

# Hyett Education Workshops

We deliver exciting, engaging, educational STEM workshops for students all over the UK. Typically we are in three schools each day, aiming to inspire tens of thousands of students annually.

## Beginner STEMbotics: Robotics & Coding Workshop with LEGO WeDo 2.0 or Spike Essentials (KS1-LKS2)

Students can build from instructions on hundreds of designs, or get creative and build their own robots. Once built, the LEGO robots are capable of moving and detecting other objects using motion and tilt sensors using icon or block coding.

We take a very cross-curricular approach to our sessions and will happily adapt our workshops to suit your class topics and themes. These sessions have particularly strong links to the computing curriculum, design and technology curriculum and science curriculum.



For these sessions we typically use LEGO WeDo 2.0 equipment for KS1 and LEGO Spike Essentials for LKS2. Sessions are differentiated by complexity of robots and coding. Shorter sessions limit the robot builds possible.

### Recommended Format:

- 2-3 sessions per day (approx 75-120 mins each).
- Up to 34 children working in pairs.
- Can be delivered in the classroom or hall. Access to a screen/projector required.

### Taster Experience Format:

- 2-3 sessions per day (approx 75-90 mins each).
- Up to 60 children per session working in threes.
- Hall or other large space required to accommodate 2 classes. Access to a screen/projector required.

**Cost: From £597/day ex VAT**

## Intermediate/Advanced STEMbotics: Robotics & Coding Workshop with LEGO EV3, RI5 or Spike Prime (UKS2-KS4)

Our Intermediate / Advanced robotics and coding workshops provide students with opportunities to code, design, engineer and build their own robots, in both simple and complex forms.

We can set challenges that are tailored to your school's needs and these workshops have curriculum links to Computing, Design Technology, Engineering and Science.

Our sessions are adapted according to the age and experience of students to ensure all learners have a great time building and coding their robots to compete with their peers.

For younger students we use entry-level block coding, progressing to Scratch-style programming blocks as well as Python coding in KS3-KS5.

Students can incorporate a range of motors, touch sensors, colour sensors, ultrasonic sensors and more into their designs to build robots that are capable of taking on a range of briefs. We also have bespoke challenge floor mats for students to test their coding and problem-solving skills.

### Recommended Format:

- 2 sessions per day (approx 2-2.5hrs each).
- Up to 40 students/session working in pairs or up to 60 students/session working in threes.
- A longer session allows students greater ability to design and engineer their own robots, including making use of a range of sensors.
- Hall required for coding challenge floor mats. Access to a screen/projector required for modelling.

### Taster Experience Format:

- 3 sessions per day (approx 90 mins each).
- Up to 60 students/session working in threes.
- Students build a simple vehicle robot from instructions and code it around our challenge mats. Opportunity to modify the robot and implement sensors.
- Hall required for coding challenge floor mats. Access to a screen/projector required for modelling.

**Cost: From £647/day ex VAT**

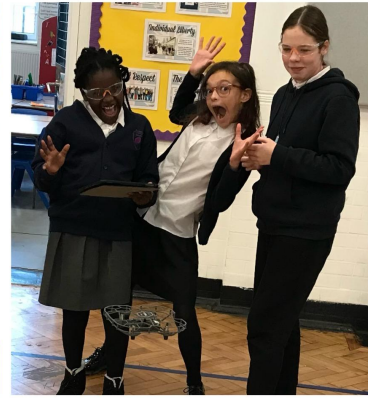


## STEMdrones: Drone Coding Workshop (UKS2-KS5)

Students taking part in our Drone Coding workshop will learn to code the flight patterns of their drones using block programming or Swift coding language (used to develop apps on iPhone and iPad).

They'll provide algorithms to their drone to make it take-off, land, do flips and somersaults, as well as navigate different altitudes and distances to make its way safely around a course or to perform a coordinated routine.

We limit the number of students in session to 30 for both safety and technical reasons.



Safety goggles are provided to all participants and a risk assessment can be provided for booking schools.

### Recommended Format:

- 3 sessions per day (approx 90 mins each).
- Up to 30 students per session working in threes.
- Hall and access to a screen/projector required.

### Advanced Format:

- 2 sessions per day (approx 2hrs each).
- Up to 30 students per session working in threes.
- Longer session allows time for students to code more advanced flight patterns.
- Hall and access to a screen/projector required.

**Cost: From £747/day ex VAT**

## Electricity & Circuits Workshop (KS2)

This workshop will introduce primary school children to electricity and circuits by interacting with and building with Snap Circuits. Students in KS2 will cover objectives from the national curriculum in Science.

