STEM

REPORT

2019/20

“We are RS Components. We make amazing things happen by innovating for the engineers of today and inspiring the engineers of tomorrow.”

Contents

Foreword

According to STEM Learning, the UK's largest provider of education and careers support in science, technology, engineering and mathematics; the UK industry is spending £1.5bn per annum on closing a shortfall of skilled workers in the UK, in 2018 this was estimated to be a shortage of around 173,000.*

STEM (science, technology, engineering, and mathematics) is important because it affects every part, and day in our lives.

Globally, an average of 42 percent of the core skills required to perform a job will change between 2018 and 2022.**

According to the UNESCO groundbreaking report Cracking the code: Girls' and women's education in STEM, only 35% of STEM students in higher education globally are women, and differences are observed within STEM disciplines.

Only through cross-sector collaboration can a strong STEM ecosystem align the skills and ambitions of graduates with the jobs of tomorrow and the solutions to society's growing needs.***

Find out how we, as a business, are promoting and supporting STEM around the world.

James Howarth
Head of Education Strategy

Laura Giddings
STEM Education Manager

*https://www.theguardian.com/careers/2019/mar/05/how-schools-and-businesses-are-addressing-the-stem-diversity-gap

**http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf

***https://www.fsg.org/publications/global-stem-paradox

750,000+
customers

2,500+
major suppliers

500,000+
products

5,300+
employees

28
countries

45,000+
orders shipped daily

RS Components is a trading brand of Electrocomponents PLC.

With operations in 32 countries, we offer around 500,000 products through the internet, catalogues and RS Local branches to over one million customers, shipping more than 44,000 parcels a day. Our products, sourced from 2,500 leading suppliers, include semiconductors, interconnect, passives and electromechanical, automation and control, electrical, test and measurement, tools and consumables.

Our **STEM** aims

1 Inspire

Inspire the next generation of engineers and help students realise the potential of STEM careers and their imaginations.

2 Support

Support teachers & educators with the delivery of amazing STEM based curriculum.

3 Address

Address the current global skills shortage in STEM related careers and provide a pipeline of talent for the future.

4 Build

Build strategic partnerships within the education sector to support the delivery of STEM activities globally.

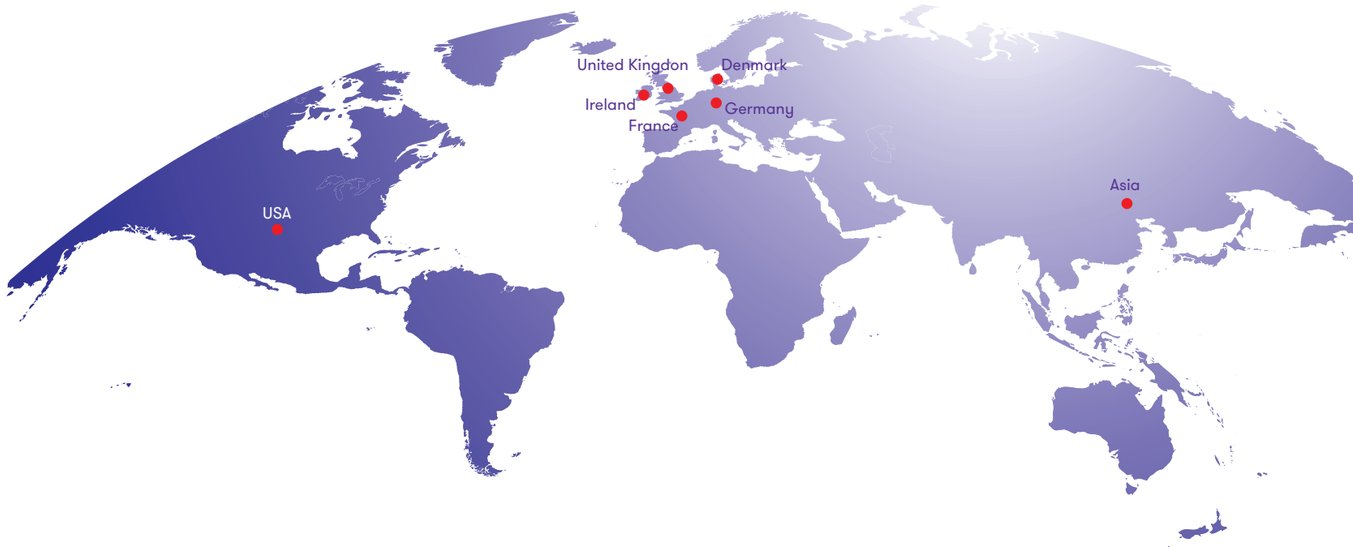
5 Develop

Develop and utilise new technology to create exciting hands on STEM experiences.

STEM around the world

RS is committed to inspiring the next generation of engineers in countries all over the world and addressing the increasing global skills shortage. By providing meaningful STEM engagement and working with like-minded partners we can ensure there is a pipeline of talent to secure our future industry. Here you will find amazing stories of how our teams across the globe are are doing just that.

Find out more on how our colleagues around the world support STEM and Education in their region.



