

CENTRES OF EXCELLENCE

GREENPOWER EDUCATION TRUST

Greenpower
INSPIRING ENGINEERS



Global Partner

SIEMENS
Ingenuity for life

National Partner

IET Education
The Institution of
Engineering and Technology

National Partner

SILVERLINE

Global Technology Partner

SOLID EDGE



ABOUT GREENPOWER

At Greenpower Education Trust, a registered charity, we believe that providing young people with an exciting, real life project is the most successful way of sparking an interest in engineering, helping to the serious skills gap faced by countries worldwide.

Our highly successful challenge, to design, build and race a single seat electric car uses the excitement of motorsport to inspire students from primary school through to university to excel in Science, Technology, Engineering and Maths (STEM) studies whilst also providing valuable soft skills and community engagement.

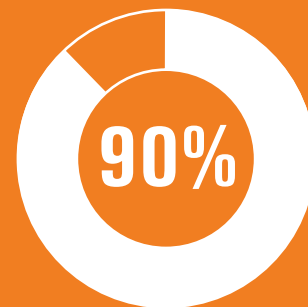
Greenpower, with the support of a large and expanding number of volunteers, has grown into an international challenge engaging with over 15,000* students globally. **Figures as of October 2016*

“The organisation was first rate, the staff were all very approachable and helpful and the atmosphere was very good indeed. It was, in fact, inspirational without being restrictive.” **Paul March**, Poole Grammar School

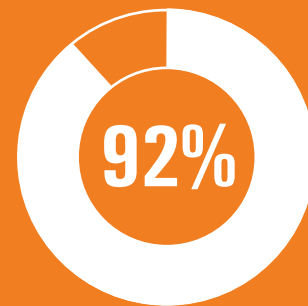
THE NEED

- By 2020 the UK will need 830,000 new engineers and 450,000 technicians. This is a familiar story in countries worldwide.
- Curriculum enrichment is a key factor in providing young people a real life experience of the application of Science, Technology, Engineering and Maths (STEM) subjects.
- The UK Audit Commission recommended recognition of Special Educational Needs/ Vulnerable pupil's achievements beyond the academic sphere. Best practice includes providing vocational life skills opportunities for these young people.
- 900,000+ unemployed 16-24 year olds (UK).

OUR IMPACT



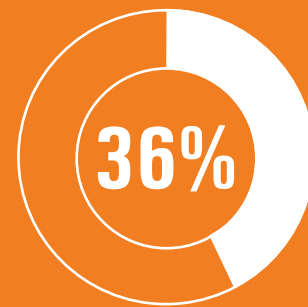
90% of our participants at GCSE level want to follow a career in engineering (28% above comparative projects).



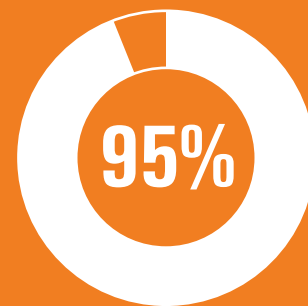
92% of secondary teachers rate the project as very good at encouraging young people's interest in STEM careers.



100% of primary school teachers say the activity has changed their view on Design & Technology.



36% of participants are female.



95% of primary school teachers rate the project as 'very good' for team work.

CATEGORIES

IET FORMULA GOBLIN

The primary category is for 9-11 year olds who build the 'Goblin' car from a supplied kit and then create their own bodywork to complete the car. This project can often be the first time these children have used simple hand tools and worked with electricity and motors. The cars and their drivers are then put through a series of tests at a regional event with prizes awarded to top cars.

"The collaborative build, bringing both parents and grandparents back into the classroom, really brought the class family together and the STEM project has enabled children to develop skills and interests in new areas."

Neil Linford, Boxgrove School, West Sussex

IET FORMULA 24

The next category is IET Formula 24 for 11-16 year olds. The challenge here is to use either a kit car supplied by Greenpower or, using supplied motor and batteries only, to build a car within Greenpower's safety regulations to compete in a 90 minute race, aiming to be the car that completes the furthest distance within that time on just one set of batteries but using three different drivers.

"It was such a fantastic event for the pupils to take part in and something that made me immensely proud as a teacher."

Alan Tilley, Southbrook Special School, Devon

"The pupils in our school do not often have the most aspirational career choices and schemes like this raise their hopes and ideals in ways others can't come close to..."

Roger Reeves, Longdean School, Hertfordshire

IET FORMULA 24+

The final category is for 16-25 year olds. It's called IET Formula 24+ and is predominantly entered by sixth forms, technical colleges, universities and company apprentices or graduates. This category uses the same basic concept of IET Formula 24 but the races are shorter at one hour in length, allowing for faster speeds.

"My Greenpower experience helped me to get my job as an apprentice motor vehicle technician." **Jonny Owens, IMI Level 3 Diploma**



CENTRES OF EXCELLENCE

In 2016 we launched our Centres of Excellence scheme, The Centre of Excellence scheme is a prestigious badge where an organisation, academic or otherwise, can be recognised as offering support to local school teams, both primary and secondary.

Centres of Excellence offer a facility in a central location which can act as a hub for Greenpower participant teams, providing promotion of the programme as well as support and training for participants.

Being a Centre of Excellence may bring members of staff together within your organisation and provide shared facilities which others may not have, providing access to the project and opportunities for all teachers and students locally.



