> <hr/> <hr/>
<p>Let's talk: Write a sentence about how the people in your group use their bikes.</p>	<hr/> <hr/> <hr/> <hr/> <hr/>

worksheet 2 — our community walkabout observation sheet

Walk down a street in your community. Write or draw things you observe that could be dangerous for someone on a bike. Share your observations with others in your group.

1.

2.

3.

4.

5.

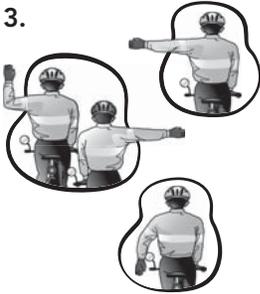
6.

Let's talk: What things could a bicycle rider do to be safe in each situation?

worksheet 3 — picture a rule

Here are some important **rules of the road** for cyclists. Below them are some pictures. Write the rule of the road beside the picture that it goes with. Then write a sentence explaining why that rule is so important. Share your explanations with others in a small group.

Watch for pedestrians. Beware of road hazards. Beware of parked cars.
 Signal before you turn or stop. Keep to the right of the road. Obey traffic signals.
 Be visible at night. Have front and back lights and back reflectors.

<p>1.</p> 	<p>_____</p> <p>_____</p> <p>_____</p>	<p>5.</p> 	<p>_____</p> <p>_____</p> <p>_____</p>
<p>2.</p> 	<p>_____</p> <p>_____</p> <p>_____</p>	<p>6.</p> 	<p>_____</p> <p>_____</p> <p>_____</p>
<p>3.</p> 	<p>_____</p> <p>_____</p> <p>_____</p>	<p>7.</p> 	<p>_____</p> <p>_____</p> <p>_____</p>
<p>4.</p> 	<p>_____</p> <p>_____</p> <p>_____</p>	<p>8.</p>	<p>Draw your own rule.</p> <p>_____</p> <p>_____</p> <p>_____</p>

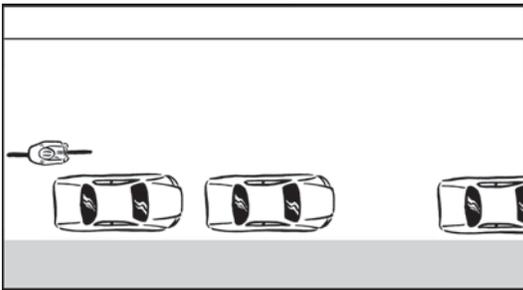
worksheet 4 — the safe ride

Imagine you are riding the bike in each diagram below.

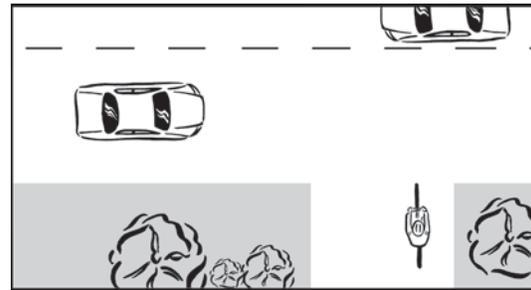
- What is the safest path to take? Draw it.
- What rules of the road will you follow? Write them under the diagrams.

Traffic rules

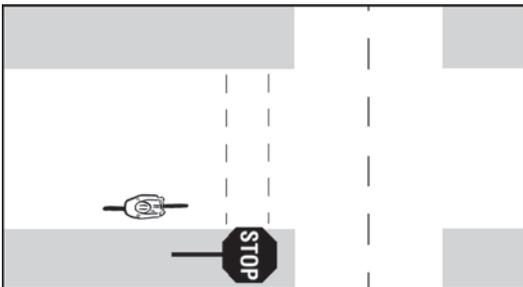
- beware of parked cars
- stop for stop signs
- look for traffic all ways
- slow down and look
- yield to traffic before crossing
- ride in a straight line
- shoulder check before turning
- use hand signals to tell other drivers what you're going to do
- ride on right hand side
- turn with care.



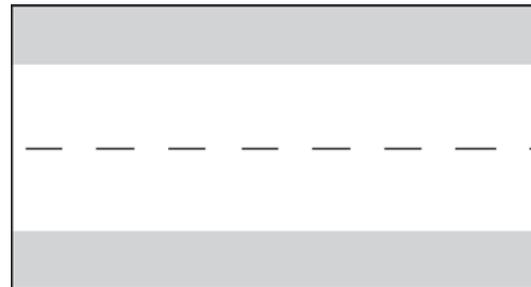
Riding past parked cars.



Riding out from a driveway.



Crossing an intersection.



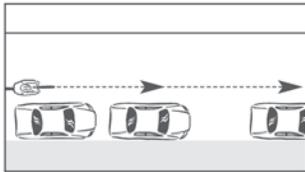
Draw your own special cycling situation.

Answer key

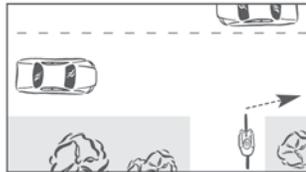
Worksheet 3 — picture a rule

1. Obey traffic signals.
2. Keep to the right of the road.
3. Signal before you turn or stop.
4. Beware of road hazards.
5. Be visible at night. Have front and back lights and back reflectors.
6. Beware of parked cars.
7. Watch for pedestrians.

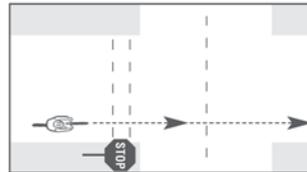
Worksheet 4 — the safe ride



Riding past parked cars
Rules of the road: 1, 6, 9



Riding out from a driveway
Rules of the road: 3, 4, 7, 8, 9, 10



Crossing an intersection
Rules of the road: 2, 3, 5, 6, 9 or walk your bike across the crosswalk

session 2 — bikes and helmets

Introduction

Most participants will already have bikes, or will have tried out a friend's bike. Increase their understanding of the parts and mechanics of the bike. Introduce the important accessories, and promote and insist on wearing bike helmets.

Main concepts

By the end of this session, participants will be able to:

1. Describe the parts of the bike.
2. Explain how the various bike systems work (e.g., wheels, brakes, chain, gears).
3. Understand how to maintain a bike.
4. Explain what accessories are important for bike safety.
5. Demonstrate how to fit a bike properly.
6. Explain why a helmet must be worn.
7. Demonstrate how to fit a helmet.
8. Describe what clothing is best for cycling.

Equipment/preparation

- Bike, bike clothes, helmet, pump, pressure gauge, adjustable wrench, lubricant (WD 40), old toothbrush, chain cleaner and container, rags, accessories (lights, reflectors, panniers).
- Participants: helmets.
- Photocopy or place onto transparency worksheet 6 — bike parts.
- Invite a local cyclist or cycle shop representative to assist with this session.

Indoor activities

Bikes

1. Bring in a bike. Identify the parts. Discuss the parts and basic maintenance tips.
2. Bring in and demonstrate other accessories and proper clothing.
3. Inflate a tire and put the chain back on.
4. Demonstrate fitting a bike.

Helmets

Discuss the helmet construction, proper fitting, styles, and standards. Demonstrate and practise helmet fitting.

Extension

- In a physical science class discuss the physics of gears, brakes, wheels and levers, etc.
- In a life science class discuss the brain and the potential consequences of hard impacts to the head.

teaching notes

Bike part descriptions and maintenance tips (see worksheet 6).

1. **Seat:** available in different shapes and sizes. Choose one that is comfortable and adjust its height for more comfort.
2. **Rear red light:** must be mounted and visible to the rear — flashing or steady (MVA, Section 183(6)). Keep clean and replace bulb or battery when necessary.
3. **Seat stay:** adjustable tube holding the seat. Adjust by releasing the quick release lever or loosening bolt.

4/21

Rear and front caliper brakes: operate by squeezing the rim of the bike's wheels. Check the brake pads — they should only contact the rim, not the tire; if they are worn, replace them. Squeeze hard on the lever and there should be room for one thumb knuckle between the lever and the handlebar. If not, the brake cable needs tightening. Examine the brake cables. If the outer housing is kinked or the inner wire has broken strands, the housing and/or wires may need replacing — consult a bike repair shop. Hand brakes work the best when rims are clean, dry and rust free.

5. **Red rear reflector:** must be mounted and visible from the rear. Keep clean and replace if broken.

6/12

Rear and front derailleurs: move the chain onto each chain ring (that is, shift gears). Lift the rear wheel off the ground, turn the crank arm (pedals) and shift through all gears. The derailleur must move far enough to move the chain onto each chain ring, but not so far that the chain falls off — if they stick or slip, consult a bike repair shop.

7. **Chain:** must be kept cleaned and lubricated, especially after riding in wet weather. Pour chain cleaner into a small container and use an old toothbrush to clean the chain. Wipe it dry with a cloth. Apply lubricant and wipe off excess.
8. **Pedals:** should be secured tightly and spin smoothly.
9. **Crank arms:** hold the pedals; should be secured tightly onto the chain ring.
10. **Chain ring cogs:** one each for the front and rear derailleurs; used to guide the chain from one gear to the next.
11. **Chain stay:** part of the bike frame. Keep clean.
12. (see 6)
13. **Seat tube:** part of the bike frame. Keep clean.
14. **Top tube:** part of the bike frame, sometimes horizontal to the ground and sometimes on an angle. Use this tube to help fit a bike (see the section on fitting a bike).
15. **Fenders:** keep mud and water off the cyclist. Attach securely.
16. **Down tube:** part of the bike frame. Keep clean.
17. **Handlebar grips:** provide a safe hand hold to steer the bike from. Ensure that the handlebars and handlebar grips are tight and straight. You should not be able to twist back and forth when you hold the front wheel between your legs. At least five centimeters of handlebar stem should be inside the head tube.
18. **Bell:** provides a warning noise — optional.

teaching notes

19. **Front light:** must be mounted on the front and capable of displaying a white light visible at least 150 metres in the direction the cycle is pointed (MVA, Section 183(6)).
20. **Brake cables:** run from the lever to the caliper brakes. Keep clean and lubricated.
21. **(see 4)**
22. **Tires:** need to be checked often for bulges, cuts, cracks, or worn spots. Check to see if the tread is good. Inflate tires to the pressure indicated on the side of the tire with a tire pressure gauge and a hand pump. A gas station pump is difficult to control and can easily burst the tire.
23. **Spokes:** check to see that none of the spokes are loose, missing, or broken. These may need to be replaced — consult a bike repair shop.
24. **Fork:** part of the bike frame which the hubs of the wheels are attached to. Keep clean.
25. **Hub:** the centre part of the wheel that hosts the quick release lever or nut. Be sure the lever or nut is tight. Keep clean and lubricated.
26. **Rims:** the edge of the wheel that the brakes rub against. Check that the rims are smooth to ensure the brakes will work properly and the wheel doesn't wobble back and forth when you lift the bike and spin the wheel freely.
27. **Tire valves:** come in two types — a presta valve which has a narrow tip which can be unscrewed to release the air and a schrader valve (typical car tire valve) with a little pin on the inside. Match the correct pump to your valves.