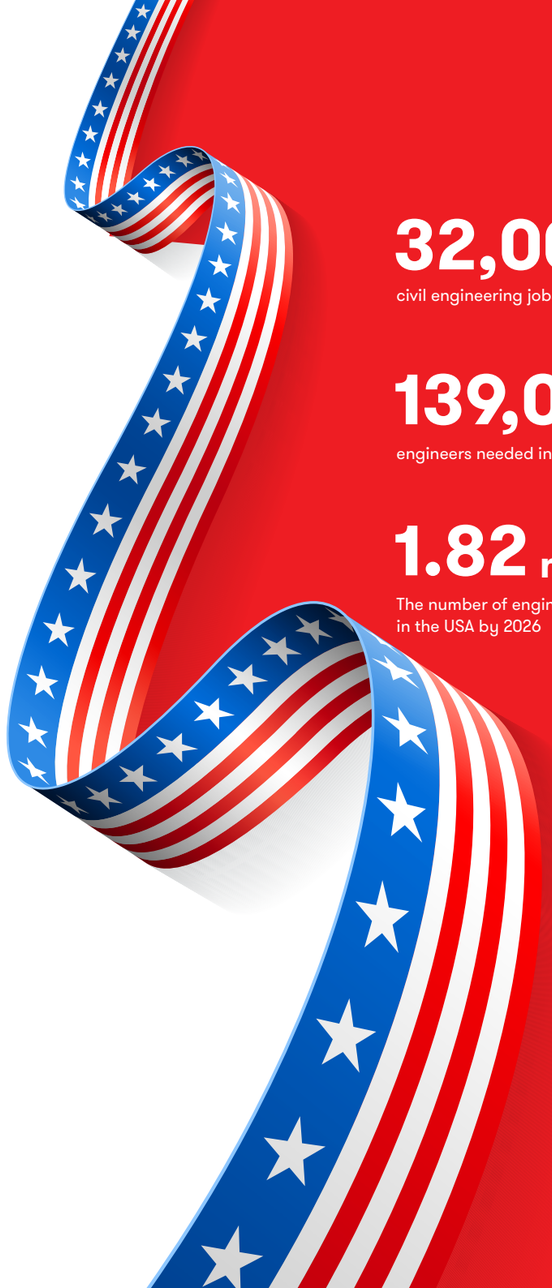
USA Snapshot

Overview

The number of engineering jobs available is growing in the US with the number of engineers set to increase by 139,000 between 2016 and 2026 from 1.68 million to 1.82 million. The most sought after engineers are civil engineers with 32,000 jobs available.

Even though more and more jobs are becoming available within the US there is a shortage of engineers with the problem arising at education level with not enough students choosing maths and science. Employers are not happy as they believe there aren't enough workers with advanced degrees in STEM fields.

Moreover, in recent years the US hasn't even reached the top ten countries with engineering graduates. In addition, even with the high level of engineering jobs available, which is positive for individuals trying to find a job, it is in fact quite serious to the overall condition of the industry that the US is lacking students capable in maths and science This is reflected in where the US are ranked compared to other countries with a placing of 27th in maths and 20th in science globally.



32,000
civil engineering jobs available

139,000
engineers needed in the US

1.82 million
The number of engineers working in the USA by 2026

Fort Worth Christian School

STEM & Allied Electronics and Automation

Allied Electronics and Automation is a subsidiary of Electrocomponents plc. A distributor of electronic components and electromechanical products in America, with the head office based in Fort Worth, Texas.

Since 2018, Allied has worked with Fort Worth Christian School; supporting students from elementary school right up to high school age. They have provided the school with many products, services, resources, and educational opportunities students and teachers can use throughout their education careers.

Allied have donated product for teachers to use in their classrooms along with creating Project Booklets for students to build their own projects. These projects include Memory Games, LED Blink Patterns, and Soil Moisture Sensor Circuit Systems; in addition, some of Allied's Ambassadors have been invited to school for "Train the Teachers" Sessions.

Allied has sponsored a Robotics Team from Colorado State University, in Fort Collins, Colorado. The Team competes in the NASA Robotics Mining Competition.

ASIA Snapshot

Overview

It is estimated by 2020, the Asia Pacific region will face a labour shortage of 12.3million workers, which will cost the economy US$4.2trillion. A significant reason for this is the lack of availability of suitable skills to meet the changing demand in technology within the region.

In 2017, the Ministry of Education in China announced the official inclusion of STEM education into the primary school curriculum.

Since then, schools in the public and private sectors in china have started to carry out STEM Education Programmes. For this to be effectively implemented in the curriculum, more full-time teachers specializing in STEM education are required. Presently China lacks qualified STEM teachers and a training system is yet to be established.

A recent survey by the Global STEM Alliance (GSA) showed that whilst a vast majority of students in the region are interested in STEM; both students and teachers want better resources, as less than half of students are happy with the practical experiments and interesting curriculum they currently receive.

12.3 million
Labour shortage of workers by 2020

2017
STEM added to curriculum in China

4.2 trillion
Cost to economy

STEM in ASIA

RS and DesignSpark APAC have become a Supporting Partner of The Women's Foundation (TWF) Hong Kong's Girl Go Tech programme.

The Girls Go Tech programme aims to build a pipeline of local female STEM talent and empower underprivileged girls to achieve their full potential through coding workshops and career development opportunities. The programme aims to break gender stereotypes in male-dominated careers and provide women with the opportunity to fulfill their professional and personal potential in an increasingly technology-driven world.

In the first stage, RS and DesignSpark will provide online courses to Girls Go Tech alumni; introducing them to basic 3D modelling and the DesignSpark software and community. In the next stage, a hands-on 3D modelling and printing workshop for programme alumni who completed the first stage is also planned in 2020.

