



DURATION: 30 MINUTES



MATERIALS REQUIRED: PEN &amp; PAPER

## ACTIVITY NAME: GEAR RATIOS

Aim: To understand how a bike's gears work, what gear ratios mean, and how similar ratios can be achieved using different equipment.

Instructions: Using the simple method of dividing the number of gear teeth on the driving gear (attached to the pedals) by the number of gear teeth on the driven gear (attached to the wheels), calculate the gear ratio of the following gear combinations. (The first number is the driving gear/the second is the driven gear e.g.  $52/26 =$  a gear ratio of 2)

- $50/20 =$
- $48/16 =$
- $44/11 =$
- $52/16 =$



Driven gear

Driving gear



DURATION: 15–30 MINUTES



MATERIALS REQUIRED

## ACTIVITY NAME: GEAR RATIO EQUIVALENTS

Aim: To understand how similar gear ratios are achieved using different sized gears.

Instructions: Using the knowledge of calculating gear ratios gained from the above activity, work out which of the below gear ratios are most closest to each other.

E.g.  $50/25$  is equal to  $36/18$

- $52/26$
- $48/12$
- $48/32$
- $33/44$
- $38/51$
- $36/18$
- $39/29$
- $60/15$

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The Active School Travel Programme is an exciting initiative for schools who wish to see more of their pupils choosing an active and healthy journey to school. The programme provides schools with the skills and knowledge to get more children walking, cycling and scooting as their main mode of transport to school.

Find out more at [www.sustrans.org.uk/NIschools](http://www.sustrans.org.uk/NIschools)