Fitting a bike

A properly fitted bike is the difference between an uncomfortable ride and life-long satisfaction as a cyclist.

To fit a bike:

- Stand over the top tube with your feet flat on the ground.
- Lift the front wheel. You should be able to lift it 2.5 to five centimeters off the ground.
- Sit on the saddle. You should be able to touch the ground with the balls of your feet.
- While you are seated and your feet are on the pedals, the leg on the pedal in the down position should be bent slightly at the knee.

Bike accessories

Emphasize:

- working front light, red tail light (flashing or steady) and red reflector — required by law when riding before dawn and after dark
- bell or horn
- lock
- basket or panniers — leaves both hands free.

teaching notes

Helmets

a) What a helmet does:

- Absorbs the blow and minimizes violent movement of the brain within the skull.
- Distributes the blow over a larger area, reducing the chance of skull fractures.
- Absorbs the type of impact that may be encountered in a cycling crash or fall. Other types of helmets are not designed for that purpose.

b) List the following important tips for participants:

- Only buy a helmet that meets a standard (for example, CSA, Snell or ASTM approved).*
- Get the right fit, snug but not too tight. You should not be able to fit your fingers up between the head and the helmet.
- Choose lighter helmets for small children. They have weaker neck muscles.
- Choose a bright colour. You want to be seen in the dark.
- Choose a helmet with adjustable straps and a quick release buckle. Always buckle the straps. A helmet which is not buckled is useless!
- Choose a helmet that looks good, but don't trade safety for style — find one you like so you'll like wearing it.
- Put helmet on handle bars ready for the next ride.

c) Provide the following helmet tips for parents:

- Let children pick their own.
- Follow a "no helmet, no bike" policy.
- Use rewards and praise.
- Emphasize valuing their brain.
- Emphasize the danger of brain injuries; they can't be fixed like broken arms.
- Note that many athletes wear helmets — hockey players, football players, and many local, elite, and Olympic cyclists.
- Encourage other parents to buy helmets.
- Replace old helmets. They have a five-year life span, due to foam deterioration.
- Helmets should be replaced after one impact.
- Emphasize proper positioning.
- Set an example! Wear your helmet.



Wrong



Wrong



Correct

* The ANSI standard Z90.4 was withdrawn in February, 1995.

worksheet 5 — bike mechanical safety checklist

Name _____

With a partner, check out a bike for the following safety features. Check ✓ for 'Yes'.

1. Does the front light work?
2. Is there a rear light?
3. Is there a rear reflector?
4. Are the wheels tight on the frame?
5. Are the wheels fully spoked?
6. Is the seat tight to the frame?
7. Do the pedals turn freely?
8. Is the chain tight?
9. Is the chain lubricated to move smoothly?
10. Do the tires look good?
11. Are the tires inflated to the recommended pressure shown on the tire?
12. Are the brakes working?

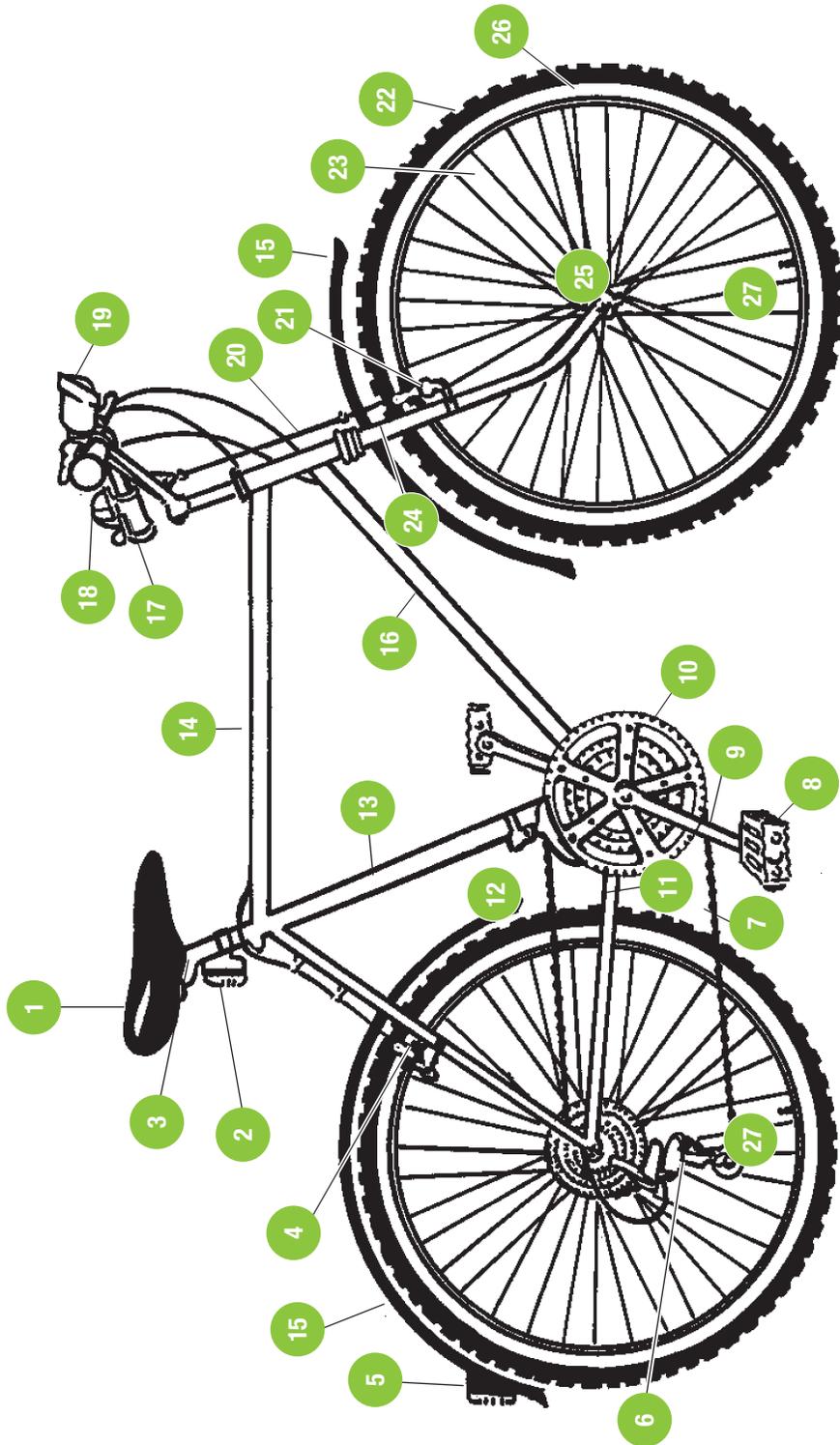
A regular bike check to keep your bike in good condition should include the following:

1. A quick check before each ride:
 - Squeeze the brake levers to ensure brakes are going to stop you.
 - Make sure tires are inflated to recommended pressure shown on side of tire.
 - Make sure seat and handlebars are tight.
 - Make sure wheels are properly fastened.
2. A thorough check every six months:
 - Carefully lubricate all moving parts.
 - Check all nuts and bolts for tightness.
 - Check tires, spokes and wheels for adjustment and condition.
 - Check light, reflector, pedals, seat, brakes, and handgrips.
 - Replace or repair any broken or missing parts.

Now sign and return this form to your instructor.

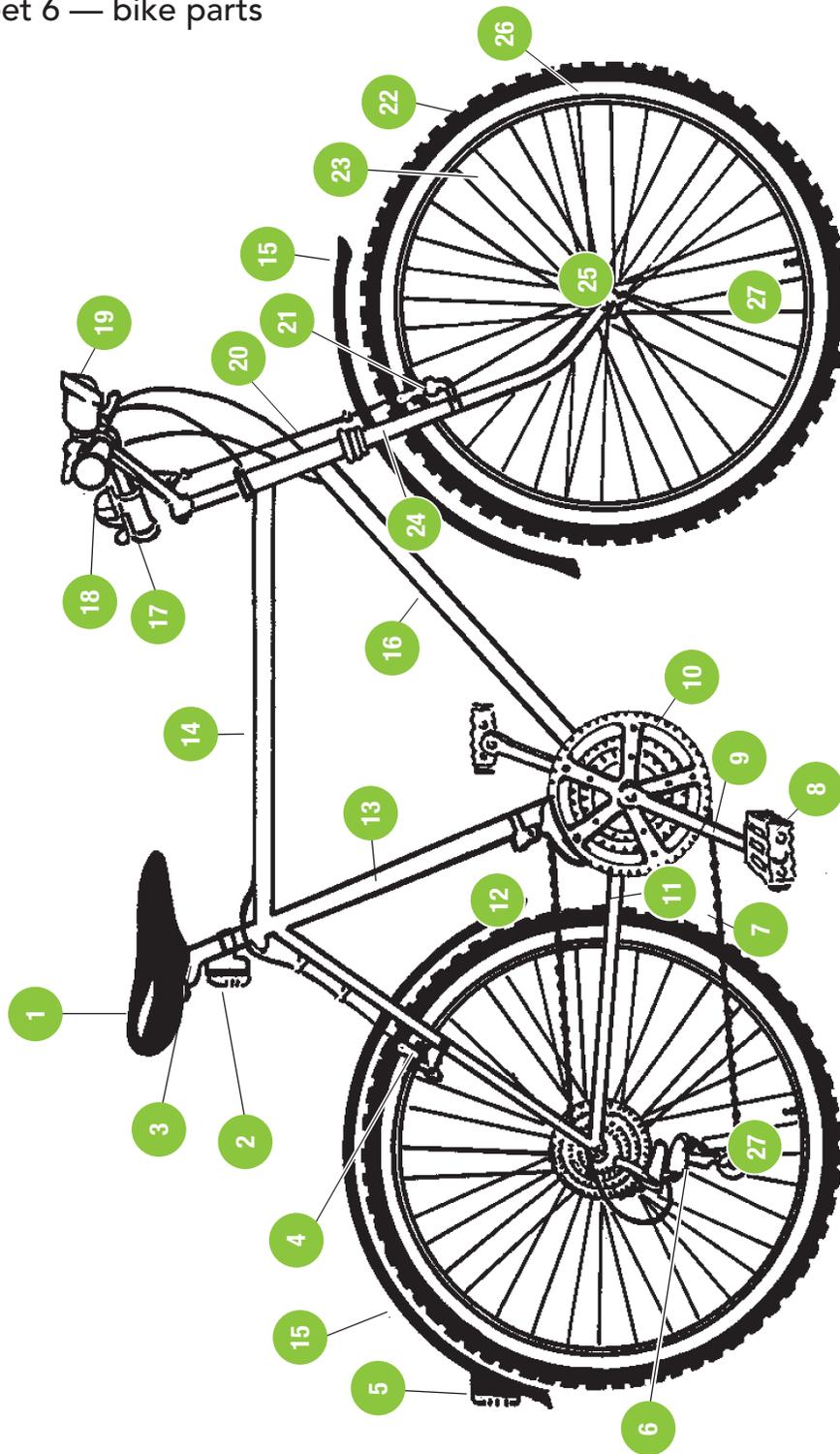
_____ has completed the bike mechanical safety checklist.
Name