STEM training is not something applicable only to students and children, it can also help our colleagues understand more about the technology industry and promote engagement and collaboration.

RS Japan delivered hands on training to employees from various departments on how to programme a Raspberry Pi single board computer using Python. For many participants this session was their first encounter with coding and a great experience.

This STEM training session is now part of a series of learning sessions organised by the Japan People team in RS.

France Snapshot

Overview

In France, science and engineering technicians represent 5.8% of total employment. It is predicted during the 2016-2030 period, there will be 1.1million job openings for more roles in these sectors. ICT and engineering professionals are professions that have been identified as mismatch priority occupations for France, as shortage occupations

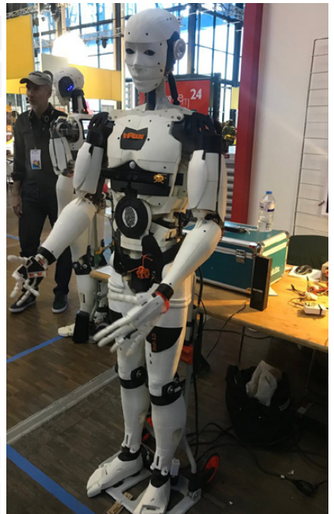
By 2022, it is forecast there will be 303k people employed in the engineering sector in France. This is due to the development of new technologies as well as R+D efforts in other technological sectors such as optics, aeronautics and the electronics sector. The digital revolution in France has created new needs in the sectors surrounding transport, vehicles, connected products and energy. Shortages in engineering are due many factors, the main one being the lack of candidates with appropriate higher education and poor perception of roles in the engineering and manufacturing sectors.

There are several national campaigns currently in action in France to increase interest in the manufacturing and engineering sectors, aimed at a wide target group of young people, jobseekers and young women (which are massively under-represented in the French engineering occupations). There is also a push for schools visiting companies as well as universities and companies keeping close ties to engage and recruit students at student-company get-togethers.

1.1 million
jobs between 2016-2030

303k
Engineers by 2022

5.8%
Total employed in France within science and engineering



In November 2019 RS France attended Makerfaire Paris and engaged with thousands of students through interactive workshops including soldering, robotics, coding, 3D printing and vacumm forming. RS also presented awards to the "best junior maker", "best senior maker" and "best societal project" at the event.

This was the second year in a row RS France have supported the event where over 23,000 visitors attended over 4 days, including 8,000 students.

Maker Faire

4 day event

23,000 Visitors

8,000 Students

Along with major events, RS France has various partnerships with schools and colleges in Beauvais and supports teams in the following STEM Competitions:

Shell Eco-marathon

FORMULA STUDENT Institution of MECHANICAL ENGINEERS

ROBOCUP 2020 BORDEAUX FRANCE NOUVELLE-AQUITAINE

Blue-Bot Robot

RS France is committed to continue to establish relationships with schools along with developing activities to inspire young people aged between 6 to 18 years old.

Germany Snapshot

Overview

Germany is the fourth largest economy following the US, China and Japan. It has how ever been noted that it is near impossible to fill vacancies in certain regions and sectors with suitable skilled workers, particularly those in STEM related careers. A major factor that will impact the prevailing skills shortage is the ageing workforce. According to current forecasts, the working-age population, i.e. people aged between 20 and 64, will drop by 3.9 million to 45.9 million by 2030. In 2060, there will be 10.2 million fewer people of working age.

The ratio of STEM students in Germany has risen significantly since the turn of the millennium, and the percentage of graduates with a STEM degree is relatively high by international standards. STEM subjects have become the most popular group of subjects among the 878,000 new students at university level. While about 322,000 young people pursued economic, social or legal studies, 351,000 students were taught in STEM subjects.

4th
Largest economy worldwide

351k
Students undertook STEM subject based degrees

Future ING Award

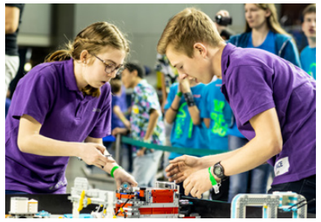
Under the Name "Future ING Award" a version of the UK BrightSparks competition was launched in Germany. The programme is designed to identify and celebrate the best young minds in engineering. Discovering Individuals that are making a big impact in their specific field whether that be as a student, entrepreneur or in the early stages of their careers. The ultimate goal of this award is to inspire future generations to pursue a career in engineering.

Shell Eco-marathon: TU Fast Eco Team

The TUfast Eco Team is an organization of students with a shared passion for motorsports! Every year the team members take up the challenge of developing, designing and building a new race car with an electric powertrain. Team spirit, commitment and persistence paired with technical finesse are what make it possible for them to succeed at national and international competitions throughout the Shell Eco Marathon. The aim of every events is focusing on the most efficient use of energy.

FIRST® LEGO ® League

Following FIRST® LEGO ® League demos on the RS Components Stand at 2018's Electronica exhibition, RS has donated Lego Kits to local teams to compete in their regional heats.



TUM Hyperloop

RS Components sponsored a Hyperloop-Team from the Technical University of Munich (TUM Hyperloop). Team TUM won SpaceX Hyperloop Pod Competition with a record speed of 288 mph (463,491 km/h). The team built the fastest Hyperloop pod to date, beating its own record from last year. TUM beat out three other finalist competitors, including Delft Newsletters Hyperloop, EPFL Hyperloop and Swissloop.

