

EQUIPMENT AND SHARED RESOURCES BROCHURE



The resources contained in this brochure are available to colleges and are intended for use at events, open days, STEM fairs etc.

All resources require a booking form to be completed and are normally available to be booked for a maximum of 2 weeks but availability cannot be guaranteed at all times. Certain pieces of equipment do require college staff to be trained in the operation of them and these are listed under those resources in the brochure.

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IMMERSIVE HYBRID REALITY (IHR) VIRTUAL REALITY MOBILE UNIT

IHR Mobile Virtual Reality Unit

6 x available

Available for colleges to use as a training tool, this VR experience simulates the experience of working at heights on top of a wind turbine, exploring the inside of a wind turbine or working on a construction site.

Includes Oculus VR headset, 2 controllers, PC and projector.

Packed in a trolley travel case with all cables and full instructions.

The following colleges/organisations each host a kit which are available to be booked by using the contact details:

Ayrshire College

Jim Armstrong

jim.armstrong@ayrshire.ac.uk

01292-293075

Dundee & Angus College

Megan Sanderson

m.sanderson@dundeeandangus.ac.uk

01382 834853

Dumfries & Galloway College

Billy McRobert

McRobertW@dumgal.ac.uk

01387 734053

North East Scotland College

Kevin Bruce

kbruce@nescol.ac.uk

01346 586127

Fife College

Craig Somerville

craigsomerville@fife.ac.uk

01383 628977

ORE Catapult

Karen Leiper

Karen.Leiper@ore.catapult.org.uk





Virtual Welding Unit

1 x available

Fronius Virtual Welding is a step towards enhancing the image of welding, with innovative technology. Without needing any prior knowledge, beginners can start learning what welding is all about under true-to-life conditions – without any safety risks, and using an ergonomically shaped torch, typical workpieces and adjustable welding parameters.

Kit is packed in a wheeled flight case and is a 2 person lift due to the weight 52.7kilos and requires a small van or hatchback car to transport.

Hosted by Perth College UHI

To check availability or to book contact Andrew Stibbles at:

andrew.stibbles.perth@uhi.ac.uk

NOTE: you must have a staff member who has been trained in the operation of the Unit.

VIRTUAL WELDING UNIT



AIR TIGHTNESS TRAINING EQUIPMENT

Air Tightness Training Equipment

1 x available

Includes calibrated test fan and equipment for carrying out air-leakage and room integrity testing.

Hosted by South Lanarkshire College.

To check availability and to book, contact James Jamieson at:

James.Jamieson@slc.ac.uk

NOTE: you must have a staff member who has been trained in the operation of the Unit.



**Hydraulic Torque
Equipment**

1 x available

HYTORC Hydraulic Torque
Equipment.

The HYTORC Hydraulic Torque
equipment is based at Ayrshire
College and is bookable by
contacting Ewan Granger at:

ewan.granger@ayrshire.ac.uk

NOTE: you must have a staff
member who has been trained in the
operation of the Unit.

HYDRAULIC TORQUE EQUIPMENT



**ELECTUDE HIGH VOLTAGE SAFETY
INTERLOCK TRAINER
MODULES**

**High Voltage Safety Interlock
Trainer Modules**

8 x Modules available (bookable in
quantities of 4)

Safety when handling high-voltage
vehicles. With this flexible system
you are training safely different
manufacturers methods.

Virtually every car manufacturer has
a high-voltage vehicle in the program
today. Knowing the different
manufacturer's instructions and
methods is therefore essential.

