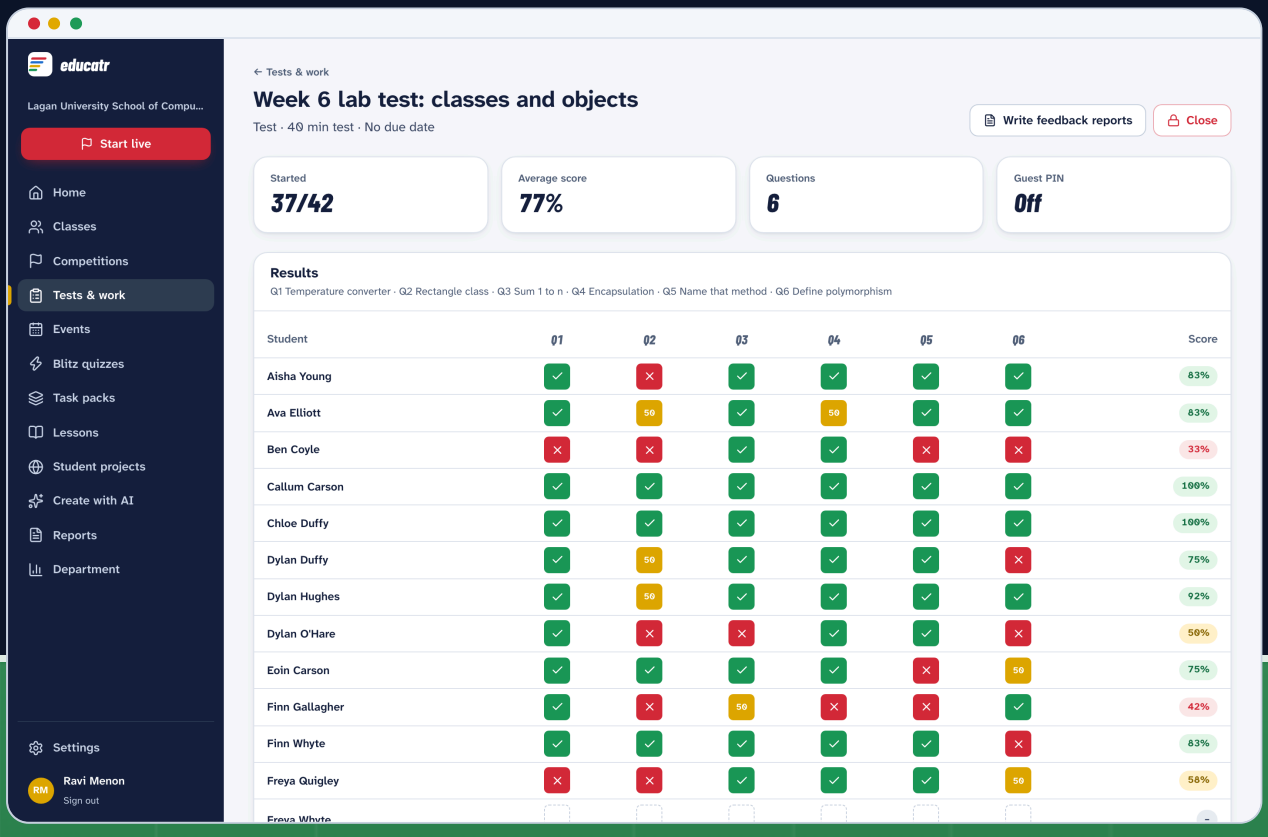
Programming labs that mark themselves, at module scale

Timed lab tests with hidden tests and checker programs, multi-file projects, cohort-wide results and written feedback, in any of fourteen languages.

The Educatr guide for universities and colleges



Educatr at a glance

Educatr is a coding platform for learning, practising and competing, built in Northern Ireland for UK and Irish classrooms. Here's what it means for universities and colleges.

1 **Hidden tests and checkers**
Mark against visible and hidden test cases or a checker program you write.

2 **Timed lab tests**
Per question or for the whole test, on a server clock.

3 **Students' own projects**
Multi-file programs saved as they type, run together on the server.

4 **Cohort-wide view**
Every student and every question in one grid, exportable reports.