Ireland Snapshot

Overview

According to the World Economic Forum, Ireland's economy is outperforming most other Eurozone countries with almost full employment and rising real wages.

However, the Republic of Ireland is also facing a shortage of skills. According to the Critical Skills Occupations List, there are 17 sectors with a high skills shortage, the sectors include major industries including Natural and Social Sciences, Engineering, ICT professionals and Health.

In 2017, The Department of Education launched the STEM Education Policy Statement and Implementation Plan for Schools.

The national focus on STEM education in early years settings and schools aims to produce an engaged society and a highly-skilled workforce in the future.

Titan II supports Irish STEM Week

Titan II welcomed over 2,000 young people on board over the 7 events supporting the STEM Festival. Students from all ages, backgrounds and levels of education were given the opportunity to understand how the world of engineering and technology will shape their future and how their amazing educational institutes are giving the tools needed today to create the careers of tomorrow.

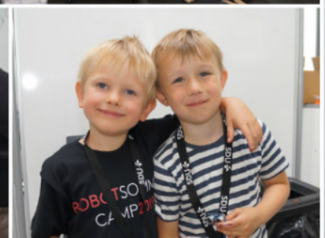
The STEM Festival was organised collaboratively between local industry, state agencies and education providers.

Denmark Snapshot

Overview

Danish companies today experience a large shortage of employees with digital and technical competencies. As advanced technology and digital solutions are spreading in the future, corporate demand for, for example, engineers, computer scientists, bio-statists, electricians and other people with digital and technical skills is growing.

On January 25 2019, the Danish ministry of Industry, Business and Financial Affairs officially announced the Danish Technology Pact. The government has set various ambitious targets for different levels of STEM education, and will closely cooperate with the education institutions and industry partners for its implementation. The Pact was officially launched in spring.



DTU RoboCup

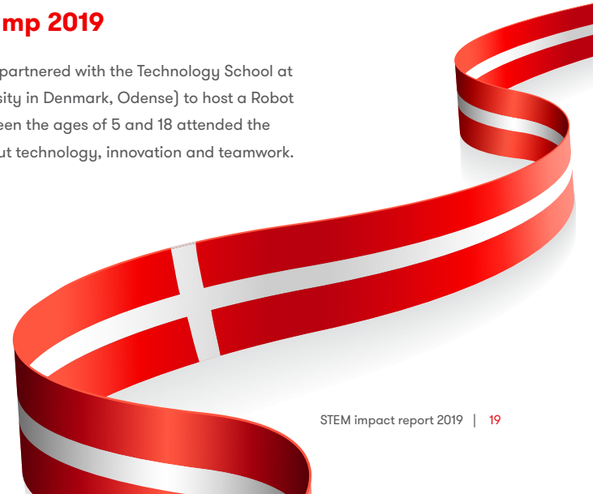
RS Partners with Denmark's Technical University (DTU to) organize a RoboCup event every April for students of all abilities to enter. The aim of the competition is for students to build and code their autonomous robots to complete an obstacle course in the quickest time with minimal errors. The obstacle course is made up of new and familiar challenges for the robots to complete in their turn. Among challenges in 2019 were to go upstairs, over a seesaw and getting a golf ball into a hole on the 7-metre-long race track.

IoT Week 2019

Between the 17th and 20th June 2019, RS Scandinavia sponsored the European IoT Week 2019, in Denmark. The IoT week is a gathering point where innovative tech meets business and society, who are using or consider using the Internet of Things (IoT). RS organized a hackathon during the event and invited students to experience the latest technology on board Titan II.

Robot Summer Camp 2019

During the summer of 2019, RS partnered with the Technology School at Syddansk (based in the University in Denmark, Odense) to host a Robot Summer Camp. Students between the ages of 5 and 18 attended the camp over 3 days to learn about technology, innovation and teamwork.



UK Snapshot

Overview

Engineering plays a key role in driving economic growth and productivity in the UK. Generating 21.4% (£1.2 trillion) of the UK's £5.7 trillion turnover in 2018. Along with the manufacturing sector providing a substantial economic contribution, accounting for 43.5% of the turnover generated by engineering enterprises in the UK. There is a vast shortage of skilled workers in the engineering sector.

Currently there is an estimated annual shortfall of 59,000 new engineering graduates and technicians, which only continues to get worse.

In 2019, the UK Government campaign 'Engineering: Take a Closer Look' was created to follow on from the success of the 2018 Year of Engineering. It continues to celebrate the world of engineering and forms an important part of the UK's Industrial Strategy which is committed to boosting engineering across the country ensuring everyone has the skills needed to thrive in a modern economy.

The UK Government advise that STEM skills are crucial to help rebalance the UK economy and improve productivity.

£1.2 trillion

21.4% of the UK turnover in 2018

59k

Shortfall of core engineering roles requiring level 3+ skills

90%

of STEM Ambassadors surveyed by STEM Learning say that volunteering has increased their job satisfaction.

STEMFEST

In July RS hosted its inaugural STEMFEST - a 3-day STEM event onsite at RS headquarters in Corby to inspire the next generation of engineers and scientists.

Over 500 students attended from 19 Primary and Secondary schools in Northamptonshire, plus an additional 800 friends and family and members of the public attended on the Saturday.