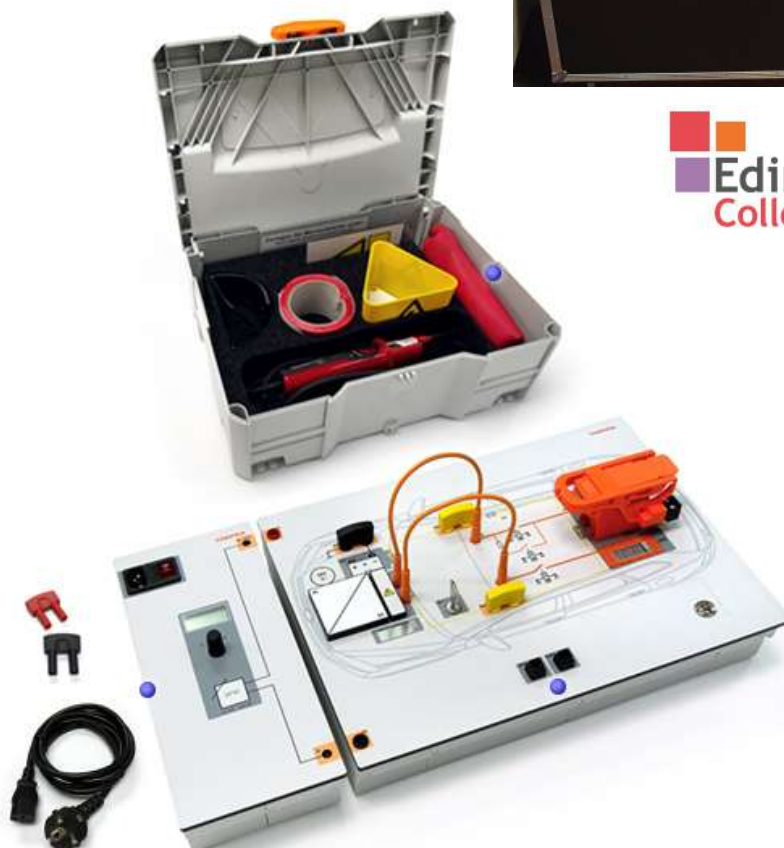
4 units are packed in a large
wheeled flight case (1000-x-700-x-
550-mm) and is a 2 person lift and
requires a small van or hatchback
car to transport.

The following colleges each host the
kits which are available to be booked
by using the contact details:

Edinburgh College

Kieran Lydon

Kieran.Lydon@edinburghcollege.ac.uk



Bodyworks on Tour

The Glasgow Science Centre BodyWorks On Tour programme is all about our amazing (baffling and sometimes yucky) bodies and offers an array of exciting workshops, live science shows and interactive exhibits.

Everything is hands-on and designed to fit the needs of learners from primary through to secondary school pupils. These engaging science shows, interactive workshops and amazing exhibits are the perfect complement to the Curriculum for Excellence Science and Health & Wellbeing outcomes.

We'll visit you and deliver a tailored full day set of activities. Plus, there's a bunch of educational resources to enjoy in and out of the classroom!

For advice and bookings please call the GSC on [0141 420 5003](tel:01414205003) or email:

ontour@glasgowsciencecentre.org

BODY WORKS ON TOUR



POWERING THE FUTURE ON TOUR

Powering the Future on Tour

Glasgow Science Centre's 'Powering the Future On Tour' programme is all about getting to grips with how energy underpins our modern lives.

Through an exciting suite of engaging workshops, live science shows and interactive exhibits you can explore the choices we all face in having energy that is affordable, secure and environmentally sustainable.

The programme is a perfect choice for teachers seeking rich education experiences for their pupils as it seamlessly compliments the Curriculum for Excellence for P4-S3 learners, and the offer together with our expert and enthusiastic team also brings a new dimension to family, community and corporate events.

For advice and bookings please call the GSC on [0141 420 5003](tel:01414205003) or email:

ontour@glasgowsciencecentre.org



ESP DISPLAY BANNERS FOR USE AT EVENTS



ESP All Colleges Hop up Banner

1 x available

Large fold up banner displaying the logos of all Scotland's colleges.

Banner is attached to a metal foldable frame which fits into a large wheeled carry bag.

2260(h) x 3730(w) x 295(d). 12.75 kg



All banners are available for booking to use at events or meetings.

To check availability and request a booking form please contact info@esp-scotland.ac.uk



**ESP
General
Banner**

2 x available

Pull up banner
with pole, base
and carry bag.

39 x 78 in



info@esp-scotland.ac.uk
www.esp-scotland.ac.uk



engineering



**Scotland's
colleges –
delivering
skills for:**

- energy
- engineering
- construction



**ESP
Engineering
Banner**

1 x available

Pull up banner
with pole, base
and carry bag.

