

Digital/Data Industry partners for schools – Internet of Things

Throughout 2021/22 the DDI programme will begin rolling out Internet of Things sensor networks to 40+ schools across the Edinburgh City region. Eventually, all 500+ schools across the region will be offered the same network. See below for further details.

The package of network sensors will also come with a set of learning resources for teachers in each school and through a series of exciting and interactive sensor-based activities – in class, whole school and even inter-school communities – we will build skills, confidence and awareness of real-world data gathering and use.

In order to support this ambitious roll out, we are looking for industry partners across the city region who have skills and experience of data-rich and data-driven workplaces and can share how data is gathered and analysed in the world of work – connecting classroom learning to real world application.

Internet of Things – expert mentor– collaboration partnership

Description of Activity:

- Volunteers can act as a visiting environmental/scientific expert for indoor and outdoor environmental projects
- Listen to learners plans to collect and analyse environmental data and comment accordingly
- Discuss measures proposed by learners to improve learning environments
- Provide mentorship and support to a partner IoT school and lead teacher
- Become familiar with the learning and teaching packs available to the IoT schools
- Be willing to support the teachers one day a month to run classroom activities using the school's sensor network

Expected Commitment:

- Ideally approx. 1 day per month or 10 days in an academic year.
- Willingness to travel to and work in either a primary or secondary school.
- Willingness to work directly with young people and their teacher for the duration supporting in class, whole school activities
- Disclosure Scotland PVG check would be required.

Support provided

Industry volunteers will receive support from the Data Education in Schools and the DDI Skills Gateway teams. This support includes orientation into the classroom environment, introducing classroom skills and ongoing engagement throughout the initiative.

The programme has the potential to sit within existing DYW activity across schools. This would be a pilot year for industry engagement so we would be looking for a collaborative approach to ensure it is effective, impactful and of value to both schools and employers.

Benefits for Individuals

- Contributing and building connections to the local community
- Sharing your passion in data science with young learners
- Applying expertise to a meaningful learning context
- Acting as an ambassador for tech-based career opportunities
- Experience of working with young people in a classroom setting
- Build personal confidence and communication skills with young learners

Anticipated Benefits for Employers

- Building community links with local schools
- Providing the real-world context of your industry/business area to school learning
- Developing the communication / presentation and creativity skills of employees
- Influencing skills sets acquired by school pupils and their teachers
- Helping to improve future diversity of representation across tech roles
- Raising brand awareness within your talent pipeline

Anticipated Benefits for Schools

- Additional “real world” expertise in new and important areas of data science to support teaching and learning.
- Access to industry role models and world of work experience and insight.
- Contacts within industry to support local initiatives
- Possible future placements for pupils

INTERNET OF THINGS IN SCHOOLS

A briefing for Senior Leadership in Schools and Councils

Bringing the latest sensor technology into the classroom

Internet of Things (IOT) and data technology

There are over 20 billion internet connected devices across the planet.

Working with sensors and data is likely to be commonplace in most aspects of learning, life and work. This project empowers learners and teachers with the latest sensor technology in and around the classroom.

Pilot projects in Midlothian Schools

1
phase

Newbattle High School and Roslin Primary were the first to trial the latest sensor technology in 2019-21. Learners and teachers worked with engineers, data educators and technologists to design suitable classroom solutions.

Learners investigated real-world environmental problems.

2
phase

Up to 40 schools across southeast Scotland

Half a dozen schools in each local authority area will be offered indoor environment sensors and associated support. (Sep 21 - Mar 22)

Some schools will also have outdoor air quality monitors, soil moisture sensors and weather stations.



3
phase

On offer to all city region schools

All 550 schools across Edinburgh and south east Scotland will be offered the latest sensor technology bundles, data visualisations and lesson guides. (from Apr 22)

Support is available to learners and teachers through the Data Education in Schools Team, Moray House.

University of Edinburgh 2021