Students were able to take part in interactive workshops, talks and exhibits, from over 30 partners and activities from coding and robotics to space exploration and wildlife conservation. There were also unique opportunities to learn from internal RS departments about cyber security, website development, compliance engineering and media filming.

STEM FEST

"We loved STEMFEST! The children had a fantastic time and loved the range of different activities that were available."

- Rockingham Primary School

"The pupils had an overwhelmingly great day! Our ambassador was fantastic. We definitely want to return next year please."

- Green Oaks Primary School

"The workshops and talks were brilliantly interactive and had the students totally hooked and engaged!"

- Brooke Weston Academy

IMAGINED TODAY
ENGINEERED TOMORROW.

Fashion | Gaming | Automotive | Healthcare | Engineering | Music

IMAGINE-X

Launched in June 2019 to forty thousand teachers, Imagine-X is RS' first official offering into the UK education industry by providing free cross-curricular resources for pupils in Primary and Secondary Schools (based on the English Curriculum).

The resources were a year in the making, starting with research groups in August 2018 with children of RS colleagues, to find out what young people find interesting in STEM. At the same time, the RS Education team created a think tank of teachers, inventors and designers to help curate our first lesson plans.

The first theme was Biomechanics, based on the story of Ben and Sol (Ambionics). These dynamic, exciting STEM lessons will continue to be a strategic offering to the education sector; based on real people/stories.

The next lesson plan theme, Smart Conservation, is due to be released in Spring 2020.

Teachers are able to access and download the 2 lesson plans for free from the RS STEM Education website, which consists of:

- A Powerpoint presentation for classroom use
- Videos
- 2x Lesson Plans
- Teacher Plans

TITAN II

Titan II is our mobile innovation centre which provides unique and interactive experiences that demonstrate what its like to be an engineer today and tomorrow.

With over 70M² of exhibition space, Titan II showcases the latest technologies including Raspberry Pi, 3D printing, Robotics, Internet of Things, Thermal Imaging, Virtual Reality and Augmented Reality.

Vehicle Weight:

35 tonnes

19

Interactive Displays

Number of Visitors:

28,000

MAX

Following the success of Titan II in Northern Europe, in April 2019 RS launched its second innovation truck in Central Europe.

"MAX" has been busy visiting customers and education establishments across Germany and beyond, showcasing the latest innovation and technology from leading brands.

Number of Visitors:

32,971

122,703

Product Demos provided

Event Days

133

Work Experience

A relaunch of RS' new work experience programme took place this summer – over 12 departments across the London and Corby sites have signed up to support the next cohort of Work Experience students due to enter the business Easter 2020.

Each young person will receive a fully bespoke and content rich experience of the RS Components business aligned to their interests and passions.

The new enhance programme, managed collaboratively between the Education and Apprenticeship teams, will provide each young person full access to RS as a business; providing an understanding of it inner workings and functions; showing how as One Team, we Make Amazing Happen for our customers and suppliers.

STEM Workshops and Ambassadors

STEM Ambassadors, support various events to inspire young people to consider STEM careers.

Since 2016, RS has recruited STEM ambassadors within the business to inspire the next generation. As of January 2020, the STEM Ambassador count stood at 220 in the UK+I.

Our STEM Ambassadors are very keen to learn about new technologies and develop new skills to enable them to become Super STEM Ambassadors. By doing this, these ambassadors are able to deliver various workshops for all ages to suit their interests, be that coding, building laptops, vac-forming, using power tools or introducing the engineering design process.

STEM Ambassadors
Chris, Joe, Adam, Eloise, Linda, Lewis...

What do our STEM ambassadors say?

Why did you decide to become a STEM Ambassador? 10:44

Joanne Bradbury
As a parent to a primary school daughter, I wanted to make sure I'm abreast of all the latest technology and resources, to enable me to support her as much as possible. Also, I've also wanted to be a teacher and have always been an advocate of RS supporting our local educational institutes to encourage the next generation of RS employees! 10:48

What benefit do you feel young people get from your engagement? 10:44

Dennis Woodruff
Hands on career information to help them make big decisions. Exposure to some exciting areas to work in, and some really cool technology. 11:04

Georgia Katz
Being female, I can act as a role model for young girls who may not think that STEM fields are for women. 11:04

What do you get from supporting STEM? 11:36

Jo Faulkner
A great sense of achievement in making the young person's day different and an interesting learning experience! 11:04

Declan Gray
Lots of fun (more than I expected). A great sense of having done something that can make a difference. 11:04


10:48


10:48

SCIENCE IS COOL

STEMillie

@STEMillie_

Follow

STEM mad almost 13yo. Aspiring scientist and engineer. #GirlsInSTEM #GirlsWithSpanners *parent monitored

Joined March 2018

278 Following 99 Followers

Followed by DesignSpark - Engineering Resource Platform

Tweets | Tweets & Replies | Media | Likes

Pinned Tweet

STEMillie 10/08/2019

I just managed to work on @pdc_racing with @RacerHammond, the actual car that they are going to drive!! I'm so happy I can't wait to watch them race!! GOOD LUCK in the Tegiwa Club Enduro.

4 19

STEMillie 6h

Found an extra surprise in my advent calendar this morning. This super cool engineering pin.😍 Thank you to @JamieBGall for making them.

4 19

STEMillie 19h

Can't wait to take a break from all my

In July 2019, the RS Education team met Emilie, an aspiring engineer and enthusiast for STEM.