BENEFITS

As a Centre of Excellence you will benefit from the following:

- Promotion of your Centre of Excellence on the Greenpower Website, and event Programmes where applicable.
- Special Centre of Excellence signage at Greenpower events that you attend.
- 5% discount for your own in-house team/s on spare parts and entry fees.
- A certificate and special plaque for your achievement to be displayed in a prominent position in the Centre.
- The lead contact in the Centre receives a special t-shirt and badge to wear at events.
- Corporate Social Responsibility for your institution – working with local schools and engaging students to follow a rewarding career in the STEM subjects.
- Support from Greenpower Headquarters or a local Greenpower Ambassador in your area.
- Promoting a great project for teachers, and showing it can be done whilst improving grades and behaviour.
- Staff development, enhancing skills.
- Siemens will offer free Solid Edge certification exams for a defined number of teachers and students within the Centre of Excellence.
- Use of Greenpower Centre of Excellence digital badge for use on organisation website or literature.





RESPONSIBILITIES AND COMMITMENT

As a Centre of Excellence you are expected to be proactively involved in helping to fulfil Greenpower's objectives.

We ask Centres of Excellence to:

- Actively promote all categories of the programme within your Centre.
- Run a minimum of one awareness/promotional event for teachers in your area each year.
- Network and share your experiences.
- Host workshops or sessions in your facility for all Greenpower categories.
- Offer technical support to local teams wherever possible.
- Use Siemens Solid Edge CAD software in the design of your Greenpower car, and within your Centre, and proactively promote Solid Edge as part of the Centre's activities. Please refer to More Information at the end of this document.
- Aim to offer the potential to run a small Goblin event on-site or locally in future.
- Offer excellent communication with other teachers, public and the local industry, quickly responding to queries and referring to Greenpower where necessary.
- Proactively seek to get primary, secondary and tertiary education in your area working together.
- Provide a portfolio of evidence each year demonstrating activity undertaken and institutions with which you have engaged.
- Active engagement with Greenpower's social media Channels.

SIEMENS SOLID EDGE SOFTWARE

Siemens will provide a free academic site license of Solid Edge to all Centres of Excellence. Secondary Schools and UTCs can obtain the Solid Edge software by registering at www.siemens.com/plm/solid-edge-highschool. Post-secondary academic institutions should contact Siemens to obtain their free site license (contact details available from Greenpower).

The Centre of Excellence will be required to use Siemens Solid Edge for all the CAD design activities related to their Greenpower team and also allowed/encouraged to use Solid Edge within the general D&T curriculum. Siemens Solid Edge Student Edition is available free to all students, regardless of age and provides the student with a perpetual license. To obtain the software students should register at www.siemens.com/plm/solid-edge-student.

A Centre of Excellence is encouraged to use the growing range of Greenpower resources available from Siemens which can be found at www.siemens.com/plm/academic/greenpower.

Siemens will also offer free vouchers for Centre of Excellence teachers to take the official Siemens Solid Edge Associate Level I and/or Associate Level II certification and also offer a limited number of free vouchers for students within the Centre of Excellence. For more information on Siemens Solid Edge certification [click here](#).

Siemens, through its official Channel Partners, will offer free places for Centre of Excellence teachers on scheduled Solid Edge training course, based on availability.

Wherever possible, Siemens will endeavour to connect a Centre of Excellence with one of its Channel Partners and one or more of its commercial/industry customers.



BECOMING A CENTRE OF EXCELLENCE

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graph TD; Title[BECOMING A CENTRE OF EXCELLENCE] --- H1[ ]; H1 --- V1[ ]; V1 --- S1[1. GETTING STARTED]; S1 --- V2[ ]; V2 --- S2[2. APPLICATION PROCESS]; S2 --- V3[ ]; V3 --- S3[3. GREENPOWER SITE VISIT]; S3 --- V4[ ]; V4 --- S4[4. APPROVAL GRANTED]; S4 --- V5[ ]; V5 --- S5[5. WELCOME PACK]; S5 --- V6[ ]; V6 --- S6[6. CENTRE OF EXCELLENCE]; S6 --- V7[ ]; V7 --- S7[7. ANNUAL REVIEW]; S2 --- H2[ ]; H2 --- S3; S6 --- H3[ ]; H3 --- S7;
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We recognise that those operating a Centre of Excellence will not want to be burdened with significant extra work and so our approval procedure is designed to be as simple as possible. At every step we will work with you to help you through the process and offer guidance where required.

1. GETTING STARTED – enquire with Greenpower headquarters.

2. APPLICATION PROCESS – send back application form.

3. GREENPOWER SITE VISIT – An initial meeting with a member of staff from Greenpower to ensure the premises will meet the standards for a Centre of Excellence.

4. APPROVAL GRANTED or recommendations made for improvements required.

5. WELCOME PACK sent by Greenpower to the Centre of Excellence.

6. CENTRE OF EXCELLENCE begins operating.

7. ANNUAL REVIEW takes place every 12 months to ensure standards are met.

SOCIAL MEDIA

A Greenpower Centre of Excellence is encouraged to proactively promote its activities, the Greenpower Challenge and Greenpower partners via Social Media.



/GreenpowerRacing



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/company/greenpower-education-trust



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MORE INFORMATION

If you'd like more information please contact:

Email: info@greenpower.co.uk

Phone: **01243 552305**

Greenpower Education Trust

The Greenpower Centre
Arundel Road, Fontwell,
West Sussex BN18 0SD

T: 01243 552 305

F: 01243 553 498

E: info@greenpower.co.uk

Greenpower Education Trust is a
charity registered in England and
Wales no. 1133536 and in
Scotland no. SC046969

o www.greenpower.co.uk

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