worksheet 6 — bike parts



Answer key

Worksheet 6 — bike parts



- 1 Seat
- 2 Rear light
- 3 Seat stay
- 4 Rear calliper brake
- 5 Red rear reflector
- 6 Rear derailleur
- 7 Chain
- 8 Pedal
- 9 Crank arm
- 10 Chain ring
- 11 Front derailleur
- 12 Front calliper brake
- 13 Seat tube
- 14 Top tube
- 15 Fenders
- 16 Down tube
- 17 Handlebar grip
- 18 Bell
- 19 Front light
- 20 Brake cable
- 21 Front calliper brake
- 22 Tire
- 23 Spokes
- 24 Fork
- 25 Hub
- 26 Rim
- 27 Tire valves

session 3 — high-tech handling

Introduction

Improve the skills of participants as bike riders on a safe course set up in the parking lot.

Main concepts

By the end of this session, participants will have developed and practised the following skills:

1. Balancing
2. Pedaling
3. Steering
4. Shifting gears
5. Stopping/braking
6. Turning
7. Shoulder checking
8. Climbing

Equipment/preparation

- Participants: bikes and helmets.
- Cones, start and finish streamers/markers, plastic bottles (various sizes), whistles, dimes.
- Cut pieces of coloured card paper (2.5 x 7.6 cm) for shoulder checking activity.
- Hazards: hose, plywood pieces, sand, water, cones, tarp.
- Photocopy observation sheet (see supplementary material) — make extras for volunteers.

On-bike activities

1. Set up a bike-handling skills course. It should include a straight-line section and a slalom course.
2. Begin by finding out each participant's ability as a bike rider. Have them manoeuvre through a figure 8 on the skills course. Record their ability level on the observation sheet.
3. Review and practise the principles and proper procedures for:
 - proper seating position
 - balancing
 - pedaling with both hands on handlebars, then with either hand removed.
4. Drills — parent and teacher volunteers can be helpful here.
 - Balancing: Turtle race, bottle pick-up.
 - Pedaling: Straight-line ride, alternate hands.
 - Braking/stopping: Stop drill, whistle stop, stop on a dime.
 - Shoulder checking: Cue card colours.
 - Steering/cornering: Slalom, Obstacle course.
 - Other fun drills include: Follow the leader and Figure 8s. Use cones to lay out the course.
5. Evaluation — let participants know how they have done according to your observations.

Extension

- In a Fine Arts class, design and construct your own safe obstacle course.
- Prepare a “Safe-cycling skills video” for presentation to a younger class of students.

teaching notes

1. Work with a partner and/or with another adult if you have more than 10 children in your group. Set up two stations on your bike-handling skills course.
2. Divide the participants into two or three groups according to ability, with specific instructions for a sequence of drills and practices to keep them moving.
3. Be specific about behaviour expectations when you are working with one of the other groups.
4. Use the expert riders in your group to demonstrate their expertise, and to help with less experienced riders.
5. Use the following procedures to coach students in the various skills:
 - Observe carefully the current level of skill of each participant.
 - Identify areas of strength and weakness.
 - Praise strengths.
 - Explain that practising in a safe environment will help them develop a particular skill.
 - Repeat activities and drills to improve performance in one particular skill.
 - Keep all participants active and having fun.

teaching notes

6. Teaching specific skills:

- **Balancing**

There is no magic in teaching balance. It's innate, like walking or running. Learning to relax is important. The trick to balancing is to keep moving. If the bike falls to the left, steer to the left to bring the wheels under the bike, and vice versa. To begin to ride, straddle the bike, back pedal until the right pedal is in the two o'clock position. Stand up on the right foot and the bike will begin to move forward. Move your crotch over the saddle, sit down and start pedaling with both feet.

Since a bike always wants to tip over, you continually steer into the fall to keep the bike up — just like balancing a ruler upright on your hand.

- **Pedaling**

If the bike has flat pedals, stress pushing down with both feet alternately. If the bike has toe clips, tell the participants to concentrate on making circles with their toes.

Practise riding straight while signalling and shoulder checking.

- **Braking**

When the brakes are applied, the rider's weight transfers forward, shifting most of the weight over the front wheel. Use both brakes equally.

Note that when you brake with the front brake, the weight shifts over the front wheel, making the bike stop very quickly. If the rear wheel begins to skid, ease off on the front brake to shift the weight back over the rear wheel, which helps the bike keep moving.

Skidding the back wheel is hard on the tires, can cause a loss of control, and will increase stopping time. Practise stopping at a set point with both brakes. When stopping, have one foot out ready to catch yourself and steer to the opposite side. The bike will tilt to the supporting foot.

When riding with others keep one bike length between you and the person in front.

- **Shoulder checking**

Shoulder checking lets you know if anyone is beside or behind you; it can be a signal for a left turn, or it can be used to establish eye contact with a driver so you know that a driver knows if you intend to change lanes. Ride on a straight line; then try to look back without swerving. When you turn to look, turn your torso with chin to shoulder. Try identifying colours of cards flashed behind you. Note your riding line.

- **Steering/cornering**

When you turn the handlebars, the bike turns. For a fast turn, keep the inside pedal up, inside knee out and inside shoulder down. Lean into the turn. When you lean, the front wheel falls into the lean and you turn more easily. Lean first; then turn. Both these motions happen almost simultaneously. Keep leaning until the turn is finished. Then steer the same way slightly to bring the bike under you and stop the bike from turning.

teaching notes

- **Climbing**

Going up — you want to pedal at a constant rate, so shift to a lower gear before the hill. Pace yourself so you still have energy left at the top of the hill.

Going down — control your speed throughout. Ride, don't slide, and use both front and back brakes equally. Sliding on trails causes the trails to erode. Sliding on pavement quickly ruins your tires and decreases your control.

- **Shifting gears**

Gather participants around the bike and demonstrate what happens when the gear shifter is moved towards the rider or pushed away from the rider. Before you ride up a hill "gear down" (go to a bigger rear sprocket and the small front chain ring). Going down hill you "gear up." Through trial and error on your bike you will learn which way is which.

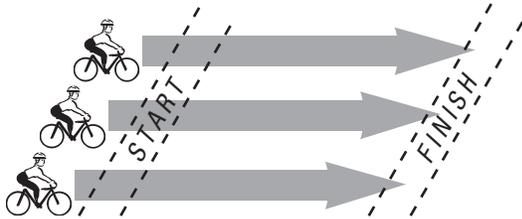
Drills

turtle race

Purpose: To practise balance and control.

Set-up: Courtyard, basketball court, field (can be carried out in a fairly small area).

Diagram:



Object of the drill:

To ride as slowly as possible toward the finish. The last rider to cross the finish line is the winner.

Procedure:

1. Riders line up side-by-side — with lots of room between each rider so they don't crash into each other.
2. Ride in a straight line towards the finish. Don't swerve; no part of the body may touch the ground during the race; start at the same time.

Note: Hints for balance — wiggle handle bars, pedal backwards, pump brakes. Make sure participants understand that this drill helps to improve their ability to control their bikes. The balance hints should not be applied in traffic, and particularly not at stop signs/lights.

bottle pick-up

Purpose: To practise balance and control.

Set-up: Straight-line course with taped or coned lane boundaries. Plastic bottles are set up at intervals down the course.

Object of the drill:

To see how many bottles riders can pick up without swerving out of the lanes.

Procedure:

Ride past bottles placed on the ground and lean over to pick them up. Then toss each to the side.

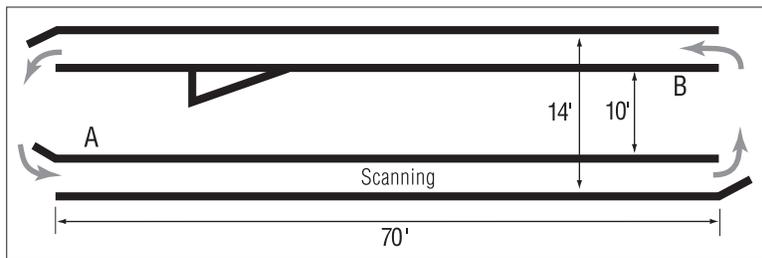
Note: This game can be made more or less challenging by the height of the bottles.

straight-line race

Purpose: To practise starting and riding in a straight line between marked lanes, two feet apart.

Set-up: Bike-handling skills course — straight-line section.

Diagram:



Object of the drill:

To develop confidence and control on a straight-line ride as speed increases.

