

# Ben Fogle's Hero to Zero Emission Miles Challenge



KS2 Teacher Notes



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## Timings

- 60 minute teacher-led lesson, (potentially 70-100 minutes if all optional tasks are explored).
- A few minutes each day during competition week to support and encourage pupils filling in their low emission diary.

## Resources included

- KS2 Teacher Notes
- KS2 PowerPoint presentation
- KS2 Curriculum links (England and Wales)
- Electric Sceptics video
- Activity Sheets 1-3
- Competition Leaflet

## Introduction

Can you imagine a world where every vehicle is 'green' and cheap to run? Vehicles have historically been powered by internal combustion engines; however, vehicles that run on electricity are becoming increasingly popular and in the next 20 years every new car and van sold will be electric. In the UK alone there are around 230,000 electric cars on the road. To celebrate transportation's transition to an electric future, Go Ultra Low are inviting all young people aged 7-11 to take part in **Ben Fogle's Hero to Zero Emission Miles Challenge**.

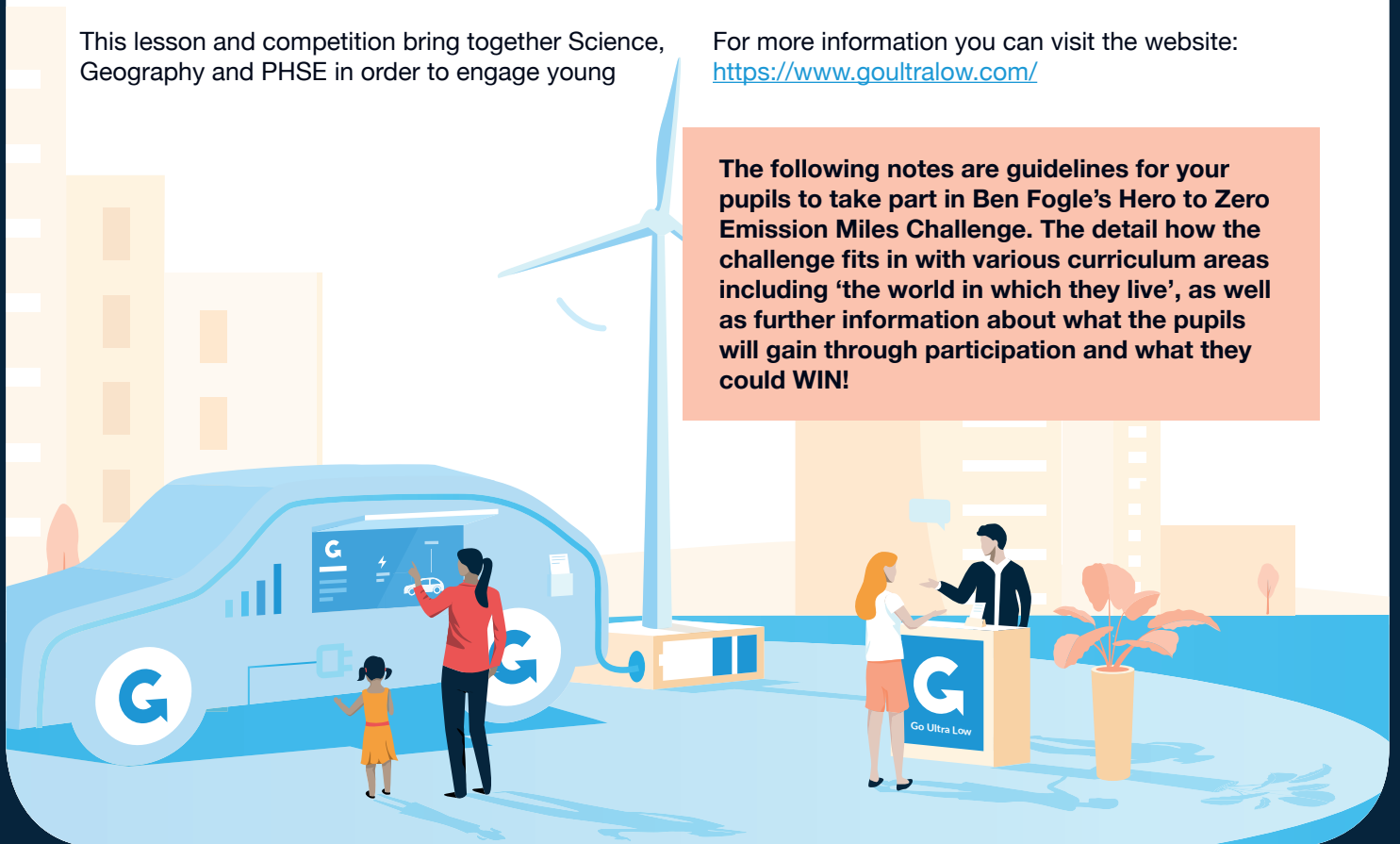
This is an exciting competition where KS2 pupils will try to clock up as many zero emission miles in one week. The pupil with the highest score will win some incredible prizes for themselves and the school, including the opportunity to meet Ben Fogle himself!

