



Fife College

# Unlocking the World of STEM!

From the precision of doctors to the creativity of software developers, and the analytical minds of accountants – what's the common thread? The dynamic world of Science, Technology, Engineering, and Mathematics (STEM)!

Dive into the realm of STEM, where curiosity meets innovation, and logic dances with determination. Whether it's the bustling life sciences sector or the ever-evolving world of finance, STEM paves the way for exhilarating careers.

At Fife College, our mission is clear: bridge the STEM skills gap and spark interest from a young age. With our seasoned lecturers and top-notch facilities, we're turning classrooms into playgrounds of discovery. Dive into real-world scenarios, get hands-on with our £400,000 worth of tech wonders, and watch STEM come alive in our interactive workshops. Oh, and did we mention? Many of our sessions are aligned with CFE outcomes!



# Where STEM Dreams Begin!

Imagine consolidating all that primary school knowledge with a sprinkle of STEM magic! Our events are more than just learning; they're adventures. Dive into activities rooted in Scotland's vibrant renewable energy scene or the buzzing gaming hubs of Edinburgh. We're here to paint a picture where every young mind sees a future in STEM.

Activities for P6 & P7 students:

## Ecology Box

Go green-fingered growing your own plants, and experimenting with the best growth conditions, while learning about photosynthesis.

## Crystal Box

Turn your classroom into a chemistry lab and be amazed as your crystals slowly grow.

## Creators Club: Virtual Coding Club

A full year of coding for your class that develops knowledge and understanding of the key software languages and tools associated with web development.

## Green Energy Box

Combat climate change by producing power from solar and water resources. Use the energy you create to power a race car!

## Construction Box

Build real houses with reusable mini bricks and mortar. Try your hand at interior design and furniture making to complete your new building!

## Exploring Wind Power

Students will explore wind power and find out more about a wind turbine called Poppy.

## Exploring Energy Storage Through Hydrogen

Pupils learn about one downside of renewables: intermittency. By being introduced to the concept of energy storage, the pupils will learn how this can be used as a solution.

## Science Workshops

A range of exciting STEM activities within the areas of Biology Chemistry Physics and Mathematics.

# Beyond the Tech: The Heart of STEM!

STEM isn't just about circuits and formulas; it's about shaping thinkers and doers. Dive into:

## Critical Thinking

Open-ended questions in our STEM events? They're your ticket to honing critical thinking and problem-solving prowess.

## Real-world Magic

Discover how STEM knowledge transforms into real-world solutions. Be the change-maker!

## The Joy of Discovery

Let STEM fuel your curiosity and wonder. Who knows? It might just be the start of a lifelong learning journey.

## Building Confidence

Tackling challenges head-on, together. Watch as every solution boosts confidence and resilience.

# Your Next STEM Adventure Awaits!

School College Partnership courses offer an integrated inclusive curriculum designed to increase your understanding of related industry sectors through engaging in workplace knowledge and practices at various SCQF levels.

All our School College Partnership courses offer a progression on to further SCP courses and/or a full-time college course or apprenticeship.

Foundation Apprenticeships is an innovative career pathway allowing S4, S5 and S6 pupils to learn the skills that employers want and need, and pick-up real-life work experience.

Working with our partners we aim to ensure young people on our programmes have access to educational experiences that are work-relevant and support continuous skills development.

Find out more about our School College Partnerships and Foundation Apprenticeships at [fife.ac.uk/schools](http://fife.ac.uk/schools)

# Activities for S1 to S6 pupils

## **Beginners Online Course Unreal Games Development**

Have you got a class of young people who love playing computer games? This online course is an introduction to developing computer games using the Games Engine Unreal. Combining creativity and technical skills this course is a great way to let participants see how their hobbies can be turned into great career opportunities.

## **DataFit**

*Target Year Group: P7 to S3*

Learn how to use and understand your health data to develop good health choices.

## **Health Data & Diagnostics**

*Target Year Group: S1 to S4*

This activity lets participants use health data to define the care needs of simulated patients, linking STEM to careers and courses in Health and Social Care.

## **SpeedySTEM**

*Target Year Group: S1 to S3*

Join Fife College and partners for an entire day of STEM activities. The events mix interactive engineering challenges, science experiments and construction techniques with talks and demonstrations from partners organisations including industry representatives and universities.

## **Investigation of Bioterrorism**

*Target Year Group: S1 to S3*

A Forensic and Laboratory Experience. It will encompass a Bioterrorist attack scenario, forensic investigation of the scene and the identification of both Chemical and Biological Weapons.

## **Drone Demonstration**

*Target Year Group: S1 to S3*

Participants will learn about the main components of a drone, understand the basic functions, and see a flying demonstration.

## **Sketching and Drawing - studio workshop**

*Target Year Group: S3 to S6*

Participants can develop their sketching and drawing skills around furniture design, architecture, or interior design. They get a chance to tour the college and find out more about the education and employment opportunities.

## **Forensics for Criminologists**

*Target Year Group: S3 to S6*

We concentrate on crime scene examination, first considerations at a crime scene, roles of professionals who investigate a scene and coverage of forensic theory and evidence analysis.

## **Esports Tournament**

*Target Year Group: S3+*

Pupils will use state of the art hardware, learn teamwork and planning, practice sportsmanship, and learn to reflect and maintain a growth mindset of continuous improvement.

## **Introduction to Internet of Things**

*Target Year Group: S3+*

Mini sensors are starting to connect our world. From Apple Airtags to your smart meter, “things” are now connected to the internet helping us make decisions, find things, and understand how things work. This online course teaches pupils more about digital transformation within the economy along with security concerns when implementing internet of things skills to transform businesses.

## **Introduction to Cyber Security**

*Target Year Group: S3+*

This online course gives pupils an understanding of the internet, computers, and social media, contributing to their digital skills.

## **Introduction to 3D Computer Modelling and Printing**

*Target Year Group: S3+*

Pupils will learn about the principles of 3D modelling and 3D printing including using modelling software and different file types required to print their 3D model.

## **Introduction to Raspberry Pi**

*Target Year Group: S3+*

The Raspberry Pi is a simple computer that helps people develop an understanding of coding. This online course will introduce learners to the knowledge and skills required to use a Raspberry Pi. The course covers programming languages Python and Scratch (JavaScript).

## **Get Connected**

*Target Year Group: S3+*

This online course gives pupils an understanding of the internet, computers, and social media, contributing to their digital skills.

## **Learn to be a Construction Manager**

*Target Year Group: S4 to S6*

Participants take part in a problem-based scenario where they develop a budget for a new building design. This event is a great way to contextualise maths learning in a fun and relatable way. Participants can see the application of maths into careers in construction and learn about the different elements of developing and managing a budget.

## **Building Trades Experience Event**

*Target Year Group: S4 to S6*

Participants will take part in a range of activities that link STEM skills to construction jobs. Learn to mortar bricks, build different structures, and understand how to make design decisions.

## **Design**

*Target Year Group: S4 to S6*

Participants are invited to the College to design a house using specialist software. They learn how software is used in a professional context to develop new building designs and internal layouts. Young people will receive a tour of the College and will be provided with information about progression pathways and career opportunities in the construction sector.

**SCHOOL  
COLLEGE  
PARTNERSHIP**

# Find out more about our School College Partnerships and Foundation Apprenticeships at [fife.ac.uk/schools](https://fife.ac.uk/schools)

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The information published in this guide was correct at the time of print.  
For the most up-to-date information, you should always check our website.

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