With a passion to understand the impact of STEM in the world; she actively engages with the STEM industry via her Twitter Profile.

Who are you?

19/11/2019, 12:14

My name is Emilie and I'm 12. On Twitter I'm known as @STEMillie_

19/11/2019, 12:16

What are your interests?

19/11/2019, 12:20

I love engineering, especially car engineering. I also love all the sciences, especially chemistry, as it's fun and exciting because you never know what's going to go wrong or what's going to happen if you mix two different things together.

19/11/2019, 12:24

What are your aspirations & career ideas?

19/11/2019, 12:26

I really want to be an engineer. I'm not really sure what type of engineering yet as I'm only 12 so I still have so much to find out about. I know I really want to go into a STEM subject, it would be like my dream. I would especially love to work with cars because I love the whole mechanics thing.

19/11/2019, 12:32

How has RS Components inspired you to date?

19/11/2019, 12:41

RS has been a big inspiration to me this year. I went to their first STEMFEST in July and got to take part in lots of great activities and explore the Titan II truck. I also met PDC racing and since then have watched them race and even helped them in the pits on race day in Silverstone! I'm so glad that I went and it was really worth doing because sometimes you just have to throw yourself into things and you get such amazing opportunities out of it.

19/11/2019, 12:45

Who are your other inspirations?

19/11/2019, 12:52

Fran Scott has been such an amazing inspiration because she is a great scientist and engineer. Also Jemma Naumann who (like Fran) works at The Royal Institution. She is an amazing female scientist who presents science workshops to schools and public groups who visit the RI. Also PDC Racing who I met at STEM Fest, and especially Esther Quaintmere who is an outstanding female engineer and racing driver.

19/11/2019, 12:59

RS UK+I Partners

Without our amazing partners in the UK and Ireland, we would not have been able to help inspire thousands of young people at their workshops and during their campaigns. Find out more about these inspiring partners and how we RS UK+I has collaborated with them.

These partnerships vary from government bodies, non for profit organisations, learned academies and corporate organisations who's ethos and mission statements support our strategy.

These are:

ENGINEERING TAKE A CLOSER LOOK

D&T the design and technology association

IET The Institution of Engineering and Technology

CREATE Education

GREENPOWER

WISE

NSBN 2019 Northamptonshire Schools & Business Alliance

THE CAREERS & ENTERPRISE COMPANY

STEM LEARNING

CAMDEN STEAM SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATHEMATICS

TEENTECH

FIRST LEGO LEAGUE

320,000+
PARTICIPANTS

40,000
TEAMS & ROBOTS

1,450
EVENTS

90
COUNTRIES

FIRST® LEGO® League is a global STEM challenge for teams of young people, to encourage an interest in real world themes and develop key skills that are crucial for their future careers.

Young people work together to explore a given topic and to design, build and program an autonomous LEGO® robot to solve a series of missions. 2019's theme is CITYSHAPER. FIRST® LEGO® League is for young people aged 9-16 years, working in teams of up to 10 students with a supporting adult coach.

Each year FIRST® LEGO® League releases a new challenge for the teams. The challenge involves a robot game and a research project, and students will need to demonstrate the FIRST® LEGO® League Core Values throughout all their work.

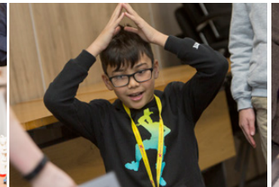
In the UK and Ireland, the FIRST LEGO League competition is co-ordinated by the Institute of Engineering and Technology

2
Number of years RS has been headline sponsor in the UK and Ireland.

15,762
Students participated the 2019/20 season across League, Junior and Discovery, UK+I

2,518
Teams participated in the 2019/20 season across League, Junior and Discovery, UK+I

In January 2020, RS hosted a 2 day regional tournament in Corby. 18 teams from local primary and secondary schools attended to compete to win a place a the England and Wales final in February 2020.