This lesson and competition bring together Science, Geography and PHSE in order to engage young

people with future technology as well as encourage the exploration of zero emission travel. Go Ultra Low aims to educate people to make informed decisions about using electric cars and how to contribute to a 'greener' future.

For more information you can visit the website: <https://www.goultralow.com/>

The following notes are guidelines for your pupils to take part in Ben Fogle's Hero to Zero Emission Miles Challenge. The detail how the challenge fits in with various curriculum areas including 'the world in which they live', as well as further information about what the pupils will gain through participation and what they could WIN!



# LESSON PLAN

## Lesson Objectives

In this lesson pupils will learn the meaning of 'green' vocabulary such as **zero emission**, **carbon footprint** and **climate change**. The lesson highlights the benefits of using electric cars, how and why these vehicles are charged, as well as how travel can be made more sustainable for people in the future. They will explore different types of renewable energy and the small changes people can make to reduce their carbon footprint. Finally, pupils will discover how they can participate in **Ben Fogle's Hero to Zero Emission Miles Challenge**.

## Lesson Outcomes

2 mins (PPT slide 2)

- I can state the meaning of zero emission, carbon footprint and climate change.
- I can explain the advantages of using electric cars, as well as how and why they are charged.
- I can describe the ways in which humans can reduce their carbon footprint.
- I can tell others how to travel sustainably and how to enter **Ben Fogle's Hero to Zero Emission Miles Challenge**.

## Keywords (PPT slide 2)

Zero emission, carbon footprint, climate change, renewable, energy, electric, EV (electric vehicle), charge, charging point, green, solar, tidal, efficient, competition, teamwork, collaboration.

## Resources required

- A4 plain paper
- Activity Sheets 1-3
- Scissors
- Access to video:  
<https://www.youtube.com/watch?v=IHxsS8D4RVQ>
- Access to PowerPoint Presentation
- Competition Leaflet
- Pens/Pencils



## Learning Environment

Create a safe teaching and learning environment (in line with the PSHE curricula) by working together as a group to establish clear guidelines for discussions and activities. Throughout the lesson, pupils will be asked to discuss their thoughts and opinions - all of which should be respected and encouraged.

## Starter: It's easy being Green 5 mins (PPT slide 3)

Introduce the starter activity and encourage pupils to discuss the meaning of the phrase, 'Go Green'. Facilitate class feedback, or keep discussions in small groups, to establish their existing knowledge. This can be used as a baseline assessment. Click the **PowerPoint Presentation** to reveal the KS2 appropriate definition for the newly introduced term, ensuring all pupils understand its meaning.

## Core Activity 1: Mix and Match 5 mins (PPT slide 4+5)

Give pupils a copy of **Activity Sheet 1**. Ask them to read the definitions and match each one to an appropriate keyword, shown on **slide 4**. The activity can be carried out individually or in pairs. Support pupils through this activity with additional questioning and/or assistance if required.

**Further Challenge:** For pupils who require an additional challenge, direct them towards the **optional** differentiated task. This aims to consolidate pupil understanding through their own illustrations. Use the diagrams created to monitor pupil progress. Run through **slide 5** to share answers with the class.

## Core Activity 2: Have you heard of the electric car? 20 mins (PPT slides 6-8)

**Slide 6** – each task below will appear individually as an animation on the **PowerPoint Presentation**.

1. Ask pupils to think individually for 30 seconds about objects/activities that produce heat, sound, light or move. *If pupils struggle with this task on their own, facilitate class feedback and share ideas on the board.*
2. Ask pupils to move into pairs/small groups. Model how to take turns ‘acting-out’ one of their suggested objects/activities while their partner/group members try to guess their idea. Ensure strict timings are clearly communicated, (ideally 1-2 mins). The task should be fast paced for engagement and to encourage quick retrieval.
3. Class discussion: Make a clear link between a lot of their objects/actions needing electricity and how people in the modern world use lots of power. There is a big demand for electricity.
4. Turn and Talk: Read the facts about electric cars. Ask pupils to read the question at the bottom of the slide, then turn to the person next to them and discuss their answers.