39 x 78 in

aims to:

- Develop and deliver demand led skills programmes
- Promote careers in the energy sector
- Develop pathways through schools to college to university
- Build capability and capacity across Scotland's colleges
- Promote and support innovation in education
- Support economic development
- Interface with government and its agencies
- Influence and support developments across Scotland's colleges

info@esp-scotland.ac.uk
www.esp-scotland.ac.uk



automotive



**Scotland's
colleges –
delivering
skills for:**

- energy
- engineering
- construction



**ESP
Automotive
Banner**

1 x available

Pull up banner
with pole, base
and carry bag.

39 x 78 in

aims to:

- Develop and deliver demand led skills programmes
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construction



**Scotland's
colleges –
delivering
skills for**

- energy
- engineering
- construction



**ESP
Construction
Banner**

1 x available

Pull up banner
with pole, base
and carry bag.

39 x 78 in

aims to:

- Develop and deliver demand led skills programmes
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K'Nex Education

STEM Explorations Vehicle Building set

5 x available

Explore stem concepts while building different vehicle models! using the materials included in this set, primary-school aged children will be engaged and energized as they further their knowledge and understanding of science, technology, engineering and math concepts.

The set includes 130+ parts for a single child or team to build 7 vehicle models with different power sources, including push-power, rubber band power, wind power or a spring motor. Once built, a downloadable booklet guides students through 5 hands-on, inquiry-based experiments on several of the models.

Students will learn about potential & kinetic energy, velocity, acceleration, motion, graphing and more! the experiment guide is aligned to National stem standards and is appropriate for key stage 2/3.



To enquire about booking either of these activities contact Caroline Hogg, Forth Valley College at: Caroline.Hogg@forthvalley.ac.uk



MTa Learning kits

5 x kits available which cover a number of tasks

24 experiential activities to develop team skills.

Enable students to develop the skills required when working effectively with each other. The components in the kits are engaging, and generate powerful learning experiences.

With these kits you can deliver 24 experiential activities that encourage and support students to explore, understand and develop a wide range of team building skills.

Kits are packed in large kit case with components and instructions.





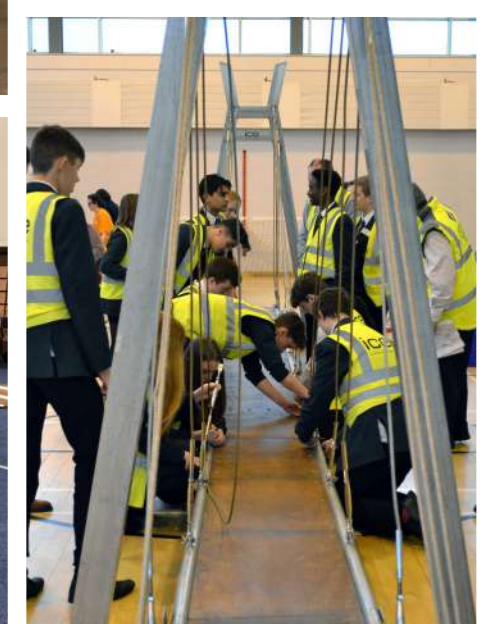
Institution of Civil Engineers

BRIDGES TO SCHOOLS

Bridges to Schools is a hands-on activity which gives P6/7 pupils the chance to build a 13m long cable stayed bridge. Having assembled the bridge they then walk across it, learning about bridges, teamwork and civil engineering as they go.

The Bridge model is available for school clusters or groups of schools for a visit of 1 week. Schools can book hour long sessions for each group of 20 pupils. Getting the cluster secondary school involved can make this a great transition activity.