Free	14	11	UK
for one class of 35, for good	programming languages, plus OCR pseudocode	task types, all auto-marked or AI-checked	hosted; pupils' names never sent to AI

Why computing schools choose Educatr

First-year programming modules are large, and lab marking is where teaching time disappears. Feedback arrives after students have moved on, and generic online judges don't fit a module's own assessment design.

Educatr marks code the moment it's submitted against your test cases, including hidden ones, or against a checker program for problems with more than one right answer. AI can draft checkers and tests from a plain-English description, and everything arrives as a draft for you to review.

Students keep their own multi-file projects between labs, so practice and assessment happen in the same place.

An example: a week of CSC1001

How a first-year module might run at Lagan University, our fictional demo university. Every screen in this brochure is the real product.

Mon

Lecture and practice set

The lecturer publishes an algorithms practice pack with hidden tests, due Friday.

Tue

Projects between labs

Students build a two-file C# bank account class in their project space, running it with a terminal.

Wed

Lab test

A timed lab test on classes and objects. Every submission is marked instantly; results appear in one grid.

Thu

Feedback

Students see per-test results and written feedback on topics to practise; the lecturer sees who needs support.

Fri

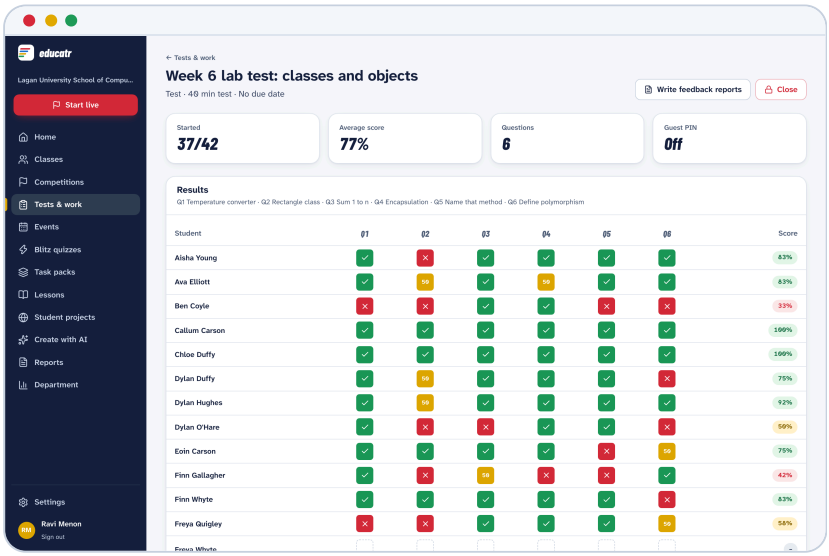
Review

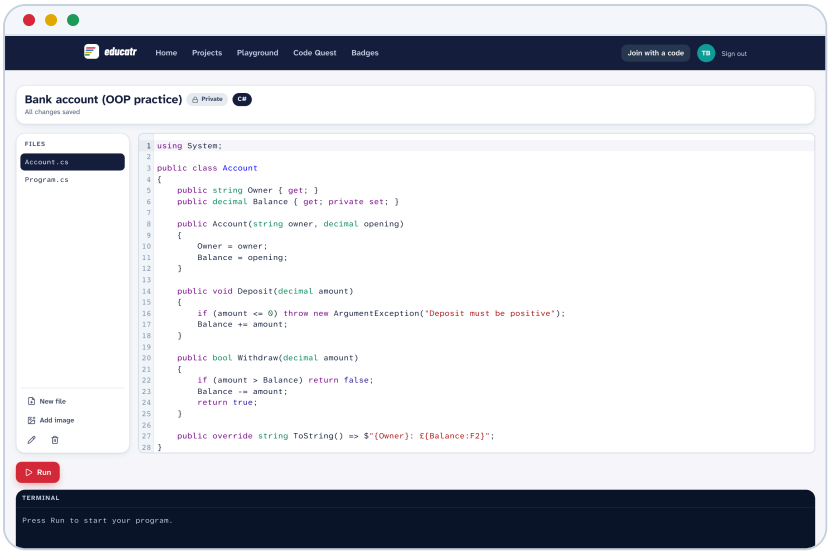
Staff override the few marks that need a human eye and export the class report.

Lab tests with hidden tests

Each code question runs against visible tests students can see and hidden tests they can't. For open-ended problems, write a checker program, or describe the rules and let AI draft one.