Procedure:

1. Ride counter-clockwise through the course twice.
2. Allow approximately two bike lengths between riders.
3. After riders have gone through both lanes once, and performed acceptably, practise the whistle-stop.

alternate hands

Purpose: To practise balance and control while riding with one hand removed from the handlebars (for example, when signalling).

Set-up: Bike-handling course — straight-line section (see above diagram).

Procedure:

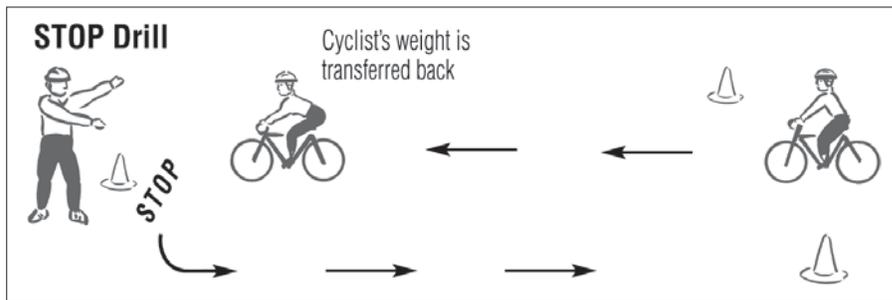
1. Ride through the first lane of the straight-line course again, this time with right hand on the handlebars and left hand pointing straight out to the side (just like a left turn signal).
2. Return both hands to the handlebars when making the turn.
3. When entering the second lane, switch hands and ride with left hand on the handlebars, and right hand pointing straight out to the side.

STOP drill

Purpose: To practise balance, control and proper body positioning for an emergency stop.

Set-up: Courtyard, basketball court, field (any relatively small area).

Diagram:



Procedure:

1. Riders line up behind each other about five metres in front of you.
2. Riders ride towards you and make an emergency stop.
3. Observe how each participant handles the technicalities of the stop (that is, the hand brake sequence, transferring weight toward the back of the bike, balance, etc.).

Note: Riders can increase their speed as they become more confident.

whistle stop

This is a behaviour you can develop to gain instant attention and regroup, or control speed or inappropriate behaviour — use with restraint. Nobody likes listening to whistles interrupting them all the time.

Purpose: To practise braking smoothly, without skidding, when the whistle blows.

Set-up: Straight-line course.

Procedure:

1. Follow each other on the straight-line course — a bike length between each rider.
2. When the whistle blows, stop by braking smoothly without skidding or swerving.
3. Riders can increase their speed on the course as their confidence increases.

stop on a dime

Purpose: To practise quick stops.

Set-up: Courtyard, basketball court, field (any relatively small area).

Procedure:

Place a dime anywhere on the course. Riders practise stopping with their front wheel right on the dime.

cue card colours

Purpose: To practise shoulder checking.

Set-up: Straight-line course with instructor standing at beginning of course.

Objective of the drill:

To be able to shoulder check while riding down a straight course.

Procedure:

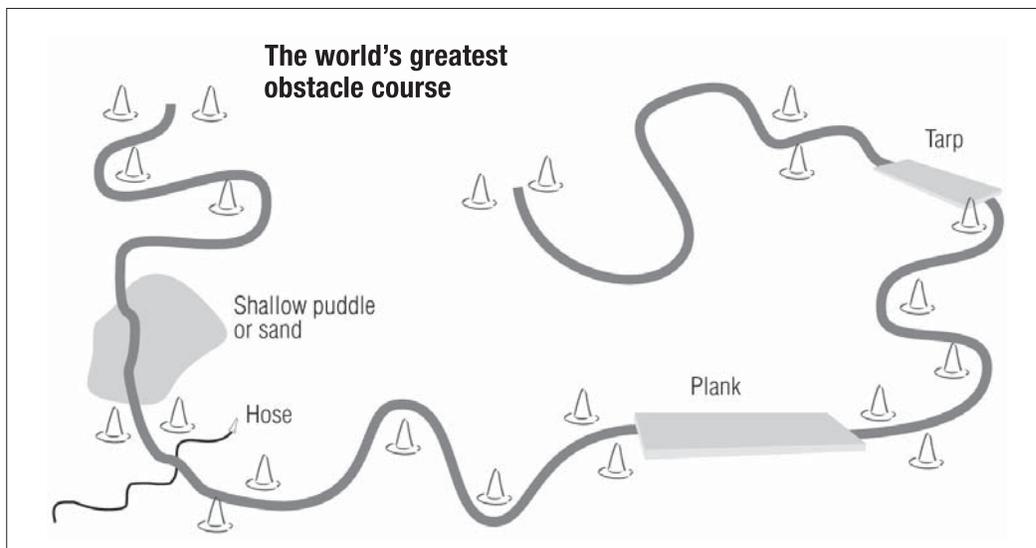
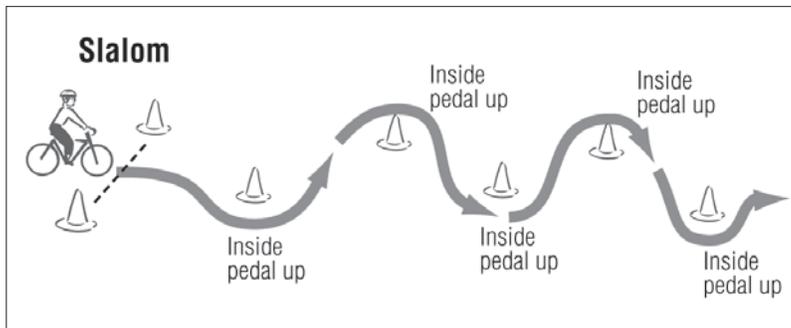
1. Riders, one at a time, ride down the straight-line course.
2. At three different intervals marked by a cone, riders shoulder check first over one shoulder and then over the other.
3. When the riders begin, the instructor holds up a coloured cue card or a number of fingers. The riders should call out the colour or the number of fingers they see over their shoulder. The instructor says "YES" for a correct response; "NO" for an incorrect response.
4. Keep track of the riders' progress.
5. Observe the control and balance of each rider as they shoulder check.

slalom

Purpose: To practise cornering and tight turns.

Set-up: Straight-line course with cones set up to ride around; or an obstacle course set up on a courtyard or basketball court

Diagram:



Procedure:

1. Ride one behind the other through cones on the course.
2. Emphasize the importance of having the inside pedal up while the bike is leaning into the turn so it doesn't make contact with the road surface or an obstacle which could cause a loss of control.

session 4 — smart signals and road hazards

Introduction

Review traffic control signs and introduce hand signals and warning signs for road hazards. Discuss ways that cyclists and other vehicle drivers signal their intent to move within the traffic system. Communicating the intent to move is key to preventing incidents.

Main concepts

By the end of this session, participants will be able to:

1. Recognize the important traffic control signs and signals.
2. Describe a variety of road hazards and warning signs.
3. Demonstrate (off-bike) how to signal a left and right turn with the new “point-point” method.
4. Describe how roads are laid out in their community.
5. Demonstrate and explain how cars and other vehicles signal their intentions.
6. Describe how to communicate with other cyclists.
7. Explain why it’s so important to: plan ahead, be predictable, look before moving.
8. Predict the consequences of some inappropriate cycling behaviours at intersections.

Equipment/preparation

- Photocopy worksheets:
 - #7 — traffic signs and signals
 - #8 — warning signs and road hazards
 - #9 — safe-t bingo
- Find/create/photocopy a blank road map of the neighbourhood.
- Have a car available for a signals demonstration.
- Determine an intersection for observations.

Indoor activities

1. Review traffic control signals. Use worksheets. Role play the appropriate actions.
2. Discuss warning signs and road hazards (worksheet 8).
3. Play safe-t bingo.
4. Review and demonstrate off-bike, hand signals — right turn, left turn, slow down, stop.

Outdoor activities

1. Review and demonstrate motor vehicle signals — brake lights, turn lights, hazard lights. Take participants to the parking lot and demonstrate with a parked vehicle.
2. Take participants on a short walk. Indicate the location of traffic signals, signs, and road hazards on a blank map of the neighbourhood.
3. Spend 15 minutes at a busy intersection. Observe the number of vehicles which go straight through in one direction, how many turn right and how many turn left. Note how many fail to signal before the intersection. Discuss the implications and strategies for cyclists.
4. Discuss and demonstrate what happens in a group if the leader does not clearly signal his/her actions.

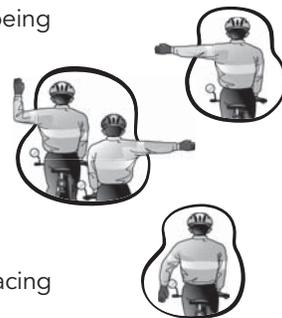
teaching notes

1. Road hazards can include:

- road surfaces: railroad tracks, gravel, water/mud, snow/ice, oil
- bumps: driveway entrances, rocks, debris, sewer covers, lane markers
- holes: drain covers, depressions in pavement, metal covers, drain grates
- sharp objects: glass, rocks, nails, wire, metal pieces
- intersections
- animals.

2. Hand signals:

- Emphasize that a shoulder check and signals are made before making a manoeuvre.
- The traditional way of signalling right (which uses the left arm only), is being supplemented with an alternative – the “point-point” method. In the traditional option, hold your handlebar with your right hand and use your left arm to signal a right turn, raising your forearm. With the point-point option, hold the handlebar with your left hand and stretch out your right arm to signal right before starting your turn. Either is acceptable.
- Signal before a turn, but turn with both hands on the handlebars.
- The slow down signal — straight left arm at five o’clock and the palm facing backwards — is particularly important when riding in a group.
- Emphasize that in actual traffic situations, some people in cars don’t signal. Simulate these situations to create awareness.

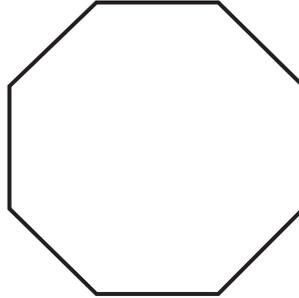


worksheet 7 — traffic signs and signals

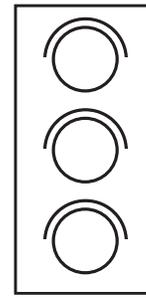
Complete the design of traffic signs or signals, according to the description provided below each diagram. Then colour the signs or signals with the correct colours.



