EDT Inspiring future engineers & scientists

An introduction to EDT

Working with Universities

Gordon Mizner

EDT has engaged > 250,000 students

- ***Track record*** **- EDT a charity established in 1984.**
- ***Scale/reach*** **- EDT is the leading UK-wide provider of work related learning programmes for 11 – 21 year-olds and annually involves over 25,000 students.**
- ***Impact*** **- EDT inspires and motivates young people towards STEM careers through real life industry experiences.**
- ***Continuum*** **of schemes - from half a day through to a full twelve months:**

- **>30,000 students p.a. receiving:**
- **~170,000 STEM enrichment days**
- **> 500 companies; > 1400 schools p.a. ;**
- **~ 45 universities**

What is the issue?

- Critical shortage of skills in **S**cience, **T**echnology, **E**ngineering & **M**aths (**STEM**)
  - Here and now!
  - e.g. electronic, electrical, ICT
- Demographics in the UK not helping
  - Ageing profile
  - Falling number of 18 year olds
  - Low % girls in engineering
  - High youth unemployment (18-14)
  - Limited appeal to many student groups

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- EDT **TASTERS** raise awareness of careers, inform choice and stimulate young people to consider a future in science, technology, engineering and maths.

- EDT **PROJECTS** develop skills, shift perceptions, inform career choice and raise awareness of science, technology, engineering and maths in industry.

- EDT **PLACEMENTS** develop skills, inform career choice, raise awareness and allow young people to gain workplace experience in STEM.

EDT has a range to facilitate engagement.

Tasters | **Projects** | Placements

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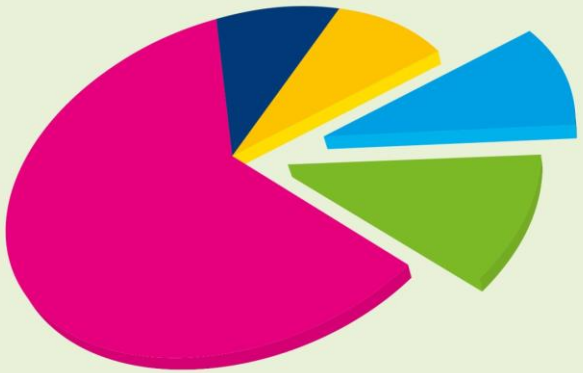
	First Edition
11-14	STEM Family Challenge
	Go4SET
14-16	Routes into STEM
	Inspire (girls)
16-18	**Engineering Education Scheme**
	Headstart
18+	**Year in Industry**

Industrial Cadets

Industrial Cadets is an industry–led accreditation providing a **skills based school engagement structure** led by industry and created for industry.

Bronze – Level 1

Guide to activities breakdown



Minimum **20** hours

Programme components	Skills/Competencies: Creativity and innovation	Communication and collaboration	Critical thinking and problem solving	Digital skills	Careers motivation and awareness	Personal and interpersonal development
Company and sector research				✓	✓	✓
Company/site visits		✓			✓	✓
Company presentations and activities	✓	✓	✓		✓	✓
Mentor/role model interactions		✓		✓	✓	✓
Hands on problem solving and critical thinking activities	✓	✓	✓	✓		✓
Graduation (presentation of programme outcomes)	✓	✓			✓	✓

Headstart

Age – 16-17 years, Year 12 & S5

38% girls; 19% ethnic min; 21% 1st in family

Description - A 4-5 day residential taster course, offering young people the opportunity to experience a taste of university life by becoming a 'live-in' student, attending tailored lectures as well as hands-on sessions, to see at first-hand what university will be like.

Benefits –

- Informs study and career choices
- Provides universities with links to target students

- 14/15 – 58 courses – 2110 places
- + 10 Inspire (girls) courses – 335 places

Engineering Education Scheme (EES)

Age – 16-17 years, Year 12 & S5

1100-1200 students; ~13 university workshops

~30% girls. Alumni survey: 91% STEM degree; 77% Eng/tech job.

Description – Offers a 'real life' 6 month STEM project to young people, giving them the opportunity to develop their skills in project management, report writing, team work and many other employability skills.