- ✓ Per-question or whole-test timers
- ✓ Paste and focus signals for academic integrity
- ✓ Override any mark





Multi-file projects

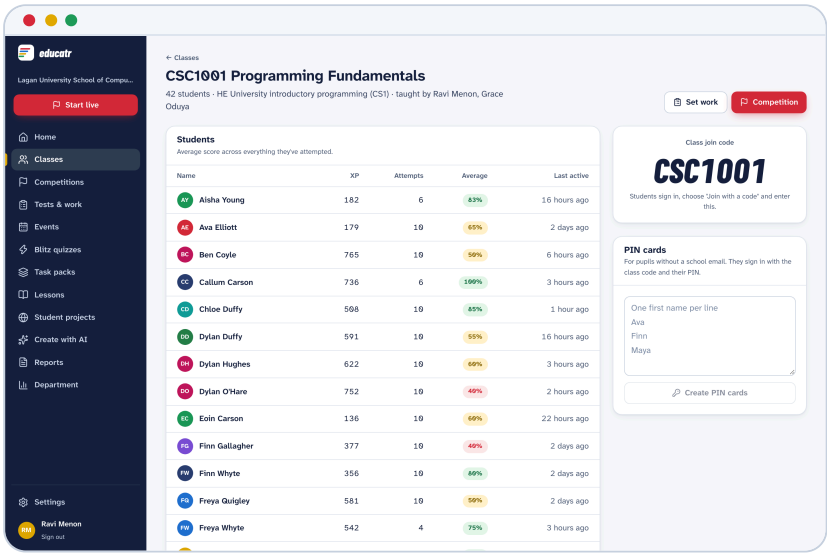
Students create projects in their own space and split code across files, which run together on the server with a terminal and program input. Staff can open any project read-only.

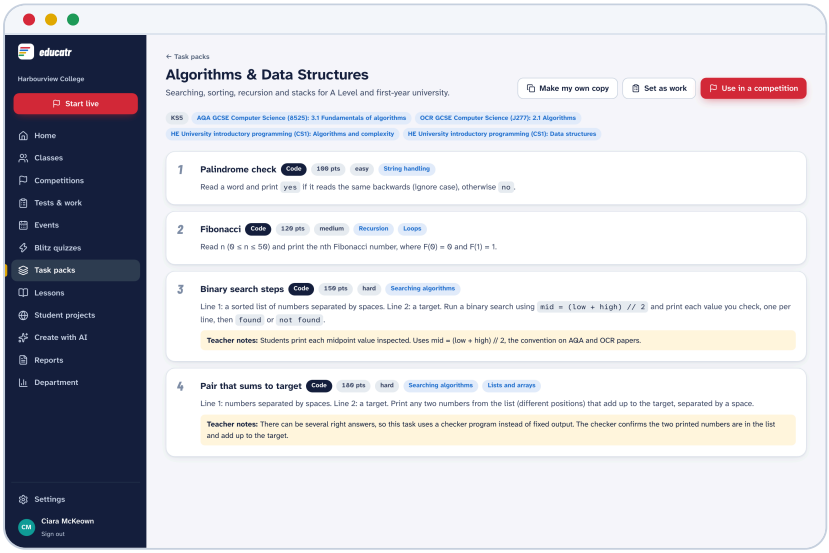
- C#, Java, Python, C, C++, Go, Rust and more
- Saved as they type
- Up to 30 projects per student

The whole module in one class

Students join with a code or their Microsoft account. Colleagues join your organisation with an invite code, and you follow activity across the term.

- Activity and results per student
- Class and student reports with PDF export
- Weekly activity





Algorithms and data structures

The built-in Algorithms & Data Structures pack covers searching, sorting and complexity, and every task type (Parsons, predict-the-output, trace tables) is available for your own material.

- Remix library packs into your own
- Generate practice from a lecture's notes or a web page
- Capture-the-flag puzzles for societies and outreach

Competitions for societies and outreach

Run a capture-the-flag evening for the computing society, or an outreach day for local schools, with the Arena on the lecture theatre screen.

- ✓ Guests join with a code and a first name
- ✓ Teams formed automatically or by you
- ✓ Events with applications or school entries



Ways to run it

The formats universities and colleges use most. Every one is included in every plan; watch each of them working at educatr.app/formats/.

