LEARN bydesign WORKSHOPS

GREEN DRIVE

Green Drive Workshop

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

Approx. 60 learners

KS3

120 - 180 minutes

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.

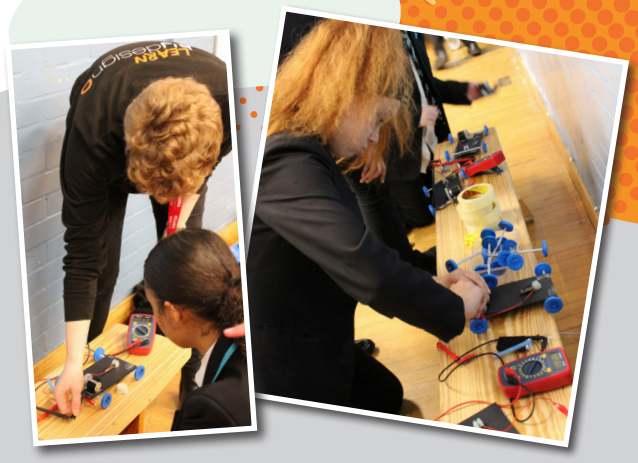
The session includes:

- 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 how we've been bringing learning to life to students:

Click here