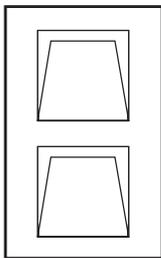
1. Pedestrian crosswalk



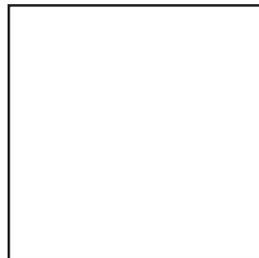
2. Stop



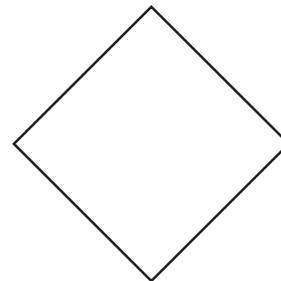
3. Warning:
Light will turn red



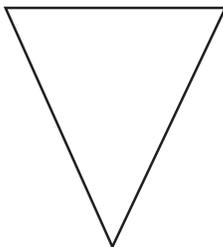
4. Don't walk



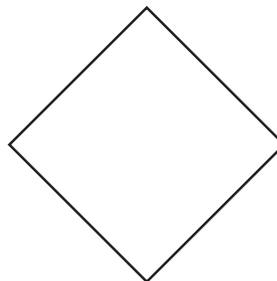
5. No left turn



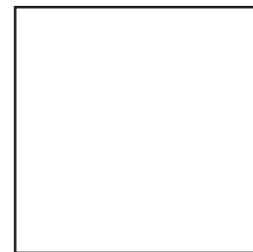
6. Railroad crossing



7. Yield



8. Road narrows



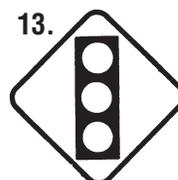
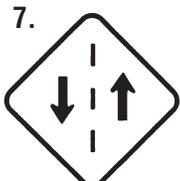
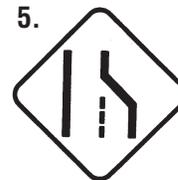
9. Do not enter



10. One-way street

worksheet 8 — warning signs and road hazards

Warning signs tell drivers of vehicles to expect something coming up ahead. Work with a partner to predict what you should watch out for if you see each of the signs below.



worksheet 9 — safe-t bingo

1. Using scissors and glue or a computer scan, create a number of different versions of this safe-t bingo card.
2. Then cut out individual symbols to call out for the game.



Answer key

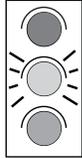
Worksheet 7 — traffic signs and signals



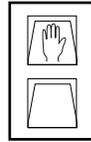
1.
Pedestrian crossing



2.
Stop



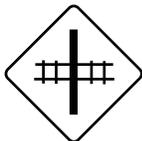
3.
Warning: light will turn red



4.
Don't walk



5.
No left turn



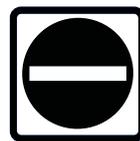
6.
Railroad crossing



7.
Yield



8.
Road narrows



9.
Do not enter



10.
One-way street

Worksheet 8 — warning signs and road hazards

1. Cycling allowed
2. People working on the road ahead
3. Wildlife in area
4. Bridge ahead
5. Lane merges ahead
6. Divided highway ends
7. Single lane traffic bothways
8. Road narrows
9. Rocks may have fallen on road
10. Stop sign ahead
11. Slippery road section
12. Steep hill
13. Traffic lights ahead.

Answer key

Worksheet 9 — safe-t bingo

1. Come to a full stop. Check for traffic all ways. Proceed when safe.
2. Slow down and yield or stop for cross traffic.
3. Slow down. People on foot have the right-of-way at a pedestrian crossing.
4. Don't pass.
5. Slow down. People on foot have the right-of-way at school crosswalks.
6. Proceed with caution, children at play.
7. People on foot have the right-of-way at a pedestrian crossing.
8. Do not proceed.
9. Proceed only in the direction of arrow.
10. Left turn allowed.
11. Right turn allowed.
12. Pedestrian crossing not allowed.
13. Don't enter.
14. Traffic lights ahead.
15. Look out, children from the nearby school will cross the road at this school crossing.
16. This is the maximum speed that traffic should travel.
17. No cycling allowed.
18. Stop sign ahead.
19. Cycling allowed.
20. Do not pass when lights are flashing.
21. Proceed with caution, rocks may have fallen on the road.
22. Proceed with caution, this section of road may be slippery.
23. Slow down, look both ways and listen for train. If there's no train, proceed with caution. Always cross tracks at right angles or your wheels may get caught.
24. Proceed with caution, wildlife may cross your path in this area.



session 5 — intersections and defensive riding

Introduction

Review and practise the techniques of cycling through intersections. Then introduce participants to the skills utilized when predictable and unpredictable things create an emergency or challenging situation for a cyclist. Planning, preparation and practise of strategies for avoiding and handling various hazards are important factors in prevention.

Main concepts

By the end of this session, participants will be better able to:

1. Ride to a simulated intersection and make a right turn.
2. Demonstrate how to make left and right turns and signals on-bike.
3. Ride defensively to avoid road hazards.
4. Take evasive action to avoid road hazards (for older participants).
5. Make an emergency stop.
6. Make an instant turn (for older participants).
7. Explain and demonstrate proper clothing and equipment for night riding.
8. Describe appropriate cycling behaviours in certain kinds of weather.

Equipment/preparation

- Participants: bikes and helmets.
- Photocopy worksheet 10 — street and road layout.
- Toy cars, town, etc. to assist in demonstrating traffic patterns.
- Hazards: sand, plywood, hose, tarp, rocks, piece of clothing, pylon.
- Cones, dimes, reflective clothing.

Indoor activities

1. Review procedures at intersections.
 - Use worksheets 4 — the safe ride, 10 — street and road layout, and a chalkboard or whiteboard for examples.
2. Use a model street system and miniature cars, buses, trucks, and cyclists to demonstrate correct actions for:
 - entering a roadway
 - passing a parked car
 - moving across a roadway
 - turning left, etc.
3. Review the laws, procedures and appropriate clothing for night riding.
4. Take participants into a dark room and demonstrate the effects of proper and improper clothing and lighting.

On-bike activities

1. Practise emergency stops. Practise quick turns to avoid a hazard.
2. Practise riding on different surfaces (sand, dirt, plywood).

teaching notes

1. Intersections

Straight ahead:

You can ride your bike through an intersection the way a car does or you can walk your bike on the crosswalk. It's safer to walk your bike if it's a busy intersection.

Turning right:

- slow down or stop if there is a stop light or sign
- look left then right (all ways)
- shoulder check
- hand signal
- place both hands on handlebars and turn
- ride on the right side of the road, single file, in a straight line.

Turning left:

Encourage young riders and riders at busy intersections to make left turns by walking their bikes across the crosswalks.

2. Avoiding hazards

Ride one metre out from the curb to avoid hazards like storm drains and debris at the side of the road.

3. Taking evasive action (for the older participants)

Keep riding straight until you are very close to the obstacle (start with a piece of cloth or a pylon). Just before the obstacle, turn the handlebars quickly without leaning so the front wheel goes around the obstacle. The front wheel will snake around the obstacle but your body and handlebars will barely move.

With practise you will remain balanced by compensating with turns and leans. Watch this manoeuvre from the front so you can see what it should look like.

4. Making an emergency stop

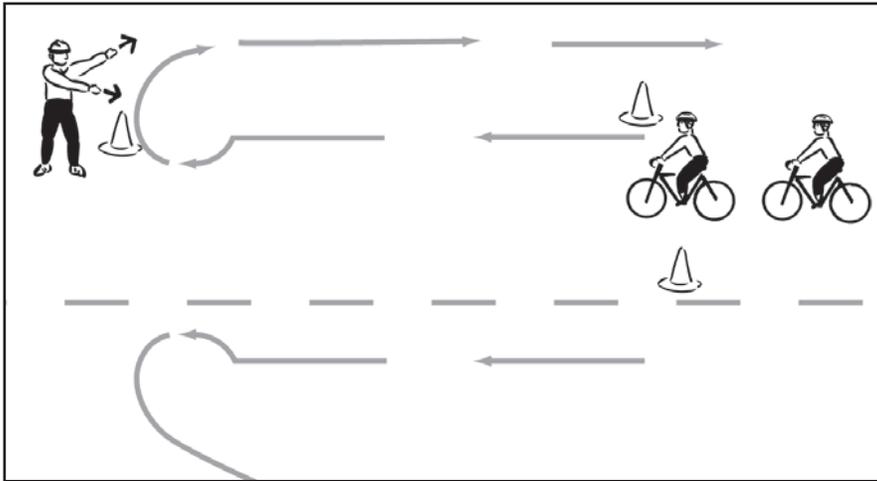
If you rely on the brakes to avoid sudden obstacles, and you do not apply the brakes properly, several things could happen — you could skid out of control or you could fly over the handlebars. In an emergency, lift off the seat and move behind it to keep the rear wheel down. Brake equally (front brake and back brake). If skidding occurs, release the front brake slightly. This will transfer your weight further back and help keep the wheels rolling. Avoid emergency stops by avoiding the hazards and situations in which you have to stop suddenly.

teaching notes

5. Making an instant turn (for the older participants)

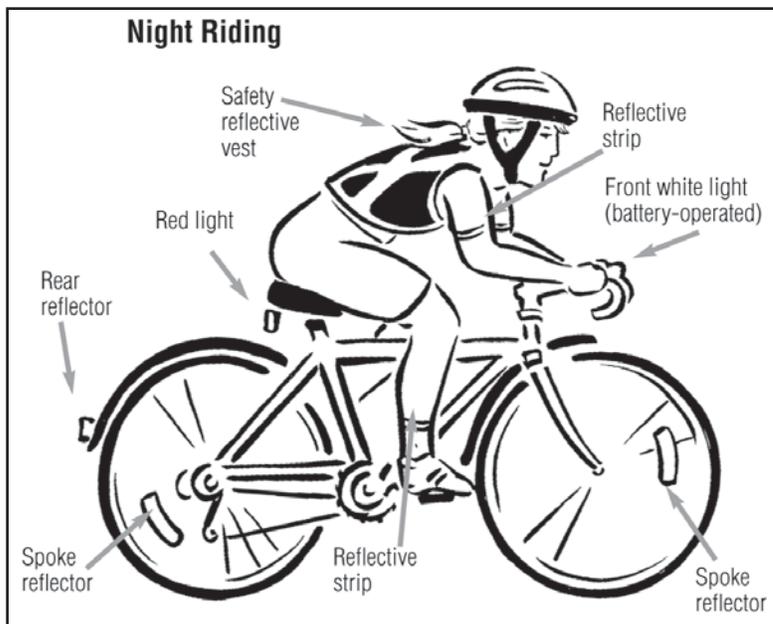
This turn will never feel completely natural, but may help you avoid a sudden collision. Suppose you are riding alone and a car passes you and turns right, directly in front of you. For an instant turn, turn your front wheel left towards the car. This will force a lean to the right which is followed by turning the handlebars to the right. Because your weight is already over on that side, the turn is very fast.