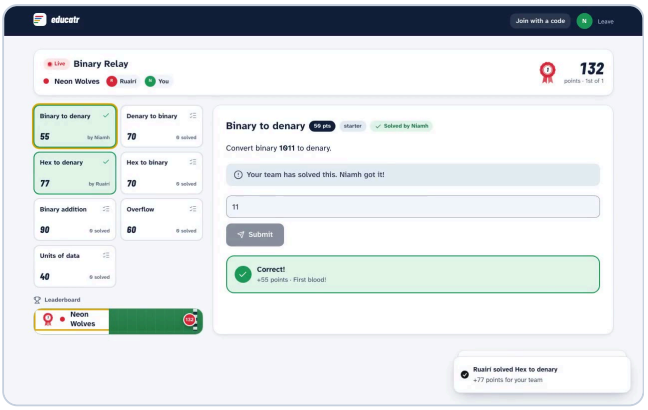


The Arena

A capture-the-flag style race between teams, with the leaderboard, race chart and star performers on the whiteboard.

Good for: End-of-topic competitions, enrichment days, house cups and outreach events

Watch it: educatr.app/formats/#arena

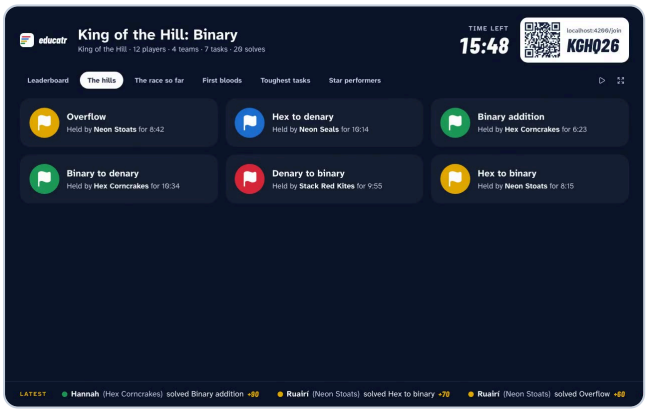


Team play

What pupils see in a competition: the task board, instant marking and their teammates' solves arriving in real time.

Good for: Mixed-ability classes where everyone can contribute to the team

Watch it: educatr.app/formats/#team-play

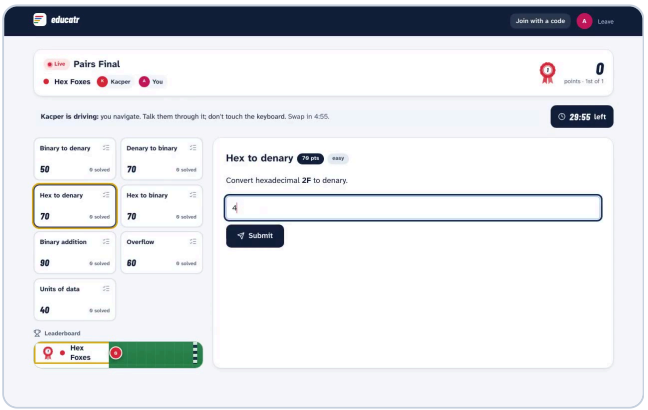


King of the Hill

Every task is a hill. Solve it to capture it, then keep scoring for every minute you hold it, until another team takes it from you.

Good for: Lively end-of-unit battles and house competitions where the lead keeps changing

Watch it: educatr.app/formats/#koth

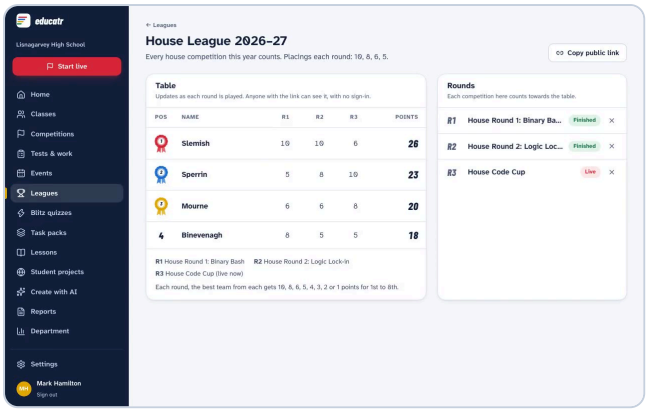


Countdowns and pair roles

Give a competition a countdown, freeze the leaderboard for a tense finish, and have pairs swap between driver and navigator on a timer.