The workshop will cover the following objectives from the national curriculum in Science:

- Identify common appliances that run on electricity
- Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- Recognise some common conductors and insulators, and associate metals with being good conductors



Challenges can include the use of resistors (various ohms), alarms, speakers, buzzers, switches (buttons and sliders), motors and fans amongst others. The workshop is easily adaptable and can be differentiated for SEN learners and Gifted and Talented learners.

### Recommended Format:

- 2 sessions per day (approx 2-2.5hrs each). Up to 34 students per session working in pairs.
- Students will produce an eBook documenting their learning journey which can be shared with schools for evidence. The eBook will show students' circuit drawings, predictions and findings, plus photo and video evidence.
- Access to a screen/projector required for modelling.
- Can be delivered in the classroom.

### Taster Experience Format:

- 3 sessions per day (approx 90 mins each) with up to 50 students working in threes
- Students will produce a simple eBook document for evidencing their work with photos and videos.
- Access to a screen/projector required for modelling.
- Hall required for delivering to groups of more than one class at a time.

**Cost: From £647/day ex VAT**

## STEM Carousel (KS1-KS2)

STEM Carousel workshop provides students with a range of exciting, team driven engineering challenges to engage with and complete.

Generally students will have 45mins to 1 hour at each activity station and there are a variety of different station options available to schools.

Standard challenge options are:

- **Tower Challenge:** Students work in teams to construct the tallest tower using straws.
- **Architecture Challenge:** Students use wooden blocks to construct their own bridge or free-standing structure.
- **Electronics Challenge:** Students work to build a variety of different electronic circuits using bulbs, motors, resistors, switches, alarms and many more.
- **Robotics Coding Challenge:** Students are tasked with coding a robotic vehicle around a course.
- **Animation Station:** Students work to produce short LEGO animations using iPads.
- **Hydraulics Challenge:** Students work from instructions to build a hydraulics actuation system for an aircraft. When complete, they should be able to operate their aircraft's landing gear, brakes, ailerons and flaps. This activity requires access to water and a non-slippery surface. (Limited availability)



### Recommended Format:

- Full day workshop with up to 64 students
- Students will be in groups of 15 and will rotate to a new activity every hour (approx)
- Hall and screen/projector required

**Cost: From £997/day ex VAT**

## Stop-Motion Animation Workshops (KS1-KS2)

Animating is a wonderful way to tell creative and fun way to tell stories in the classroom and there are many different styles that can be used in the classroom to engage learners in their topics.

Our stop-motion animation workshops do just that and support the coverage of the following computing curriculum objectives in ks1 and ks2:

- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school



select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

We can bring animation to your classroom as part of a workshop for your students or as CPD for teachers, to watch and learn how to implement animation into the computing curriculum or embed it as part of a cross-curricular approach.

We teach students animation using any of the following options:

- LEGO animations
- Paper & drawing animations
- Digital flip book animation
- Play Doh animations

Students will be taught how to use age appropriate animation software to create animated works linked to their topics. Depending on time, students may also create storyboard ebooks to plan their animation stories, shots and techniques.

### Recommended Format:

- 2 sessions per day (approx 2-2.5hr each)
- Up to 34 children working in pairs

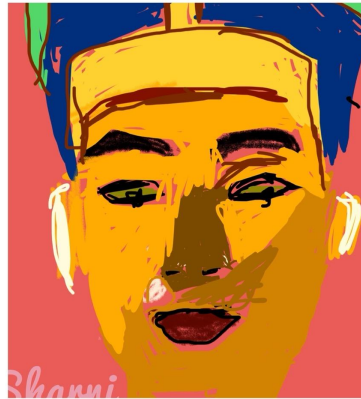
**Cost: From £597/day ex VAT**

## Digital Art & Photography Workshops (KS1-KS2)

Our Digital Photo Art & Editing workshops present a variety of creative challenges to children combining both art and computing skills. Students learn about different photography techniques and use technology to apply them to their own creations.



Students also use age-appropriate software to manipulate their own images to create pieces linked to their topics. For example, students studying a Space theme are able to use their newly developed skills to manipulate and edit images to make it look like they are walking on the moon alongside Neil Armstrong.



Learners can also take part in a creative portraits digital art session, whereby they use their own images or those of historical figures, to create modern portraits capable of talking and presenting information.

By the end of every workshop each child will have a creative digital masterpiece they can be proud of, as well as developing new digital skills linked to art and the computing curriculum.

We can adapt this workshop to any topic, so if you have any questions about how we could apply this workshop to your curriculum, please get in touch.

### Recommended Format:

- 2 sessions per day (approx 2-2.5hr each)
- Up to 34 children working in pairs

**Cost: From £547/day ex VAT**