footprints answers

80: bicycle checklist

teachers' notes

1) This worksheet is designed mainly for programs where there is going to be some serious cycling (e.g. participation in one of the great bikes rides like the Great WA Bike ride) &/or students are using their own bikes. If you do not have sufficient class time, the checklist can be set as homework, as long as there is a responsible competent adult who can "check the checker."

2) The critical checks before any ride are listed in the table below.

3 speed checks

what to check	why make this check	how to make this check
1) tyre pressure	a) you can't ride a bike which has a flat tyre b) under-inflated tyres are the main cause of punctures c) under-inflated tyres make peddling a lot harder	• press down with your thumb or the heel of your hand • use a tyre pressure gauge • "bounce" the bike • get someone else to check when you have your weight on the seat
2) seat height	a) if the seat is too low, you will get back pain or knee pain if you ride any distance b) If the seat is not optimally adjusted, you will not be able to pedal with as much power or efficiency. (For each one degree difference in optimal knee bend – as described opposite – there is 4% loss of power.)*	• when you are sitting square on the bike, with your left foot on the ground & the ball of your right foot on the pedal (when the pedal is the furthest distance from the seat), your right knee should be slightly bent. • alternatively, when you are sitting squarely on the seat, both feet should be tippy-toe on the ground
3) brakes	You will die if your brakes don't work.	• stand on the left side of your bike, squeeze hard on the handbrake lever that operates the front brake & simultaneously push your bike forwards … the back wheel should lift off the ground • stand on the left side of your bike, squeeze hard on the handbrake lever that operates the back brake & simultaneously pull your bike backwards (without lifting it)… the front wheel should lift off the ground

* Note: Beginners are better off to have their seat really low, so that their heels touch the ground.

The Challenge: Calculate the number of individual components that make up your bicycle.

Answer: This is a devil of a question & would probably require a PhD to answer it. To begin with, a typical derailleur chain has 54 links x 8 parts per link or 432 parts. Then there are the bearings, the spokes, etc. etc. (If you know the answer, let us know: SOS@wipeout.com.au.)

These answers can also be found at www.wipeout.com.au/footprints/answers/

gallery

stopping to admire a double rainbow

stopping to admire one of the many moods of the sea

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