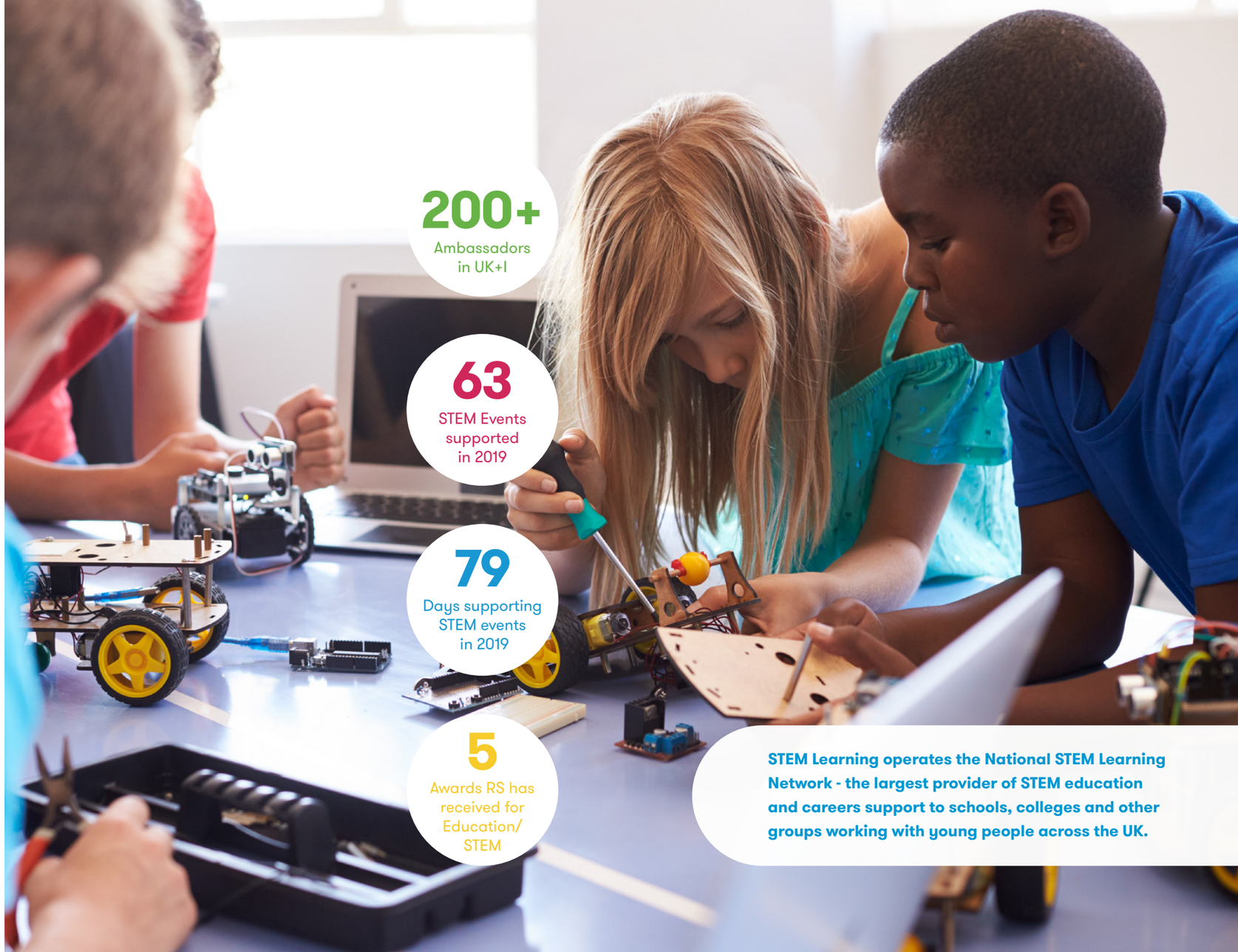
STEM LEARNING

RS Components is an excellent example of a business supporting STEM engagement. Its commitment to the STEM agenda runs throughout the company led by the dedication of the education team. Since starting their STEM programme in 2016, the company currently has over 200 registered STEM Ambassadors in the UK and is growing. Through its dedicated resources and programmes, they bring learning from business and industry into the classroom, inspiring young people and enriching teaching and learning with current and cutting-edge STEM contexts.

Employers who encourage staff to become STEM Ambassadors reap many benefits. It increases staff engagement and boosts their confidence, communication and presentation skills. Passionate employees are fantastic role models and volunteering increases Ambassadors' job satisfaction and knowledge, as well as opportunities to develop their own professional network within and beyond their own organisation or sector. STEM Ambassadors can help employers connect with local communities and build an understanding of the career opportunities they offer with teachers, families and young people but having a team or individual to co-ordinate, inspire and lead the volunteers is key to running a successful programme whether it be large or small.

Over the past year the STEM Learning and RS STEM Ambassadors have worked hard to extend both the reach and the impact of their activities and work with other partners toward a common goal but there is still more to do. Challenges for the future include tackling "cold spots" around the country that are underachieving in STEM, as well as extending social mobility, diversity and inclusion so that every young person regardless of where they live, their family background, gender or ethnic identity have an equal opportunity to be involved in STEM enrichment activities.

Judith Payne *STEM Manager*
STEM Ambassador Hub East Midlands



200+
Ambassadors in UK+I

63
STEM Events supported in 2019

79
Days supporting STEM events in 2019

5
Awards RS has received for Education/ STEM

STEM Learning operates the National STEM Learning Network - the largest provider of STEM education and careers support to schools, colleges and other groups working with young people across the UK.

institute of imagination

The Institute of Imagination (iOi) is a charity creating space to re-imagine our world, together. We run activities for children and young people, families, schools, adults and educators which combine the arts, sciences and digital technologies.

In 2019, our Imagination Lab programme received 20,000 visits and in 2020 we are aiming to engage the same numbers again in new communities and locations across London and beyond.

The iOi's biggest event in 2019 was Mega Maker Lab. At this month long-event, families tinkered, experimented, built, played and enjoyed time together across five hands-on experience zones which were designed and built by over 100 schoolchildren – our Imagination Architects. RS Components kindly donated tools which were used by children in construction workshops and tools for our Tool Bar within the experience for visitors to use in a safe environment, prototyping their own inventions. Over the month Mega Maker Lab was open, there were over 5,000 visits. For many, it was the first time they had the opportunity to use the tools available.

Catherine Cox
Development Manager, Institute of Imagination

We are multiple National champions who compete in Motorsport Events across the UK & Europe in a variety of cars and currently hold 9 National Lap Records.

In 2019 the PDC team was 22 people strong with Male & Female team members (Aged 5 – 65). Skillsets in our team include Drivers, Coaches, Engineers, Students, Electricians, Mechanics, Designers, PR, Project Managers, Planners and much more.