Good for: Pair programming, timed finals and competition days with a fixed timetable

Watch it: educatr.app/formats/#roles

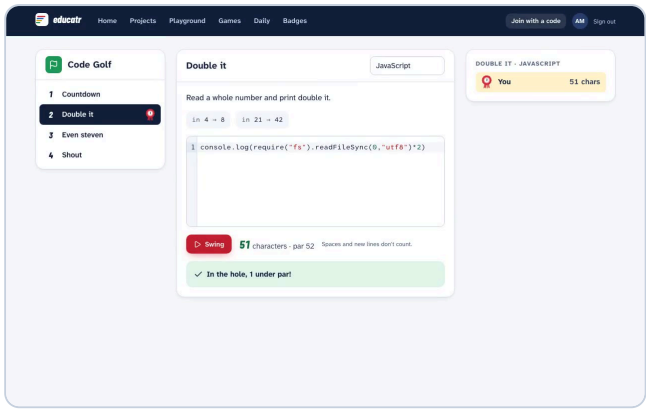


Leagues

One table across several competitions: a house cup over the year, a termly inter-form league, or an inter-school league with a round each half term.

Good for: House cups, inter-school leagues and summer schemes that run over several weeks

Watch it: educatr.app/formats/#leagues

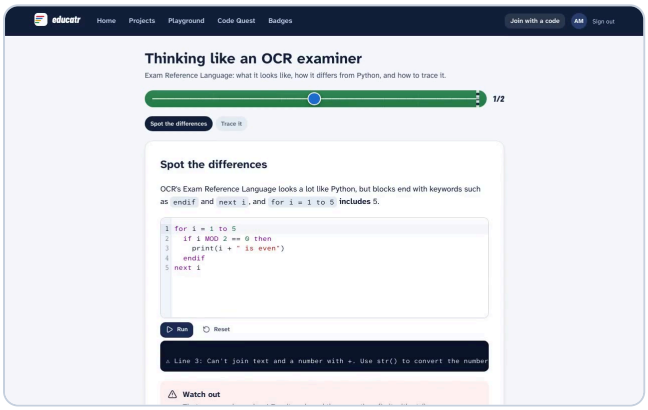


Code Golf

Make the program work in as few characters as possible. Every swing runs against the hole's tests, and beating par earns a rosette.

Good for: Stretching confident coders and lunchtime coding clubs

Watch it: educatr.app/formats/#code-golf

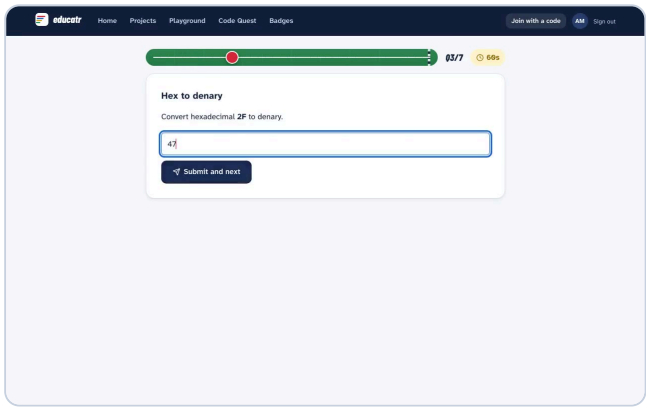


Lessons with checkpoints

Step-by-step lessons with code examples pupils can run, tips, exam tips and checkpoint questions marked as they go.

Good for: Introducing new ideas, cover lessons and flipped learning

Watch it: educatr.app/formats/#lesson

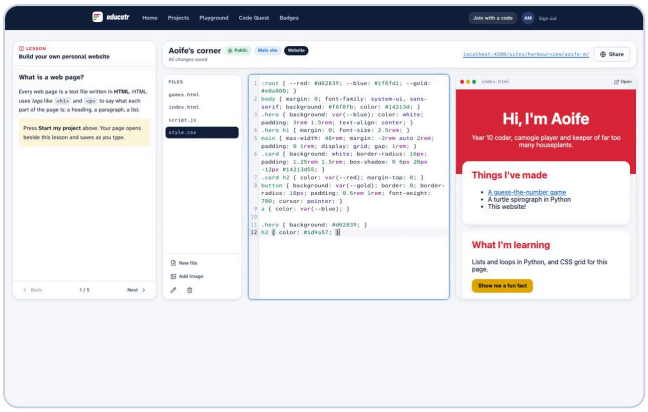


Timed tests

One question at a time on a server clock, per question or for the whole test, marked the moment each answer goes in.