To enquire about booking the Bridges to Schools challenge contact Alison Ward at: Alison.ward@ice.org.uk



ESP Branding Guidelines

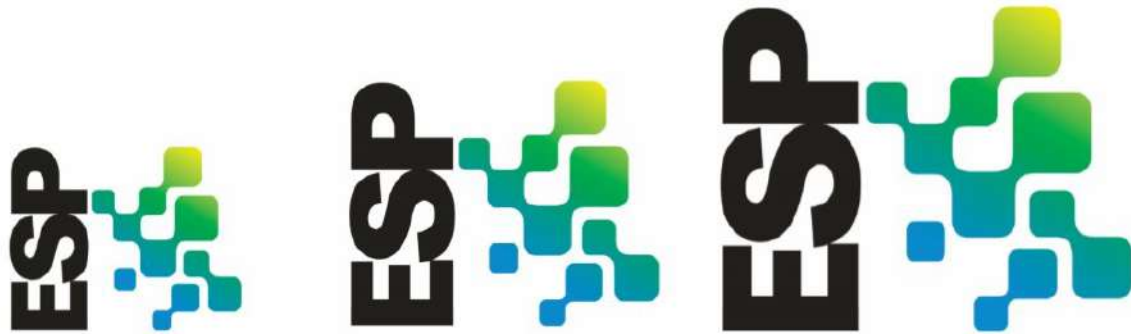
If you are successful in receiving funding from ESP please clearly acknowledge and promote our logo as part of your funding agreement with us. The ESP logo should be included on any promotion related to the aforementioned project including your website, flyers, leaflets, posters and any other promotional or marketing materials you produce. If you do not have a copy of our logo we can provide a copy in all widely used formats Jpeg, PNG etc.

If you produce any press releases to the media or through your website the ESP name must be mentioned as a partner, funder or contributor depending on our role in your project.

If your project has had successful outcomes or achievements please let us know if you think it might make a good case study to share. Visit our website to see examples of some of the case studies we have previously highlighted and to see some of the valuable support ESP has provided to other projects.

How to use the ESP logo

Ensure that the ESP Logo dimensions are proportionally scaled whatever size you use.



How not to use the ESP logo

Do not alter the colours or skew/modify the logo in any way and ensure that sufficient space is given surrounding the logo if placed along with other logos.

Examples below.



Don't forget to follow us on Twitter and LinkedIn and sign up for our newsletter.



@ESPScotland



www.linkedin.com/in/espScotland

email: info@esp-scotland.ac.uk **visit:** www.esp-scotland.ac.uk

ESP TEACHING MATERIALS REGISTER

Materials Title	Developed by	Units	Available
Engineering Mathematics	West College Scotland & Forth Valley College	<p>Engineering Mathematics 1 (H7K0 33) Outcome 1 - Functions Outcome 2 - Logs and Exponentials Outcome 3 - Vectors and Complex Numbers</p> <p>Engineering Mathematics 2 (H7K1 34) Outcome 1 - Trig Functions Outcome 2 - Differentiation Outcome 3 - Integration</p> <p>Engineering Mathematics 3 (H7K2 34) Outcome 1 - Differentiation Outcome 2 - Integration</p> <p>Engineering Mathematics 4 (H7K3 35) Outcome 1 - Complex Numbers Outcome 2 - Matrices Outcome 3 - Taylor and MacLaurin Outcome 4 - First Order Differential Equations</p> <p>Engineering Mathematics 5 (H7K4 35) Outcome 1 – Second Order Linear Differential Equations Outcome 2 – Partial Differentiation Outcome 3 – Double Integration Techniques Outcome 4 – Laplace Transforms Outcome 5 – Eigenvalues and Eigenvectors</p>	ESP members
Quality Management An Introduction	Glasgow Clyde College	<p>Quality Management: An Introduction (DT8Y 34) Outcome 1 - Explain the fundamental principles of Quality Assurance and Quality Control Outcome 2 - Explain the stages to be met in the process of achieving ISO 9001 Outcome 3 - Select and apply quality improvement tools and techniques Outcome 4 - Total Quality Costs</p>	ESP members
Certificate in Environmental Technology Systems	Dundee College	<p>Working Principles, Installation, Options and Regulatory Requirements for Micro Renewable Technologies, Water Harvesting and Recycling Technologies (F8XJ 04) F8XJ 04 Working Principles Generic Assessment Install, Test, Commission and Handover Solar Thermal Hot Water Systems (F8XK 04) Install, Test, Commission and Handover Solar Photovoltaic Systems (F8XL 04) Install, Test, Commission and Handover Heat Pump Systems (F8XM 04)</p>	ESP members
Diploma in Electrical Power Engineering - Wind Turbine Maintenance (City & Guilds 2339-44 Level 3)	Carnegie College	<p>Health & safety in the power industry (650) Theory & background of wind turbines/energy (651) Mechanical theory & principles of wind turbine technology (652) Electrical theory & principles for wind turbine technology (653) Control & instrumentation theory & principles of wind turbine technology (654) Hydraulic theory & principles of wind turbine technology (655) Wind turbine systems technology (656)</p>	ESP – Limited access
Green Deal		<p>Certificate for Green Deal Assessors Certificate for Domestic Energy Assessors</p>	ESP – Limited access via WeTransfer.
Global Wind Organisation (GWO) - Basic Technical Training	Ayrshire College	<p>Modules</p> <ul style="list-style-type: none"> • Electrical • Hydraulic • Mechanical 	ESP members
Wind and Marine Training Network Resources	Orkney College UHI (2014)	Support Notes For Personal Safety & Social Responsibilities	ESP – Limited access via WeTransfer
RTN Blade Repair & Inspection	RTN	Awareness Basic	ESP – Limited access via WeTransfer