Note: This manoeuvre is very difficult for young children. Emphasize that young children should avoid hazards altogether by riding slowly enough to stop if there is danger.



6. Night riding

According to the law, a white front light, a red rear light, and a rear reflector (MVA, Section 183(6)) are required one-half hour after sunset to one-half hour before sunrise. Emphasize "cycling to be seen."



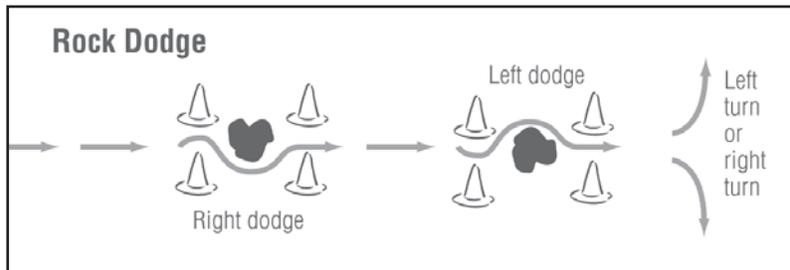
Drills

rock dodge

Purpose: To practise techniques for dodging obstacles.

Set-up: Courtyard, basketball court (any small area). Set up the cones so there is very little space to manoeuvre.

Diagram:



Object of the drill:

To make it through the obstacle course without knocking over the cones or running over the obstacle.

Procedure:

1. Ride through the first set of cones, dodging the obstacle to the right side.
2. Continue through the next set of cones and dodge to the left.
3. Practise left and right turns at the end of the drill.

stop on a dime

Purpose: To practise quick stops.

Set-up: Courtyard, basketball court, field (any relatively small area).

Procedure:

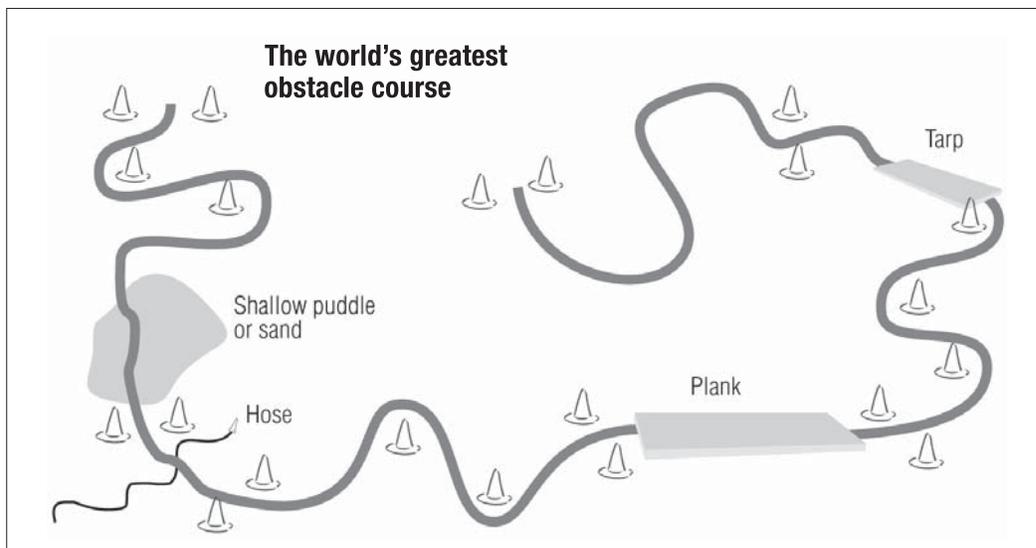
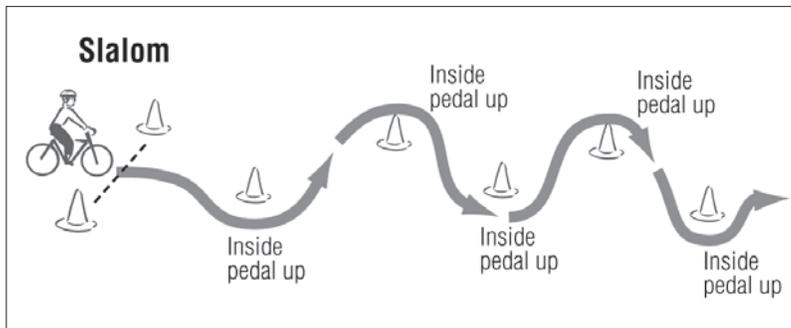
Place a dime anywhere on the course. Riders practise stopping with their front wheel right on the dime.

slalom

Purpose: To practise cornering and tight turns.

Set-up: Straight-line course with cones set up to ride around; or an obstacle course set up on a courtyard or basketball court.

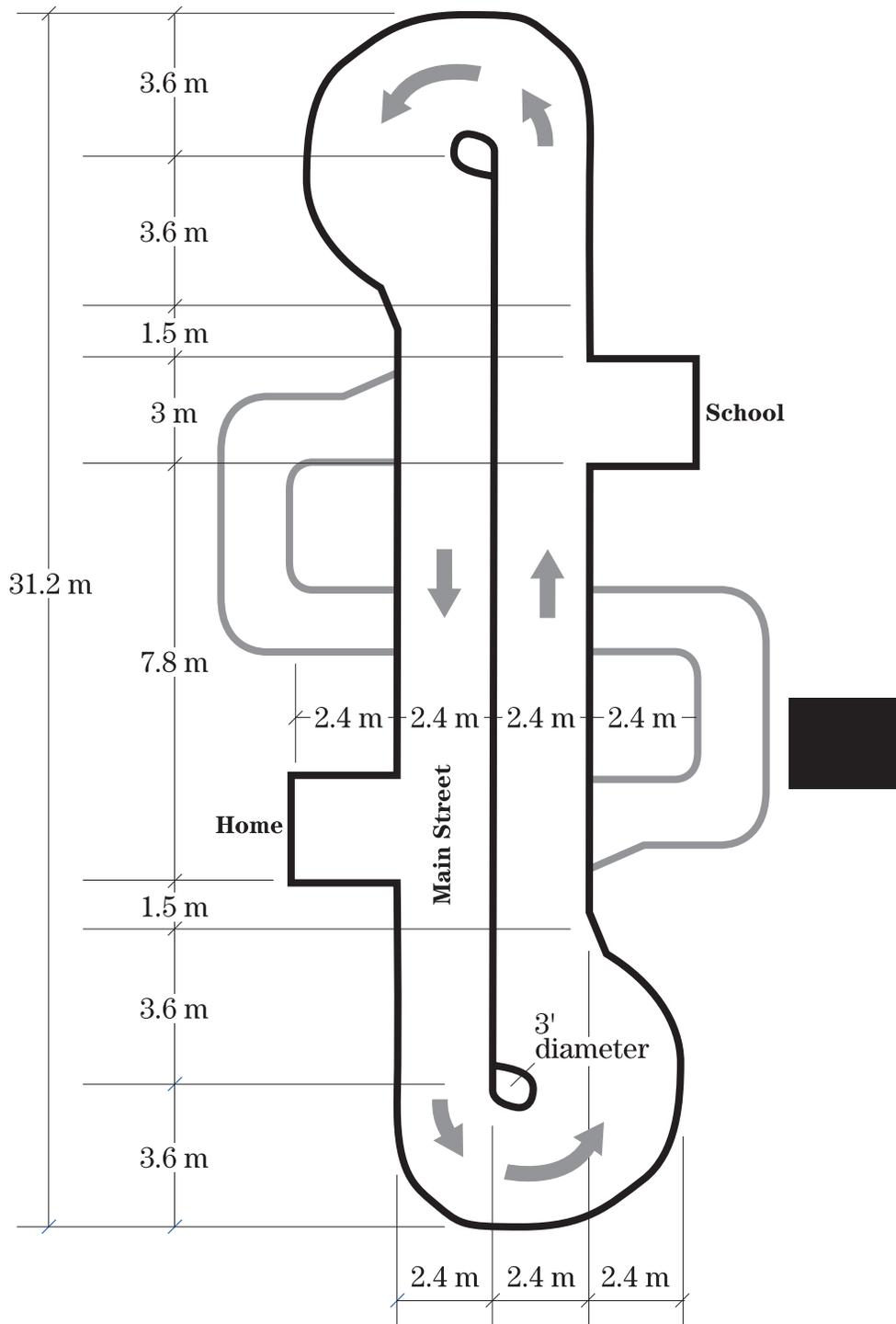
Diagram:



Procedure:

1. Ride one behind the other through cones on the course.
2. Emphasize the importance of having the inside pedal up while the bike is leaning into the turn so it doesn't make contact with the road surface or an obstacle which could cause a loss of control.

worksheet 10 — street and road layout*



* Source: Bicycle Federation of America. Basics of Cycling: A Curriculum for Elementary Level Bicyclists Training, p. 21.

session 6 – streets and roads

You must be certified to lead Session 6. This session involves on-road experience. Because of liability and safety issues, it's in the best interests of all involved to ensure that the leaders of children on bikes on-road are certified. The certification level recommended is Can-Bike II or an equivalent.