Good for: End-of-unit checks, lab tests and mock exam questions

Watch it: educatr.app/formats/#test

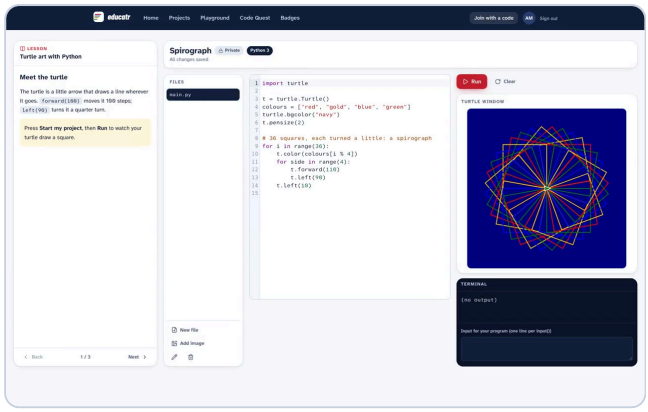


Website projects

Pupils build real websites with a live preview beside their code, and can share them with a link when they're proud of them.

Good for: KS3 web units, coding weeks and portfolio projects

Watch it: educatr.app/formats/#website



Turtle art and code projects

Programs in any of fourteen languages saved as projects; Python turtle programs draw in a window beside the code.

Good for: Loops and patterns at KS3, OOP practice at A Level and university

Watch it: educatr.app/formats/#turtle

Everything in Educatr

Every feature available today, starting with the ones universities and colleges use most. Nothing here costs extra: the free plan has limits on classes, competitions and AI credits; paid plans lift them.

Coding in the browser

Nothing to install. Works on Chromebooks, C2k and locked-down suite PCs.

- ✓ Fourteen languages run in a sandbox: Python, C#, Java, VB.NET, JavaScript, TypeScript, C, C++, Go, Rust, Ruby, PHP, Lua and Bash
- ✓ OCR Exam Reference Language runs for real, with step-through and an automatic trace table
- ✓ Code marked against visible and hidden test cases, or a checker program, with per-test results
- ✓ Live HTML, CSS and JavaScript preview
- ✓ Scratch projects (.sb2 and .sb3) uploaded straight from Scratch, with a readable view of the blocks
- ✓ A playground for trying anything without marking
- ✓ Hints after wrong answers that nudge without giving the answer away

Marking and feedback

Marked as it's submitted, with written feedback at the end.

- ✓ Every objective and code task marked automatically the moment it's submitted
- ✓ Scratch, web pages and key terms marked by AI against your rubric, with its reasoning shown and unsure marks flagged
- ✓ Results grid per class: who has finished, who's stuck, which question tripped everyone up
- ✓ Override any mark
- ✓ Student reports: strengths, struggles, what to practise next and topic scores
- ✓ Class reports: topics to reteach, misconceptions, score distribution and who needs support
- ✓ Draft school-report comments for every pupil
- ✓ Export any report to PDF
- ✓ Paste and tab-switch signals to help spot work that isn't a pupil's own

Lessons, tasks and tests

Ready-made content on day one, and AI that writes more in your words.

- ✓ Ten built-in task packs: Python Foundations, C# for Software Systems Development, OCR Exam Reference Language, Binary, Hex & Data, Logic Lab, Scratch Quests, Web Builders, Cyber Detective CTF, Algorithms & Data Structures, Computing Quickfire
- ✓ Eleven task types: text answer, multiple choice, code, Scratch project, HTML/CSS/JS, Parsons problem, predict the output, trace table, logic gates, capture the flag and key term
- ✓ Create with AI: type a topic ("GCSE Python lists, mixed ability") or paste a web page and get a task pack, lesson or test
- ✓ AI writes test cases and marking checker programs from a plain-English description
- ✓ Everything AI writes arrives as a draft for you to check, edit and publish
- ✓ Connect your own AI agent, such as Claude, with one Connect button and ask for a lesson ("install SFML in Visual Studio with screenshots, then build Pong"): it does the practical work and writes the steps, screenshots, checkpoints and starter project into a draft
- ✓ Build your own packs with every task type; duplicate, remix and share them with colleagues
- ✓ Lessons with sections, runnable code examples, screenshots and pictures, tips, exam tips and checkpoint questions
- ✓ Lessons can start a project for each pupil, so the lesson opens beside their own saved work
- ✓ Teacher notes on every task, written in plain English for non-specialists
- ✓ Set lessons, task packs and tests for a class with open and due dates
- ✓ Tests one question at a time on a server clock, timed per question or for the whole test, with optional shuffling and retries
- ✓ A guest PIN for a test, so visitors or a cover class can sit it without accounts

Project spaces

Every pupil gets somewhere to build, keep and share their own work.