**Slide 7** – deliver the content to class. If pupils are not familiar with a mobile phone it might be handy to have one available to show the class, with a charger, to aid their understanding and learning. *(Further information on charging is placed in the notes section of the PowerPoint presentation if required).*

**Slide 8** - hand out **Activity Sheet 2**. Ask pupils to read the instructions and show pupils the Go Ultra Low video, (hyperlink provided on PowerPoint). Instruct pupils to annotate their drawing with positive reasons for using electric cars. Task should be carried out individually. It could be completed during the video, or you may prefer to ask pupils to watch the video first, and subsequently annotate their drawings. (Further information on electric cars is placed in the notes section of the PowerPoint presentation if required).

**Further Challenge:** For pupils who require an additional challenge, direct them towards the **optional** differentiated task on **Activity Sheet 2**. This aims to consolidate pupil understanding through ranking EV (electric vehicle) statements in order of importance. The activity is adapted from the well-known diamond 9 discussion task to suit the learning needs of a KS2 pupil. Support pupils through this activity with additional questioning and/or assistance if required. *Health and Safety note: the challenge task involves cutting out paper with scissors, ensure to complete a risk assessment if necessary.*

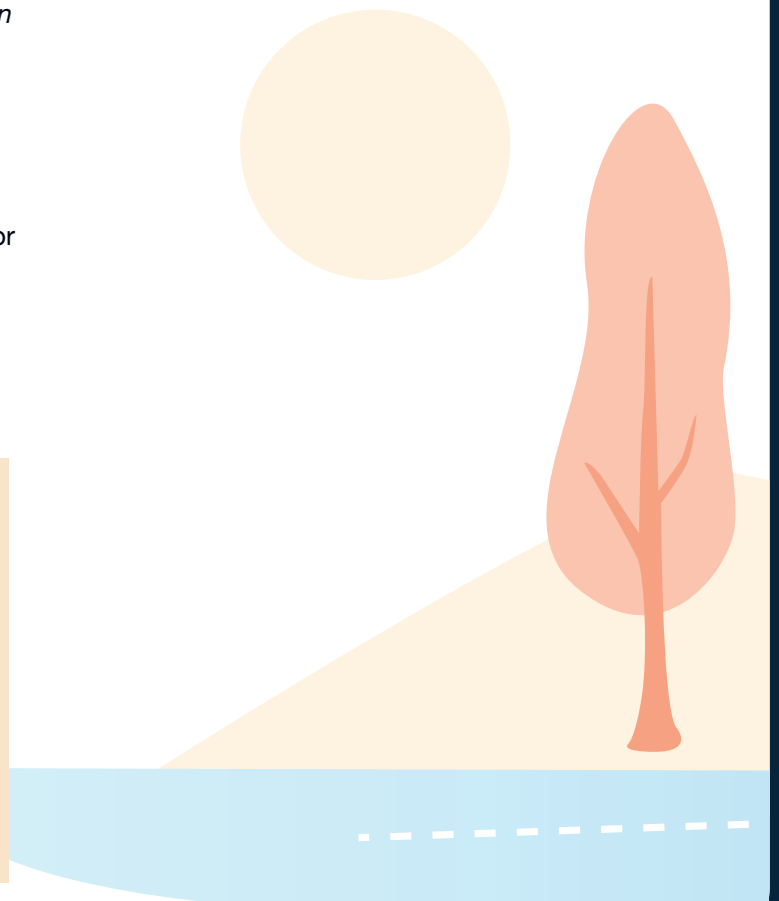
## Core Activity 3: So, what can we do? 15 mins (PPT slides 9-11)

Deliver information from **slide 9** on collaboration. Emphasise the importance of it being ‘everyone’s responsibility’ to work together to protect the planet. The question at the bottom of **slide 9**, (What else can we do?) can be an open class discussion, or it can be delivered rhetorically as this will be explored in the subsequent slides.

Run through the content from **slide 10** on renewable energy. Highlight to pupils the advantages of renewable energy and the different types that exist. Explain that there are other types of renewable energy however, these are three well-used options for meeting energy demands. Direct pupils back to learning outcomes if needed, in order to monitor progress.

Move onto **slide 11** and hand out **Activity Sheet 3**. This task can be completed in small groups. Ask pupils to categorise the ‘go green’ suggestions.

**Further Challenge:** For pupils who require an additional challenge, direct them towards the **optional** differentiated task at the bottom of **Activity Sheet 3**. Support pupils through this activity with additional questioning and/or assistance if required.