Benefits –

- Develops skills
- Raises awareness of university, industry, careers
- Informs education & career choices
- University workshops – showcase + promote courses

The Year in Industry (YINI)

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Age – 17-21 years in Scotland & 18-21 years in England

Description – A paid, 9-12 month, industry placement for young people before or during their university education. Offering the opportunity to gain real workplace experience within a STEM (science, technology, engineering and maths) related industry, with opportunities available in all areas of engineering, science, IT, e-commerce, business, marketing, finance and logistics.

Benefits –

- Develops skills required by employers
- Increases awareness of careers
- Develops a future talent pipeline
- National placements for pre-uni and u/g.

First Edition

Age – 11-16 years, Years 7-11 & S1-S5

Description - STEM taster days that offer hands-on activities and raise awareness of careers, based at schools, colleges and universities. The programme also offers ½ and 1 day industrial visits (Open Industry) as well as female only taster days (Dragonfly).

Benefits –

- Raise awareness of employers & career options
- Stimulate learning in STEM
- Inform study and career choices

Routes into STEM

Age – 14-15 years, Year 10 & S3

Description - A 3-day non-residential taster course, offering young people the opportunity to explore the different ways into a STEM career. Each day involves a different visit to college, university and company sites, informing students about both university and apprenticeship options.

Benefits –

- Inform study and career choice
- Raise awareness of employers & career options
- Raise awareness of university and college.

Go4SET

Age – 12-14 years, Years 8-9 & S2

Description – A 10-week STEM (science, technology, engineering and maths) project. Students will develop their project management, communication and team-working skills, as well as being taken beyond the curriculum to learn about project and time management, presentation skills and report writing skills.

Benefits –

- Develops skills
- Raises awareness of employers & careers
- Informs education & career choices
- Shifts perceptions of industry
- Develops staff of participating companies

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Thank you

For further information:

E-mail
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Website
www.etrust.org.uk **www.industrialcadets.org.uk**

Industrial Cadets

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Support slides

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Why a talent pipeline?

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- Most employers recruit locally
- Many communities unaware of local companies and opportunities
- Young people need awareness as well as employability skills
- This needs to be via hands-on experiences

(not just leaflets/websites)

Need to start young and maintain via continuum of engagements.

More employers need to engage with schools and young people

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- **74% of employers value work experience**
- **4 employer engagement activities during secondary school improves chances of employment or further education.**
- **YET only 1 in 4 employers offers any work experience or structured engagement.**

(Education Employers Taskforce)

- **UKCES, CBI, EngineeringUK, Perkins report – all promote more employer engagement.**

WHAT? and HOW?

- **Many ways of engaging**
  - **Supporting projects, careers events, site visits, STEM clubs, Work Experience, Industrial placements, internships.**
  - **STEM Ambassadors**
- **Supporting hands-on activities has greatest impact, especially with some on-site element:**
  - **Careers awareness in context**
  - **Employability skills**
- **Applies to all sizes of business**
  - **SMEs – Medium – Large**
- **Continuity and consistency is key – Standard outcomes**

Inspire

Age – 15-16 years, Year 11 & S4 (girls only)

Description - A 3-day residential and non-residential taster course at a university location, offering girls the opportunity to develop study and personal skills, alongside challenging hands on activities. Areas covered include time management, research, presentation and report writing skills, focused around STEM.

Benefits –

- Improved organisation skills
- Improved study and personal skills
- Increasing no of women in STEM careers

STEM Family Challenge

Age – All ages

Description - An after school event designed to encourage young people to interact with family members through related hands-on activities, whilst raising awareness of the future careers available in STEM (science, technology, engineering and maths).

Benefits –

- Challenge misconceptions
- Raise awareness of employers & career options
- Inform study and career choice
- Educate family members (influencers)
- Develops staff of participating companies

How to get involved with Industrial Cadets?

Example delivery models

	Bronze (20 hrs)	Silver (30 hrs)	Gold (50 hrs)
Project based activity	✓		✓
Work experience		✓	✓
Company modules	✓		✓
School based activity with industry exposure	✓	✓	✓

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- Inspired by HRH The Prince of Wales, to introduce young people to the workplace by giving them an insight into how businesses operate.

- Industrial Cadets creates a quality standard for industry based activities where 11-19 year olds can develop personal skills and enhance careers awareness whilst gaining accreditation from a national initiative designed to raise their aspirations.

"Thank you ... for taking a lead and adopting the Industrial Cadets programme. I hope that this will lead to many more young people seeing that they may have a possible career in this sort of industry."