Materials Title	Developed by	Units	Available
HN Energy Units	Stow College (Units) North Highland College UHI (Materials)	Energy Overview (H4J5 34) Outcome 1: Global Energy Trends Outcome 2: National Factors Relating to Energy Production, Consumption, Greenhouse Gas Emissions and Energy Security Outcome 3: Building and Transportation Outcome 4: Industrial Sized Power Plants Energy Technologies (H4J6 35) Outcome 1: Analyse the Technologies and Factors Associated with Traditional Methods of Energy Production. Outcome 2: Analyse the Technologies and Factors Associated with Renewable Methods of Energy Production Outcome 3: Describe the Technologies and Factors Associated with Emerging and/or Less Common Methods of Energy Production	ESP – Energy Technologies ESP members
Thermal Imaging	Edinburgh Napier University (2016)	Training in thermal analysis of buildings	ESP members
Sound insulation	Edinburgh Napier University (2016)	Sound insulation: design and construction for airborne and impact sound	ESP members
HND Electrical Engineering	NESCol FVC West Lothian College, Dumfries & Galloway College	DG3G34\02 Electrical Networks and Resonance DN4E34\03 Digital Electronics DN4633\04 Analogue Electronics: An Introduction D75X34\36 Information Technology: Applications Software 1 DN4K35\04 Electrical Motor Drive Systems DN3T34\03 Electrical Systems in Potentially Explosive and Gas Hazardous Environments DN4935\04 Transformers DN4F35 Electrical Installation Design DN3Y34\09 Fundamentals of Control Systems and Transducers A6AX 34 Project Management: An Intro DG5735\03 Transmission Lines and Complex Waves DN3X35\03 Electrical Engineering: Graded Unit 2 (Double unit) DN4A35\03 Utilisation of Electrical Energy in Buildings DG3D35\07 Business Awareness and Continuing Professional Development DN4M35 Electrical Standby Systems	ESP members
MOT Training Materials	Glasgow Clyde College (2017)	ESP DVSA NTTLV Presentation March 2017 Candidate check and details record MOT Student Handbook ESP Suggested Inspection Routine Not to be used in Practical Assessment VT8 MOT Practical Assessment Carrying out Brake Efficiency Calculations – Formula Required Practical Assessment covering the mandatory units	ESP members
Waste Awareness for Construction Students	Fife College (2017)	Waste Awareness Learning Materials Booklet Waste Awareness Teaching Presentation	ESP – Limited access via WeTransfer
Certificate in Electrical Power Engineering - Distribution and Transmission (Level 2) (2339 – 17)	Forth Valley College (2015)	Unit 660 Understanding Legislation in Power Industry Unit 661 Electrical Theory Unit 661 Mechanical Theory Unit 662 Electrical Networks, Plant and Apparatus	ESP – Limited access via WeTransfer

These ESP Teaching Materials are available to member colleges for use.

If your college wishes to access these materials please contact ESP at

info@esp-scotland.ac.uk