## Competition Time: The Challenge

10 mins (PPT slide 12-15)

Introduce your pupils to the competition challenge using **slides 11 to 15** of the **PowerPoint Presentation**. Pupils will most likely have questions during the delivery of this content. Encourage pupils to write their queries on paper so all answers can be given at the end of **slide 15**. Hand out the **Competition Leaflets** for pupils to read through either individually or as a class. *Health and Safety note: Pupils should not be encouraged to use **electric scooters/skateboards**. These are zero emission vehicles, however, their use is currently illegal in the UK.*

Challenge your pupils to take part in **Ben Fogle's Hero to Zero Emission Miles Challenge** for their chance to win some great prizes!

### Pupil Prize

- 2 tickets for the ABB FIA Formula E World Championship in London. This class of motorsport is for electric cars!
- Access to one week of an electric car for a family driver
- A certificate to celebrate the pupil's zero emission efforts

### School Prize

- TV presenter and adventurer, Ben Fogle, will pop along to your school with a top engineer for a school assembly!

### How it works and the application process:

The challenge takes place over a 7-day period, but you can choose which 7 days will work best for you and your school. Don't forget to include the individual pupil pledges for a greener future and the school totals! Then use the downloadable Freepost envelope and send your entries to:

**We are Futures, Go Ultra Low, 1 Paris Garden, London, SE1 8ND** or scan and email to [competitions@nationalschoolpartnership.com](mailto:competitions@nationalschoolpartnership.com).

Make sure your entries reach us by **Wednesday 13th November**.

### Plenary: Go home with Go Ultra Low 5 mins (PPT slide 16)

Supply pupils with 3 minutes of recapping time at the end of the lesson. Instruct pupils in pairs/small groups to write/discuss as many bits of information as they can remember from the lesson. Feedback as a class. If required, the learning objectives can be referred to in order to assess the progress of pupil learning.

Finally, click **slide 16** and deliver the key points from the lesson. Focus on the advantages of electric vehicles, as well as ensuring that all pupils understand the purpose of **BEN FOGLE'S HERO TO ZERO MILES CHALLENGE**, and how they can apply.

**GOOD LUCK AND ENJOY!**



## Competition Considerations

- The **total miles** travelled each day will be recorded in a travel diary, which can be from a singular journey or multiple trips in one day.
- The personal pledge should reflect why it is important to be sustainable and 'go green' for the future.
- Pupils that might not be able to walk to school can still take part. Pupils could encourage parents to park vehicles a little further from the school and walk the rest of the way.
- All zero emission miles count, not just the journey to school. Remind pupils to record trips to the park, walks to the shops or other zero emission travel that happens in leisure time.

## Competition Rules

- The **Competition Leaflet** must be fully completed and filled in correctly.
- The travel diary must be a true account of the travel undertaken by one person in 7 days.
- The **individual** who has accumulated the most zero emission travel points will be the winner.
- In the event of a tie, a judge will decide on the winning **individual** based on their personal pledges and the most interesting school travel destination, so get creative and be descriptive!
- Entries must reach us by **Wednesday 13th November**.

Please see

<https://nationalschoolpartnership.com/goultralow-tcs/>  
for full terms and conditions



## KS2 CURRICULUM LINKS

### ENGLAND

#### PHSE

##### Core theme 3:

##### **Living Things in the Wider World (Economic Wellbeing and Being a Responsible Citizen)**

L7. They have different kinds of responsibilities, rights and duties at home, at school, the community and towards the environment; to continue to develop the skills to exercise these responsibilities.

L15. That resources can be allocated in different ways and that these economic choices affect individuals, communities and the sustainability of the environment across the world.

#### SCIENCE

**Living things and their habitats:** Recognise that environments can change and that this can sometimes pose dangers to living things.

**Electricity:** Identify common appliances that run on electricity.

#### GEOGRAPHY

**Physical geography:** describe and understand key aspects of climate zones.

**Human geography:** the distribution of natural resources including energy.

### WALES

#### PHSE

##### **Sustainable development and global citizenship:**

How the environment can be affected by the decisions we make individually and collectively.

#### SCIENCE

**Interdependence of organisms:** How humans affect the local environment, e.g. litter, water pollution, noise pollution.

**The sustainable Earth:** A consideration of what waste is and what happens to local waste that can be recycled and that which cannot be recycled.

**How things work:** the uses of electricity.

#### GEOGRAPHY

##### **Understanding places, environments and processes:**

describe the causes and consequences of how places and environments change, e.g. by season; from past to present; the need for sustainability.