Our aim as a team is to have fun, compete & inspire. We are inspired by opportunity and the achievements of those around us, those who overcome challenges to achieve and prove that anyone can. We visit mainstream and special education needs schools and colleges around the UK along with supporting events to encourage and invite young people to get involved with motorsport.

During our 2019 season, we welcomed over 500 team guests at the track with a General Public attendance of over 15,000. We have reached over 100,000 people through our social media activity with hundreds engaging on a monthly basis via Driver & Team Accounts. We also attended various STEM Events across the UK.

In 2019, we were supported by RS Components and it transformed our ability to engage and inspire!

We are proud RS STEM Ambassadors

We support the programme by providing resources, advice as well as supporting Titan II, we were are able to showcase a tangible link between what we do racing and what potential careers exist in the STEM field. Motorsport in the UK is a huge industry backed by a global supply chain; RS products & behaviours fits in perfectly. Our highlight in 2019 was our 2nd place championship finish (despite only racing in 6 of the 8 rounds).

Gavin Johnson
Race Driver/STEM Ambassador, PDC Racing

PDC Racing team Sponsored by RS Components

sphero

Suitable for 7+ years

BOLT EDUCATION POWER PACK

RS Stock Number: 187-1552

Details:

Plug in. Power up. Roll out. The BOLT Power Pack lets you charge, store, and carry Sphero BOLT robots... times 15. It's loaded with Turbo Covers, Maze Tape, and Protractors, so the activities can get started anytime, anywhere.

Price Each

£2,111.47
(exc. VAT)

BOLT

RS Stock Number: 187-1549

Details:

With a striking LED matrix and advanced sensors, the Sphero BOLT app-enabled robot provides endless opportunities to be creative and have fun while learning.

Price Each

£126.68
(exc. VAT)

BOLT 15 PACK

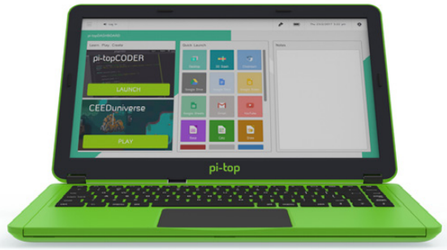
RS Stock Number: 187-1551

Details:

The Sphero BOLT 15 pack contains everything you need to get started teaching robotics and the fundamentals of programming. This special pack of 15 BOLT robots is available exclusively to educators at a discount.

Price Each

£1,646.95
(exc. VAT)



pi-top

Inventors Kit

The pi-top modular laptop provides students a platform to learn and develop coding skills that also operates as a fully functioning laptop. The modular design utilises the Raspberry Pi to provide the computing power. Included with the pi-top laptop is an inventor's kit featuring 20+ projects to help you begin experimenting with coding and electronics.

Price Each

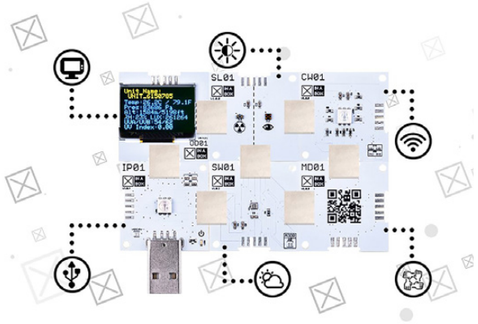
£220.99 (exc. VAT)

RS Stock Number: 146-9335

IN A BOX

STEM starter kit

The XinaBox STEM KIt gives you everything you need to build a light monitor and weather station 'edge device' that collects a range of environmental data. Build and code your environmental monitor and then connect it to an IoT dashboard to collect and analyse the data



Price Each

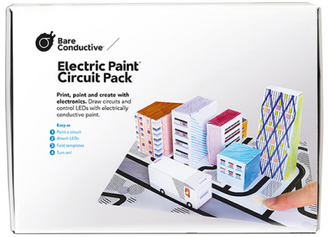
£499.17 (exc. VAT)

RS Stock Number: 190-6040

The Piper Computer Kit is the ultimate D.I.Y. computer-building experience, for ages 8-13. Build a REAL computer from start to finish while playing Minecraft: Raspberry Pi Edition to learn how to code and make STEAM connections to the real-world.

RS Stock Number: 196-1239

Price Each
£235.56 (exc. VAT)



Bare Conductive®

Electric Paint Classroom Kit

Learn how Electric Paint works and tune your electronics skills by painting electrical circuits on paper. This simple electric circuit kit comes with easy instructions and a clearly marked template, making drawing your circuit as easy as squeezing a tube and tracing a line. Add a battery to power the LED lights and bring your circuit city to life.

Price Each
£89.99 (exc. VAT)

RS Stock Number: 197-6852

MAYKU

Mayku FormBox

The Mayku FormBox is a desktop vacuum former that brings your ideas to life. It works with any vacuum cleaner and a whole selection of different materials. Use it to make molds in minutes with no additional software or digital model manipulation needed. Seeing those big ideas come to life never seemed so simple.

Price Each
£499.17 (exc. VAT)

RS Stock Number: 178-5378

Notes

STEM Education Contacts

To find out more about the RS STEM Programme and how we could help you inspire the next generation, please contact Education@rs-components.com

To download the Imagine-X lesson plans for free and see the latest Education products visit uk.rs-online.com/stem

For Titan II bookings and enquiries contact TitanII@rs-components.com

For MAX bookings and enquiries contact RMarketingDACH@rs-components.com

uk.rs-online.com/stem