- Up to 30 projects per pupil, saved as they type
- Websites with folders, images and a live preview; pictures are shrunk automatically before upload
- Programs with several files in any of the fourteen languages, with a terminal and program input
- Python turtle drawings appear in a window beside the code
- Publish a website to its own address (first name and initial only) that anyone can open without signing in
- A safety checklist before publishing; teachers can take any public site down and switch public sharing off
- Published sites run on a separate, sandboxed address so they can never touch Educatr itself

Live team competitions (the Arena)

Capture-the-flag style races with the leaderboard on the big screen.

- Launch in under a minute: pick packs, pick how teams work, open the lobby
- Pupils join with one code, by QR code on the screen, or with a PIN card
- Team modes: solo, pupils choose teams, automatic teams of a set size, teacher-assigned, or shuffle classes into balanced teams
- Every task visible at once; only one teammate needs to solve each; points land instantly
- Rules: timed tasks, negative marking, hints that cost points, AI hints after wrong answers, first-blood bonuses, dynamic scoring
- Pause for a word, send an announcement to every screen, end when you're ready
- The Arena screen cycles the leaderboard, the race so far, first bloods, toughest tasks, star performers and solves by language, fullscreen with a live ticker
- Teammates see each other's solves in real time
- Three formats: a speed race, King of the Hill (capture a task's hill and score every minute you hold it) and relays (legs unlock in order and pass between teammates)
- Countdowns with a red last five minutes, pause-aware, plus “+5 min”; freeze the leaderboard for the finish
- Driver and navigator roles that swap on a timer, shown on every teammate's screen
- Leagues: one table across several competitions, by placings or points, with a public link to share

Events, schemes and competitions

From the public page to the results, for people with no accounts yet.

- A public event page with your details, dates, location, organiser contacts and public documents
- Applications with ready-made questions plus your own; accept or decline in a click with automatic emails
- Places limit; applicants can sign in first, or get an event account with a PIN
- School competitions: registration of interest before the date is fixed, then an email to every school when entries open
- Schools enter teams, pupils, staff and the details you choose (dietary needs, photo consent, permission to attend, transport)
- Completeness checks, deadline reminder emails a week and a day before, and an overdue nudge
- Pupil PINs and printable cards made automatically; competition teams made and kept in step with each entry
- An information page for people taking part: joining details, documents and every update
- Messages to everyone or one person, by email and on their page
- Every event has its own class for setting lessons, tests, quizzes and competitions, with a progress table
- A live scoreboard for attending teachers, and results by team, pupil and school afterwards
- Event accounts expire automatically after the event

Classes and sign-in

Pupils in within a minute, with as little personal data as possible.

- Sign in with Microsoft (including C2k), Google or email
- Classes with year group, key stage, exam board and default language; pupils join with a class code
- Printable PIN cards for pupils without email: class code plus a six-digit PIN
- Guests join activities with a code and a first name only, and are deleted automatically
- Colleagues join your school with an invite code; roles for owner, admin, teacher and student

For heads of department and leaders

Evidence of coverage and progress, and simple licensing.

- Curriculum coverage heatmap: specification points against classes
- Weekly activity across the department
- Staff list and invite code
- One per-pupil licence covers every teacher, free
- Pay by card, or request a quote and pay by purchase order and invoice
- Seat counts with a 10% grace margin so no class is blocked mid-lesson

Safety, privacy and AI

Answers for your data protection officer, ready before they ask.

