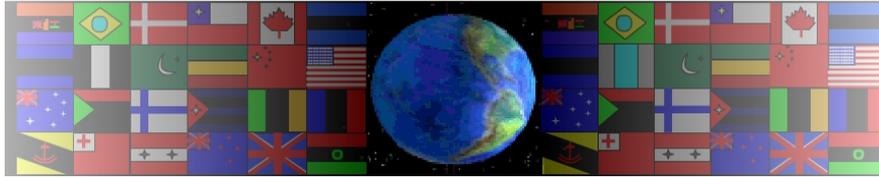


# THE BICYCLE FRAME THAT ALSO ACTS AS A BATTERY - ELECTRIC BICYCLE

V.Ryan © 2000 - 2012

On behalf of The World Association of Technology Teachers

## W.A.T.T.



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Research shows that carbon fibre and fibreglass are highly effective replacements for the steel / aluminium frame of a bicycle. The new frame can also replace a traditional battery.

Electric bicycles could be designed so that they do not need a standalone battery. The frame could be the battery, storing electricity generated by pedalling and the rotation of the wheels. When assistance is required by the cyclist, the generator / motor can be powered by the stored charge. The composite material (carbon fibre and polymer resin) replaces the steel / aluminium tube and holds the charge normally stored in a traditional battery.

1. Complete the drawing below, by adding information and diagrams, that show how the bicycle frame can be used to store electricity. Also, include information and diagrams that explain how electricity is generated and then used to increase the efficiency of the bicycle.