Session 6 requires on-road certified instructors. For a list of certified instructors, contact:

B.C. Cycling Coalition
www.bccc.bc.ca

Key contacts

ICBC

151 West Esplanade (171 EspW)
North Vancouver BC V7M 3H9
Phone: 1-866-661-6651
icbc.com/4 teachers

B.C. Cycling Coalition

www.bccc.bc.ca

Vancouver Area Cycling Coalition

Box 47068, RPO
Vancouver BC V5Z 4L6
Phone: 604-878-8222
E-mail: info@vacc.bc.ca

SportMedBC

1325 Keith Road E
North Vancouver BC V7J 1J3
Phone: 604-903-3880
Fax: 604-929-3877
Email: info@sportmedbc.com

Canadian Cycling Association National Office

Suite 203 2197 Riverside Drive
Ottawa, ON K1H 7X3
Phone: (613) 248-1353
Fax: (613) 248-9311
Email: general@canadian-cycling.com

For certification information:

B.C. Cycling Coalition

www.bccc.bc.ca

B.C. Injury Prevention Centre

Mailing Address:
BC Injury Prevention Centre
855 West 12th Avenue
Vancouver BC V5Z 1M9

Physical Address:
BC Injury Prevention Centre
767 West 12th Avenue
Vancouver BC

Phone: 604-875-4991
Fax: 604-875-4570
www.injuryfreezone.com

Ministry of Education

Curriculum Branch
P.O. Box 9152, Stn Prov Govt
Victoria BC V8W 9H1
Phone: 250-356-7551
Fax: 250-356-2316
E-mail: EDUC.curriculum@gems4.gov.bc.ca
www.dir.gov.bc.ca

Ministry of Health Planning

Office for Injury Prevention (Mailroom)
1515 Blanshard Street
Victoria BC V8W 3C8
Phone: 250-952-1533
Fax: 250-952-1570

Desired learning outcomes of the bike smarts program

Bike smarts is designed to develop knowledge, skills and attitudes in a variety of areas.¹

Knowledge and understanding

As a result of participation in the activities of the **Bike smarts program**, participants will be able to:

- List important rules and laws of the road and correctly apply those rules and laws while on a bike.
- Identify important road and traffic signs and follow their directions in a real or simulated environment.
- Identify and label the important parts, equipment and accessories of a bike and explain the reasons for wearing a bike helmet.
- Select, properly fit and wear a bike helmet.
- Demonstrate basic maintenance procedures.
- List cycling hazards and describe or demonstrate evasive action for each one.
- Describe the correct procedures and necessary equipment for night riding.
- Describe their responsibilities as users of the transportation system.
- Explain and demonstrate defensive driving strategies for cyclists.
- List the physical, emotional and spiritual benefits of cycling as an activity.
- Diagram the basic layout of a community transportation system.
- List the benefits of cycling to the environment.

Attitudes and values

As a result of participation in the activities of the **Bike smarts program**, participants will be able to:

- Demonstrate their willingness to follow the rules, routines and procedures of safety in a variety of cycling activities.
- Discuss and resolve issues related to bike safety.
- Demonstrate their willingness to wear a bike helmet.
- Demonstrate increased respect for other road users (fair play).
- Demonstrate increased respect for their abilities and skills as a cyclist.
- Demonstrate increased enthusiasm for cycling as a healthy, satisfying and environmentally friendly activity.
- Demonstrate increased willingness to cooperate and participate safely in group activities.
- Share their enthusiasm and knowledge of cycling safety with their parents and other participants.

¹ Based on Learning Outcomes of the Ministry of Education (Personal Planning K-7; Physical Education K-7) approved by the Cycling Education Committee, 1994.

Skills

As a result of participation in the **Bike smarts program**, participants will be better able to:

- Use appropriate motor skills to control and manoeuvre a bike and take evasive action.
- Anticipate potential dangers and actions of other road users.
- Communicate with other road users.
- Avoid incidents which may cause injury.
- Communicate their understandings and concerns regarding bike safety.

Note: The degree to which participants in any particular school will achieve the outcomes will be dependent on the amount of time allocated for a cycling safety program — and on your skill and preparation. The ideal program would be presented in six one-hour blocks of time.

Activities and evaluation

Session planning guide

Your bike injury fact sheet

Safe ride crossword puzzle

- Participant worksheet
- Puzzle clues
- Puzzle answer key

My bike smarts progress sheet

Participant observation form

Bike smarts certificate

Info sheets

- Bike safety for children
- Cycling safety tips

your bike injury fact sheet*

Bike injuries in childhood are common and potentially disastrous.

The facts

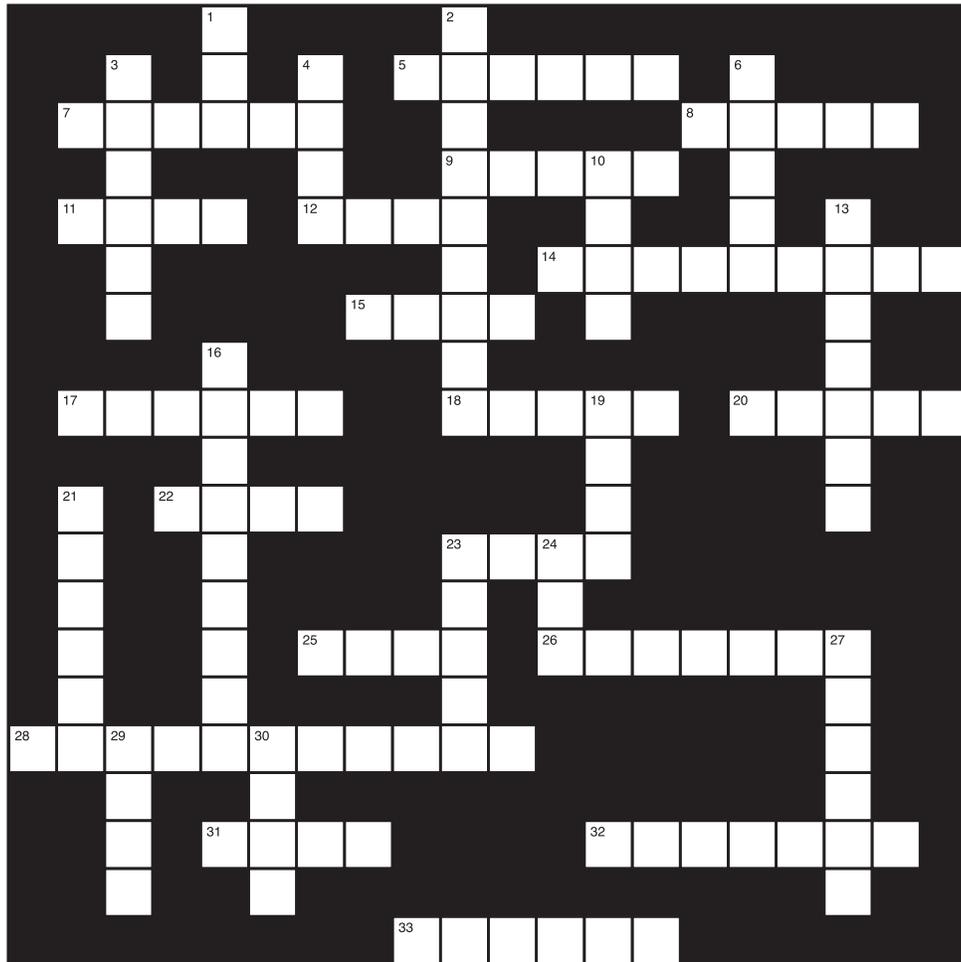
- Biking is the most popular outdoor activity among young Canadians. Between 86 per cent and 90 per cent of children aged 10 to 14 are bicyclists.
- More than 150 Canadians die each year from bike injuries. Children aged five to 14 account for about half of these deaths.
- Every year, over 50,000 children are seriously injured in bike-related mishaps.
- Almost half of all the children injured are under 10 years old and 25 per cent are under seven.
- Eighty-five per cent of bike injuries in childhood do not involve a motor vehicle.
- The vast majority of children who are involved in bike mishaps (85 per cent) are within six blocks of home.
- The human skull can be shattered by an impact of seven to 10 km/h, and children's skulls are more vulnerable than those of adults.
- A fall from 60 cm can cause permanent brain damage; a fall at a speed of 20 km/h can result in death.
- Head injuries account for 75 per cent of all deaths from bike injuries.
- Cycling mishaps are the leading cause of hospital admissions for head injury in children.
- Survivors with brain injury may suffer seizures, intellectual and memory impairment, and personality changes.
- The lifetime costs for a head-injured Canadian — including intensive care, long-term hospital costs, lifetime care and support at home — are estimated to be in the range of \$1 to \$1.5 million.

**Wearing a bike helmet reduces the risk of head injury by up to 85 per cent,
and the risk of brain injury by 88 per cent.**

* From Canadian Bike Helmet Coalition. *How to Organize a Community Project ("Bike Helmets for Children")*.

safe ride crossword puzzle participant worksheet

Name _____



Word list

both	green	listen	seat
cars	grips	lock	shoes
caution	hand	out	tire
common	handle	pedals	tool
crosswalk	hazardous	pedestrians	traffic
double	helmet	red	warning
down	horn	reflector	white
file	left	right	
good	light	safety	

