

TEACHER EXHIBITION NOTES CYCLE REVOLUTION

18 NOVEMBER 2015 - 30 JUNE 2016



Sir Chris Hoy
Credit: Phil O'Connor

INTRODUCTION

Cycling is popular in Britain again on a scale not seen since the Second World War. For many people, bicycles are replacing cars as their chosen mode of transport. The country has dominated the Olympics and the Tour de France as well as boasting some of the most innovative and pioneering cycle designers.

The Cycle Revolution exhibition brings together cycles, cycle makers and cyclists both enthusiast and professional. The exhibition is split into four user sections: High Performers, Thrill Seekers, Urban Riders and Cargo Bikers as well as two maker sections: Bike Builders and The Future.

OBJECTS TO SEE:

HIGH PERFORMERS

Great Britain cycling team Olympic track bike

Developed for the 2008 Beijing Olympics and considered the key to the success of the British Team, this track bike was developed by a team of experts in aerodynamics, structures, bike design and materials technology led by gold medallist Olympic cyclist Chris Boardman. The cycle help win the race but also the confidence of the cyclists riding it.

A day in the life of an Olympic Champion: Joanna Rowsell Shand

A look at the daily routine of an Olympian in training, from diet to exercise. See what it takes to be a world class athlete.

Sir Bradley Wiggins Hour Record Bike and Helmet

Designed by Italian bicycle manufacturer Pinarello, who made the Espada (the Blade) frame used by Miguel Indurain for his 1994 hour record. The key differences to the bike are the removal of the brakes and gear levels and a new one-piece handlebar system designed to optimise Wiggins' interaction with the bike. Also featured is the aerodynamic carbon fibre helmet used to give Wiggins the edge when fighting wind resistance.

THRILL SEEKERS

Shanaze Reade's BMX Bike

Professional British Bicycle Motocross (BMX) racer and track cyclist Shanaze Reade's BMX Bike. Aluminium framed, carbon fibre forks and titanium spoked for weight saving purposes. The single speed BMX relies on the rider's explosive bursts of energy to get up to speed. Reade won the UCI BMX World Championships three times.

Danny MacAskill – Epecuén (Film)

Street trials cyclist Danny MacAskill brings a forgotten city back to life with this film shot in the abandoned tourist village of Villa Epecuén in Argentina. Available to view at: <http://epecuen.redbull.com/>



Bike Builders featuring Caren Hartley



**Three times BMX World Champion
Shanaze Reade**



The Rover Safety Bicycle changed cycle design and cycling forever

URBAN RIDERS

Rover Safety Bicycle

c. 1888

Taking cycling from being a risky sport for enthusiasts to a viable form of transport in a single design, the Rover safety bicycle replaced the high cycle's (or penny-farthing) direct, pedal driven front wheel with a chain driven rear wheel. This genius of design brought the rider closer to the ground and eliminated the need for difficult mounting and dismounting. Every production cycle since has used this design as a starting block.



Double Pylon Moulton Bicycle

Double Pylon Moulton Bicycle

2006

Bicycle designer Alex Moulton's aerospace stainless steel bicycle frame uses a high grade material to achieve a stiff frame that is bonded with rubber torsional elements to create a light weight but insulated cycle that gives a smooth ride that eliminates static friction. The minimal but complex frame in stainless steel also carries a high level of aesthetic beauty.

Merino wool and reflective yarns

Dashing Tweeds

2015

Combining wearable clothing with reflective technology, London based company Dashing Tweeds create fashionable clothing released as a range twice a year that weave reflective thread into a garment that is both form and function.



Boxer Rocket uses a side car style retro future look to great effect

CARGO RIDERS

Donky Bike

Combining the load-carrying designs from the Netherlands and the simple components of a BMX, industrial designer Ben Wilson created the Donky Bike for work or leisure carrying ability. The strong durable frame has easily detached and replaceable parts to ensure that it can be easily maintained

Boxer Rocket

2015

Founded by Jeremy Davies, Boxer cycles produce cargo trikes. The Rocket was produced as a non-suspension trike that contained two reclining and removable bench seats which fold flat to make a child's bed or adult seat. The nose cone has a secure and large locker.



The Future - 3D printed bicycle by Renishaw and Empire Cycles

BIKE BUILDERS

The resurgence in cycling has also brought a new wave of bespoke bicycle builders with it. The artisan builders that make today's hand-built bikes for clients continue a tradition that dates back to John Kemp Stanley's 'safety' bicycle. Six UK based bike builders are featured in this section of the exhibition including Caron Hartley, a former jewellery designer now turned cycle builder.



SplinterBike made from wood and glue.



Dashing Tweeds reflective fashion wear



Ben Wilson's cycle frame sculpture

THE FUTURE

Come and see the prototypes, the innovators, the pioneers and the visionaries of the cycle world in this section of the exhibition. Look out for cycles made from Bamboo, flat pack wooden cycles, 3D printed frames and unique electric bikes that utilise power tool batteries to supplement the rider's own physical power.

SplinterBike 2011

After a £1 bet Michael Thomson found himself building a cycle entirely from wood and glue (no metal screws or pins) that could set a new human powered speed record. The need to eliminate the metal chain gave birth to the dual cog system named the pliCog. The cycle was made from little used woods such as Lignum Vitae, a naturally self-lubricating hardwood.

BEYOND THE EXHIBITION

Atrium Sculpture

Ben Wilson is a 3D Industrial designer working with mass produced products, one-off hand-made commissions exhibited worldwide. Commissioned especially for Cycle Revolution this sculpture features 90 raw bike frames, celebrating their pure form, before they are branded or personalised as they are usually seen.

Tank Installation - Santander Hire Bikes

In homage to the important role the successful cycle hire scheme has in everyday London life, this tank display will explore the components and character that make up the Santander Cycles hire scheme.

The display is a step-by step guide to a cycle: Wheels / Chain and gears / LEDs and dynamo / Safety and comfort. The complete bike is hired an average of 2.8 times per day and travels 4,179 miles per year. The cycles have been hired over 45 million times since July 2010.

Brompton Bike Hire Dock

Located outside the museum entrance, the solar-powered Brompton hire docking station allows anybody to register online and arrange to hire a Brompton folding bike. An up to date list of docking stations can be found at bromptonbikehire.com/docks

FURTHER READING

Information about the exhibition on the Design Museum website: <https://designmuseum.org/exhibitions/cycle-revolution>



**Tank Installation – Santander
Hire Bikes**



Credit: Emily Maye

EXHIBITION GUIDANCE

This exhibition displays many items that cannot be touched. There is a photo opportunity at the end of the exhibition where students are welcome to use the podium. We would be grateful if you could brief your students accordingly.

Depending on your group and your itinerary for the visit, we would recommend that you set aside approximately **45-60 minutes** to explore this exhibition.

Please ensure that you read our school visit Terms and Conditions document before making your visit.

We encourage the use of cameras without flash, sketchbooks and pencils in the gallery. To access free downloadable gallery activity worksheets for students, please visit our online resource Discover Design discover.designmuseum.org

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