

Green Drive Workshop

Get your learners considering how they can positively address the climate crisis through this interactive session focused on green transport.

Throughout the 2-3 hour workshop learners will take part in a series of activities led by our education communicators.

This workshop can be extended by including:

- 'Mythbuster' ambassador session

Aim:

By the end of this activity students will

- Understand what is meant by sustainability
- Explore the future transport energy mix and understand the difference between renewable and non-renewable energy resources.
- Explore the future of green transport.
- Take part in the electric car challenge.
- Understand how their skills and learning in school relate to real world sustainability careers and challenges.
- Develop their creativity, problem solving, speaking, listening and teamwork skills.



Approx.
60
learners



KS3



120 - 180
minutes

The session includes:

- An introduction around sustainability and a sustainability stool demonstration.
- Sustainability goals challenge.
- A series of team discussion challenges to match the energy sources to the energy resource and discuss the different future fuel sources.
- Build and test an electric car to 'travel across the UK'. Learners must use problem solving to test and improve the car and take measurements throughout to monitor their tests.
- Learners uncover a series of sustainability careers and the routes into these.

Gatsby benchmarks:

- Linking curriculum learning to careers (4)



Green Drive Workshop Year 7-9 KS3

Curriculum Links:

Mathematics

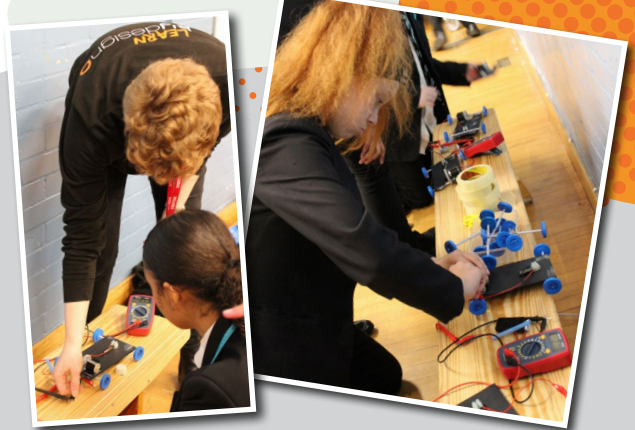
- Begin to model situations mathematically and express the results using a range of formal mathematical representations.
- Use standard units of mass, length, time, money and other measures, including with decimal quantities
- Round numbers and measures to an appropriate degree of accuracy.
- Describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers).
- Describe simple mathematical relationships between two variables (bivariate data) in observational and experimental contexts and illustrate using scatter graphs.

Science

- Pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility.
- Make predictions using scientific knowledge and understanding.
- Make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements.
- Energy: Fuels and energy resources.
- Energy changes and transfers: changing motion, dropping an object, completing an electrical circuit, stretching a spring, metabolism of food, burning fuels.
- Forces being needed to cause objects to stop or start moving, or to change their speed or direction of motion (qualitative only).
- Current electricity: potential difference, measured in volts, battery and bulb ratings.

Design and technology

- Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups.
- Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.



Logistics and planning:

The session is designed for around 30 learners, but larger groups (60) may be accommodated upon request.

We ask that a teacher is always present throughout the activities, to support learner engagement and manage behaviour.

The room should be a large classroom or hall with space for a 14m track to be laid out. The room also needs a projector, screen and power.

Why Choose Learn by Design?

We have been delivering workshops into schools since 1995 and have a team of Education Communicators with a range of scientific and educational backgrounds.

We can involve ambassadors into the day if requested.

For further learning this activity goes well with:

- [KS3 STEM day](#)
- [Engineering our future day](#)
- [Destination Rail: Stations to Success Day](#)

Watch the video below to see some of the Green Drive Workshop in action:



[Click here](#)