Safe ride crossword puzzle clues

Across clues

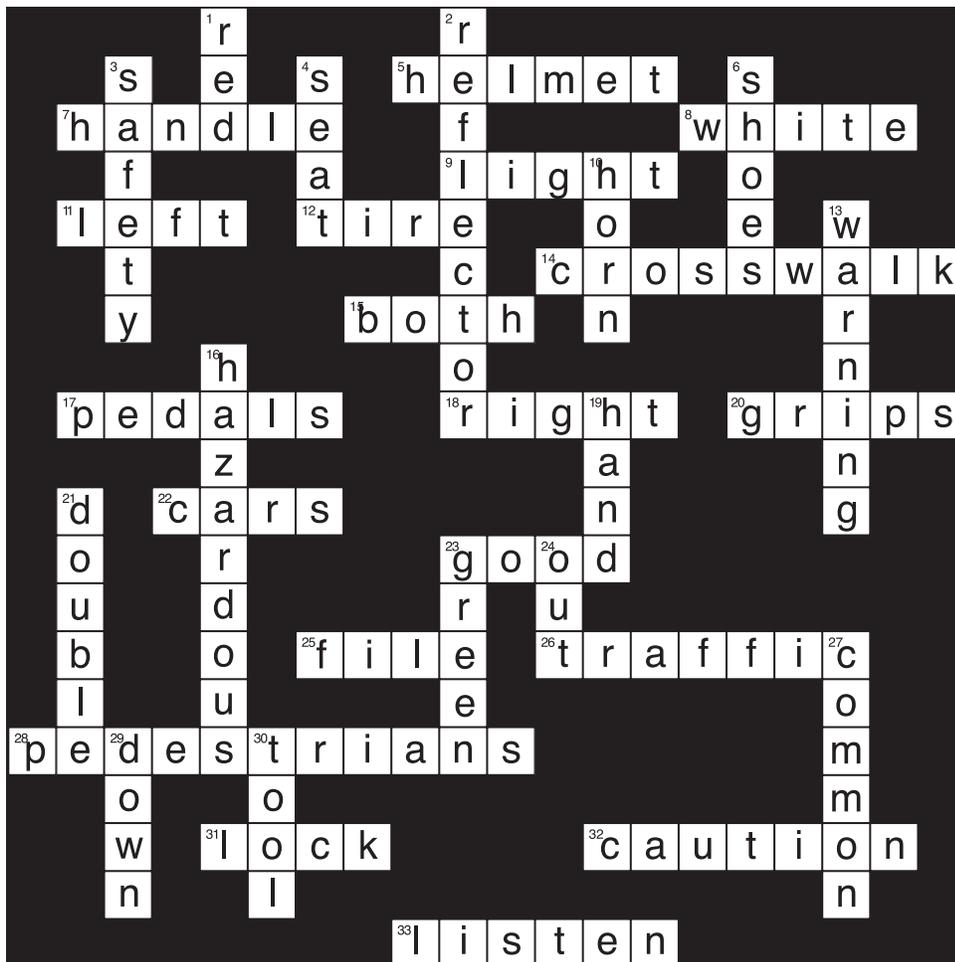
5. A good bike rider always wears a _____ on his or her head.
7. Adjust _____ bars to the correct height.
8. _____ is a good colour to wear at night.
9. Use a _____ at night.
11. Put your left arm straight out to turn _____.
12. Always have the correct _____ pressure.
14. Walk your bike across the _____.
15. Keep _____ hands on the handle bars.
17. For extra safety, put reflective tape on your _____.
18. Ride on the _____ side of the road.
20. Handle _____ should be maintained.
22. Streets are used for _____ too.
23. Keep your bike in _____ working order.
25. Ride in single _____.
26. _____ signs apply to bikes too.
28. _____ have the right-of-way.
31. Always _____ your bike for security.
32. Amber means _____.
33. Stop, look and _____.

Down clues

1. _____ means stop.
2. Have a _____ on your fender.
3. Follow traffic _____ rules.
4. Adjust your _____ to the correct height.
6. Always wear _____ when cycling.
10. Have a _____ or bell to warn.
13. Give lots of _____ before you turn.
16. Watch out for _____ road conditions.
19. Use your _____ signal when you turn a corner.
21. Do not _____ on a bike.
23. _____ means go.
24. _____ and up was the signal to turn right, now it's the point-point signal.
27. Use _____ sense when cycling.
29. Out and _____ means you are about to stop.
30. On long distance rides you should carry a _____ kit.

Answer key

Safe ride crossword puzzle



My bike smarts progress sheet

Bike smarts session 1 – Road rules

I learned about: _____

I practised: _____

What I enjoyed most was: _____

What I need to do better is: _____

Bike smarts session 3 – High-tech handling

I learned about: _____

I practised: _____

What I enjoyed most was: _____

What I need to do better is: _____

Bike smarts session 5 – Intersections and defensive riding

I learned about: _____

I practised: _____

What I enjoyed most was: _____

What I need to do better is: _____

Bike smarts session 2 – Bikes and helmets

I learned about: _____

I practised: _____

What I enjoyed most was: _____

What I need to do better is: _____

Bike smarts session 4 – Smart signals and road hazards

I learned about: _____

I practised: _____

What I enjoyed most was: _____

What I need to do better is: _____

Bike smarts final comments

Name: _____

Bike smarts participant observation form*

Session: _____ Class/Block: _____ Date: _____

Skill/Concept: _____

A - Superior

B - Satisfactory

C - Improving

I - Experiencing Difficulty

Names of Participants	Criteria to be Observed			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

Bike Smarts Certificate

This is to certify that

knows the parts of a bike, hand signals, and safety rules,
and has a bike that is in good operating condition.

Official Signature

Date

Organization/School Name



building trust. driving confidence.

Bike safety for children

A bike is not a toy. It's a child's first vehicle.

Even if children can balance a bike and ride in a straight line, it may be too soon to let them handle a bike on a busy road. Generally, children nine or 10 or younger don't have the perception and decision-making skills to be safe cyclists. It's advised they don't ride on busy roads without an accompanying adult.

Here are some tips on what to look for in a bike and how to help prepare your children to be safer cyclists.

Children and traffic safety

Although children have to use roads like everyone else, research tells us they see traffic differently than us.

Children often:

- believe that cars can stop instantly, and that if they can see the car, the car can see them
- have difficulty judging speed and distance
- have underdeveloped peripheral vision (especially younger children)
- have trouble telling where a sound (siren/horn) comes from
- lack a sense of danger
- are restless and can't wait for things like traffic lights
- have problems paying attention for a long time
- have not developed the ability to think through cause and effect
- have trouble understanding complex things
- tend to focus on things they're most interested in
- have trouble separating myth and reality
- think grown-ups will always look out for them.

Ongoing skill development and practice can help reduce a child's likelihood of injury-causing incidents.

Fitting a bike

A bike should fit properly so it's easier to control, comfortable to ride and doesn't hurt the knees.

Make sure your child's bike:

- has its seat at hip height when the child stands beside the bike
- can be straddled with both feet flat on the ground (for young beginner cyclists, both feet should touch the ground while sitting on the seat)
- allows your child's legs (when seated on the saddle with feet on both pedals) to be almost straight at the bottom of the pedal stroke, with a slight bend of the knee
- allows your child's weight to be evenly balanced when seated in a normal riding position and hands resting lightly on the handlebars
- has its handlebar stem and seat post inserted at least five centimetres into the frame (both usually have a mark that indicates the maximum extension point — longer seat posts and stems are available if you need them).

Drop by your local bicycle store and have them check the proper bike fit for your child.

Bike safety equipment

- Bike helmets are mandatory in B.C. and are your best protection from head injuries in case of a fall. Make sure your helmet is clearly designated as CSA, ASTM or SNELL approved.
- Hockey or other types of sports helmets aren't safe — or legal for riding a bike.
- Light or reflective clothing makes a cyclist easier to see — especially important for young children as they're so much smaller.
- If a child's bike has no chain guard, make sure pant legs are tucked into socks or a pant leg clip and shoelaces fastened and tucked away to prevent getting caught in the chain, crank set or brakes.
- A child's bike should have a horn or bell and a reflector. For riding at dusk, dawn, at night and in fog or rain, a rear red light and a white front light are required.

Learning to ride

Supervised practice is the best way to learn, and the safest place to learn balance and steering is away from a road, such as a vacant parking lot.

Before learning to go on the road, a child should be able to:

- ride in a straight line
- ride at different speeds
- turn, stop, look back and shoulder check while riding
- signal while riding
- be able to make emergency stops.

Teach children cycling signals and how to shoulder check for traffic before they signal a turn. Many children mistakenly think that the signal is like a magic wand; drivers will see the signal and automatically stay out of the way.

Shoulder checking:

1. Keep both hands on the handlebars and scan backward over the left shoulder for traffic.
2. If the way is clear, signal and proceed with the turn, and keep shoulder checking for approaching traffic or change in traffic patterns.
3. If traffic will obstruct the turn, wait until the way is clear, then check again and if clear, proceed following points 1 and 2 above.

Turning left at an intersection

For young beginners:

- Obey all traffic signs or signals while approaching and entering.
- Look in all directions for traffic.

Option A: Cycle straight across the intersection on the right-hand side of the road then shoulder check, stop and dismount. Make a 90-degree left turn and position yourself on the sidewalk.

- If there's a signal, wait for the light to turn green or for the traffic to clear, then walk your bike across (remember, it's illegal to cycle in crosswalks and in most jurisdictions it's illegal to cycle on sidewalks).

Option B: look in all directions, then proceed through on the right. Shoulder check, stop and make a 90-degree left turn and proceed as if you were coming from the right.

- Always yield to pedestrians in the crosswalk.
- Yield to oncoming traffic and watch for right-turning vehicles.

Advanced cyclists:

- Look back over your left shoulder for approaching traffic.
- Signal a left turn, and keep shoulder checking all through this manoeuvre. When clear, move over to the left side of the lane (on a two-lane road), or to the far right of the dedicated left-turning lane.
- Be positioned so cars going straight through cannot pass you on your left.
- In a two-lane road make sure left-turning cars will either remain ahead or behind you (so you don't get squeezed by other traffic).
- In a dedicated left-turning lane make sure traffic remains on your left or ahead or behind you (so you won't experience conflict and all traffic will resume the right road position once you have made your turn).
- Yield to oncoming traffic before turning and watch for right-turning vehicles moving into your lane.
- Obey all traffic signs or lights at the intersection.
- Still signalling left, continue cycling and turn left onto the right side of the intersecting road.

Note: If riding in a bike lane, or on a road with several lanes, you need to look and signal each time you change lanes. Never make a left turn from the right side of the road. Never make a direct left turn from a bike lane. You need to position yourself properly before making a left turn.

Remember your bike isn't a toy — it's a vehicle

- Keep to the right-hand side of the road as much as it is safe to do so. Never ride your bike on the left-hand side of the road facing traffic.
- Ride single file — it's the law in B.C.
- Keep in a straight line — don't weave in and out of parked cars, obstacles, etc.
- It's against the law to carry passengers on a bike with one seat.
- Never pull or tow anybody with your bike.
- Keep both hands on the handlebars unless signalling.
- Obey all traffic signs, signals and rules of the road.
- When passing other cyclists, look behind for approaching traffic and use a bell, horn or voice to indicate you are about to pass.
- Walk your bike over rough spots (gravel, ruts, rocks, and potholes) and over cattle guards, crosswalks, and on sidewalks.
- Approach railroad tracks with caution — angle your bike over the tracks, rather than riding over them straight on.
- Never ride your bike through puddles — there may be hazards under the water that you can't see.

