



Cycle Maintenance Lesson Plans

Northfield Eco Centre

Session 1- Bike Safety and General Maintenance

Time 2 hrs

Max no of students 6

Equipment needed: Demo bike, Bike stand for instructor and each student, flash cards, printed M check, rags, chain oil, GT85, sheets to protect floor

Aims

To be able to complete an M check

Identify the more common parts of the bike

Legalities (i.e. reflectors/bells/lights)

How to wash and clean bike

How to maintain chain

How to identify when to change the chain

Activities

Short Quiz where students will use flash cards to identify common parts of a bike

All to complete a thorough M check with instructor explaining why we check, all students to be given M check hand out

Group discussion regarding legalities

Instructor to explain how to wash and clean a bike-

All students to check their own chain using correct tool and to clean and oil their own chain

Q&A throughout the session

Session 2- Tyres /inner tubes –how to remove,replace and repair

Time 2 hrs

Max no of students 6

Equipment needed: Demo bike, Spare old inner tubes, puncture repair kits, 15mm spanner, tyre levers (2 per student), hand pump (presta and schraeder head), track pump, chain checker tool

Aims

To identify what size tyre and inner tube is fitted

How to remove the tyre and inner tube

How to complete a puncture repair

Correctly inflated tyres-how to find the correct PSI

Know the causes of punctures and how to minimise the risk

How to remove the bike wheels to change or repair

Activities

Following a demonstration all students should be able to remove their rear wheel, tyre and inner tube

Students will replace their own inner tube back into the tyre and re insert the wheel

Students will use an old inner tube and repair a puncture

Students will be shown how to identify what tyre and inner tube size they need and what PSI to put into their tyres (students will be asked to identify this at the start and to write it down). Following instruction they can then compare their initial notes.

Q&A throughout the session

Session 3- Brakes (concentrating on VEE brakes)

Time 2 hrs

Max no of students 6

Equipment needed: Demo bike, bike stand for instructor and each student, multi tools, 5mm crosshead screw drivers, small spanners for older brakes. Spare brake cables, brake outer, cable cutter, crimp ends, lubricating oil. Spare brake pads

Aims

To understand how the brakes work

Identify the working parts ie pads, cables, callipers

Know when to change the brake pads and how to make them last longer

Correctly adjust the brake pads/cable tension

Be able to remove and replace brake pads

Be able to change a brake cable

Activities

Students will remove the replace at least one brake pad

They will adjust cable tension and the tension screw to properly centre the brake pads

They will observe and then change a brake cable

Discussion regarding maintaining brake pads

Q&A throughout the session

Session 4- Gears (For bikes fitted with a derailleur)

Time 2 hrs

Max no of students 6

Equipment needed: Demo bike, bike stand for instructor and each student, multi tools, small spanners for older derailleur. Spare gear cables, gear outer, cable cutter, crimp ends, lubricating oil. Old derailleur for demo

Aims

To understand what a derailleur is and what it does

Identify what type of gear levers the bike has and how they operate

Understand and adjust the Limit screws

Change a gear cable

Index gears

Identify when a gear cable needs changing

Understand the difference between gears jumping and the chain slipping

Activities

Instructor will have an old derailleur and explain/show how it works and its function

Observe the function of High and Low limit screws. Adjust on demo bike and then on own

Observe and change gear cable (rear only)

All students to demonstrate that they can index the rear gears

Q&A throughout the session