



**Collaborative
Computing
Education**

Learn • Collaborate • Innovate

After-School Minecraft Education Club

Programme of Work — Key Stage 2 (Years 3–6)

A full-year, six-term programme using Minecraft Education to build computing, creativity, collaboration and problem-solving skills. Every term has an exciting theme with clear objectives and pupil tasks — so you know exactly what your pupils will be learning.

Provider: Collaborative Computing Education Ltd

Age range: 7–11 (Years 3–6, mixed ability)

Structure: 6 themed terms · approx. 6 sessions each · 45–60 mins

Club size: Up to 15 children per club

Price: £300 per term

Included: Laptops & Minecraft Education licences provided

Staffing: Enhanced DBS-checked leader · fully insured

Curriculum links: Computing, D&T, STEM, Geography, History, PSHE

Programme at a Glance

The club runs across all six terms of the school year. Each term has its own exciting theme that builds children's confidence step by step beginning with design and technology, moving into engineering and mechanics, then into coding and algorithms. Activities are pitched for mixed-ability KS2 groups, with support for beginners and extension challenges for confident builders.

Term	Theme	Pupils Will...	Key Skills
Term 1	Eco Forest: Guardians of the Living Forest	Design & build a thriving eco-forest habitat (D&T).	Design thinking, sustainability, creativity
Term 2	The Secret Sensory Garden	Design a sensory garden full of sights, sounds & textures (D&T).	Design criteria, planning, empathy
Term 3	Rails of the Revolution	Engineer working railways and powered transport.	Engineering, mechanisms, problem-solving
Term 4	Master Builders of the Mighty Castle	Construct a castle with working defences & mechanisms.	Structures, redstone, teamwork
Term 5	The Academy of Code & Magic	Cast "spells" using block code to automate the world.	Algorithms, coding, computational thinking
Term 6	The Living Aquarium Algorithm	Code a living aquarium that runs by itself.	Algorithms, loops & logic, debugging

How each unit is structured: Every term has an exciting theme, a learning objective, a set of pupil tasks, the computing and wider skills developed, and an outcome pupils work towards and share. The program is flexible sessions can be stretched or shortened to fit your club times and term dates.

Term-by-Term Programme of Work

TERM 1 · DESIGN & TECHNOLOGY · APPROX. 6 SESSIONS

Eco Forest: Guardians of the Living Forest

Objective: Pupils become forest guardians, designing and building a thriving woodland habitat. They plan to a design brief and learn how good design supports nature and sustainability.

PUPIL TASKS

- Explore real habitats and what living things need
- Sketch a plan for their eco-forest zone
- Build trees, ponds, dens and shelters for wildlife
- Add features that help the forest thrive (water, light, food)
- Tour each other's forests and suggest improvements

SKILLS DEVELOPED

Design thinking Sustainability Creativity
Collaboration

END-OF-UNIT OUTCOME

A flourishing eco-forest habitat built to a design brief, with pupils able to explain how their design supports living things.

TERM 2 · DESIGN & TECHNOLOGY · APPROX. 6 SESSIONS

The Secret Sensory Garden

Objective: Pupils design a magical sensory garden bursting with sights, sounds, textures and calm spaces — thinking about how design makes people feel.

PUPIL TASKS

- Discuss the five senses and calming spaces
- Plan a garden with paths, zones and seating
- Build colourful planting, water and sound features
- Use blocks and lighting to create different moods
- Add signs guiding visitors around the garden

SKILLS DEVELOPED

Design criteria Planning Empathy
Evaluation

END-OF-UNIT OUTCOME

A finished sensory garden meeting the brief, with pupils able to describe how each zone appeals to the senses.

TERM 3 · ENGINEERING & MECHANICS · APPROX. 6 SESSIONS

Rails of the Revolution

Objective: Pupils become railway engineers, building working rail networks and powered transport — discovering how machines and mechanisms move people and goods.

PUPIL TASKS

- Explore how rails, power and switches work
- Lay track and build a working powered railway
- Design stations, bridges and tunnels
- Solve a transport challenge across tricky terrain
- Test the network and fix what doesn't run smoothly

SKILLS DEVELOPED

Engineering Mechanisms Problem-solving
Resilience

END-OF-UNIT OUTCOME

A working railway network that moves carts across the map, with pupils able to explain how their mechanisms work.

Master Builders of the Mighty Castle

Objective: Pupils engineer a mighty castle with working defences and mechanisms — combining strong structures with redstone-powered gates, traps and lights.

PUPIL TASKS

- Investigate castle features and why they're built that way
- Plan strong walls, towers and a keep
- Build a working drawbridge or gate with redstone
- Add defences, lighting and clever mechanisms
- Stress-test the castle and improve weak points

SKILLS DEVELOPED

Structures Redstone logic Teamwork
Problem-solving

END-OF-UNIT OUTCOME

A mighty castle with at least one working mechanism, with pupils able to explain their structural and engineering choices.

The Academy of Code & Magic

Objective: Pupils join an academy of code wizards, casting “spells” with block coding (MakeCode) to automate building and bring the world to life.

PUPIL TASKS

- Open the Code Builder and run a first “spell”
- Use the Agent to build shapes and patterns with code
- Use loops to repeat magic efficiently
- Add events and conditions (if...then) to spells
- Create a coded mini-project of their own

SKILLS DEVELOPED

Algorithms Coding Computational
thinking Debugging

END-OF-UNIT OUTCOME

A working coded “spell” or project built in MakeCode, demonstrating pupils’ grasp of sequences, loops and debugging.

The Living Aquarium Algorithm

Objective: Pupils code a living aquarium that runs by itself — applying everything they’ve learned to build, automate and present a self-running underwater world.

PUPIL TASKS

- Plan an aquarium with zones and sea life
- Build the tank, coral and underwater scenery
- Use code to spawn, move and manage the sea life
- Combine loops and conditions to make it self-run
- Present their living aquarium to the club (and parents)

SKILLS DEVELOPED

Algorithms Loops & logic Creativity
Presenting

END-OF-UNIT OUTCOME

A self-running coded aquarium presented to an audience — a celebration of pupils’ coding, creativity and teamwork.

What schools can expect: £300 per term for a club of up to 15 children, with laptops and Minecraft Education licences provided. Sessions are led by an enhanced DBS-checked leader and we are fully insured. All planning and resources are included, activities are differentiated for mixed-ability groups, and themes can be adapted to match your school's curriculum or topics on request.

About your Club Leader

Hi, I'm Jake, founder of Collaborative Computing Education and the person who will personally deliver your club very week. I'm a qualified primary school teacher with 14 years' experience in the UK and internationally, and I hold an MSc in Education (Learning Technology & Society). As a Minecraft Education specialist, I plan and run every session myself, so your pupils get a consistent, familiar and friendly face each week. I'm enhanced DBS-checked and fully insured.

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If you'd like to find out more and arrange an informal chat about bringing the club to your school, please get in touch at info@collaborativecomputing.co.uk — I'd love to hear from you.