- Pupils' records stored in the UK; the app runs in AWS Ireland (EU)
- Pupils need only a display name; guests give a first name or nickname
- Automatic deletion of guests and event accounts after a retention period you control
- Pupils' names and emails are never sent to AI; feedback is written from pseudonymised evidence
- AI agents connect by consent, never with a password, and can only draft lessons: they can't see pupils, classes, work or marks, can't publish, and can be disconnected in Settings
- Designed around the Department for Education's generative AI product safety standards, with a published AI transparency statement
- Display and team names checked for offensive language
- Pupil code runs in an isolated sandbox with no network access
- Role-based access for owners, admins, teachers, pupils and guests; rate limits on submissions and AI
- Versioned, dated privacy policy, terms, licence agreement and AI statement, with every earlier version published

Accessibility

Readable by a five-year-old and by the back row of a hall.

- Atkinson Hyperlegible, a typeface designed for low-vision readers, throughout
- Larger type and softer controls for primary pupils
- High-contrast Arena screen for projectors
- Keyboard navigation, visible focus and screen-reader labels, designed to WCAG 2.2 AA
- Reduced-motion settings respected

Games and quick-fire modes

Short, playful formats for starters, plenaries and clubs.

- Blitz: live quiz rounds with code snippets, a host screen, speed and streak scoring and a podium
- Battle Royale Blitz: one wrong answer and you're out; the last one standing wins
- Binary Blitz: sixty seconds of binary, denary and hex conversions, with streak bonuses
- Bug Hunt: find the line with the bug, pick the fix, see why, in any of fifteen languages
- Code Golf: make the program pass in as few characters as possible, against par, in any of fifteen languages
- Daily challenge: one question a day for everyone, with a streak
- Code Quest: 48 levels in eight worlds with monsters, bosses, coins, keys, pits and teleporters, from first steps to if, while and functions
- Logic Lab: build circuits to match truth tables
- Pseudocode Playground: run exam pseudocode and watch the trace table fill in

Motivation

Reasons to keep coding, designed so nobody gets pushed out.

- XP and levels
- Badges for first solves, streaks, languages, helping others, comebacks and more
- Streaks with freeze tokens, so weekends and holidays don't break them
- Class XP boards and house leaderboards
- Pupils can hide their name on public leaderboards

What it costs

Per-student licences, priced by volume, with staff free. Larger departments can ask for a quote.

Free

Classroom

- Every task type, including code in 14 languages
- 3 live Arena competitions a month
- Blitz quizzes and the pseudocode playground
- 50 AI credits a month

Whole-school licence, per pupil per year

1–150 pupils	**£4.50**
151–500 pupils	**£3.50**
501–1,000 pupils	**£2.75**
1001+ pupils	**£2.25**

Teachers free. Minimum £295 a year. Each pupil is charged at the band your total falls into.

Prices exclude VAT and are provisional until launch. Pay by card, or ask for a quote and pay by purchase order and invoice: educatr.app/pricing/#quote

Getting started

1

Sign in

With Microsoft, Google or email. Try it free with one class of up to 35.

2

Create the module

Students join with a code; colleagues join with your invite code.

3

Set a lab test

Use a library pack or your own questions, with hidden tests or checkers.

4

Ask for a quote

Per-student licences with volume pricing for departments.

Questions people ask

Which languages are supported?

Python, C#, Java, VB.NET, JavaScript, TypeScript, C, C++, Go, Rust, Ruby, PHP, Lua and Bash, plus OCR Exam Reference Language.

Can we write our own checkers?

Yes. A checker program can decide whether an answer is correct for open-ended problems, and AI can draft one from your description.

How is student code isolated?

Every run happens in a sandbox with time and memory limits and no network access.

Can students keep their work?

Yes. Each student has a project space with up to 30 projects, saved as they type.

Where is our data, and does it go to AI?

Pupils' records are stored in the UK, and the app runs in Amazon's Ireland region. When AI writes feedback it sees answers and topic scores under a pseudonym such as "Student 7", never names or emails. Our privacy policy, terms and AI transparency statement are published with every earlier version.

Our privacy policy, terms of service, licence agreement and AI transparency statement are published, with every earlier version, at educatr.app/legal/.

educatr

10:39

Try it with your module.

Sign in with Microsoft, Google or email and try it free with a class of up to 35. When you're ready, we'll quote per student for the department.

Start free	**educatr.app**
Ask for a quote	**educatr.app/pricing/#quote**
More for you	**educatr.app/for/universities/**
See a lesson	**educatr.app/period-3/**

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Screens show fictional demo organisations with illustrative data. Prices are provisional until launch. Produced November 2026.