Junior Engineers Online

CLASSROOM CODING MADE EASY!

What is Junior Engineers Online?

Junior Engineers Online is Australia's leading AI-powered online platform, designed to support educators in the delivery of the Digital Technologies curriculum in the classroom.

Teach with confidence, no coding experience required!

Junior Engineers Online features hundreds of ready-to-teach video tutorials in five of the world's most popular coding languages, housed in a cloud-hosted next-gen learning platform.
Students watch videos and code along with them, in a single-screen environment, that deploys seamlessly on laptops and tablets alike.

REQUEST A DEMONSTRATION TODAY!

juniorengineers.com.au/junior-engineers-online-schools
1300 089 344
partnerships@juniorengineers.com.au

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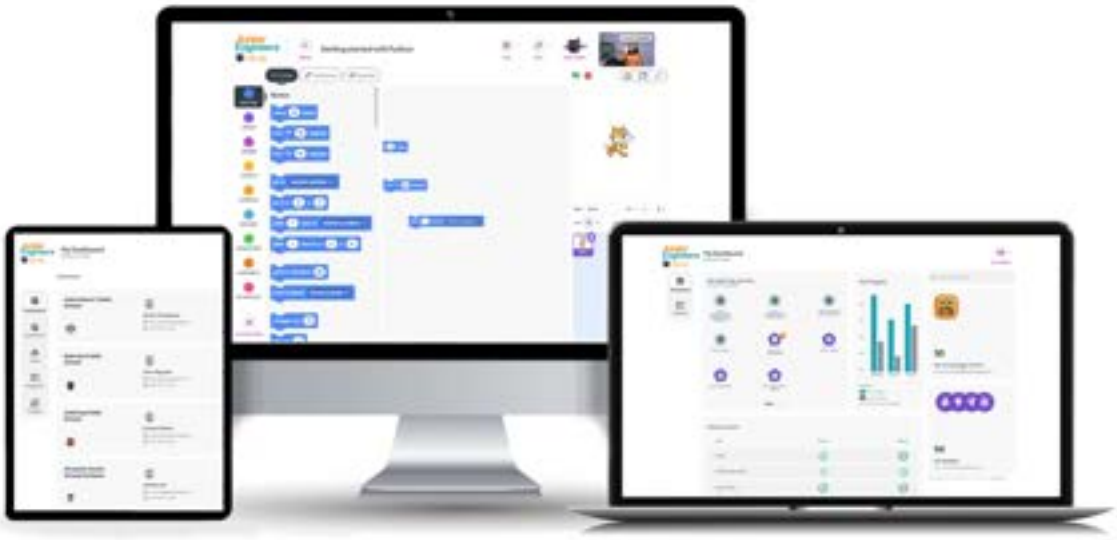
Proudly brought to you by Junior Engineers

Easy-to-use Learning Environment

Junior Engineers Online delivers a seamless learning environment, designed to maximise hands-on learning and engagement for students

- Device neutral - Works on laptops and ipads alike
- Seamless single-screen switch between video, coding environment, learning resources and coding assistant
- Check code and ask for help at the click of a button
- Student grading and coding aptitude automatically feeds to dashboard reports



A safe, secure and accssible platform

Junior Engineers Online delivers an all-in-one platform, designed with student security top-of-mind. The platform includes:

- An in-built coding environment, no downloads required
- Cloud-hosted, and available 24/7
- Security of student data and anonymity, all data housed in Australia

Next-Gen coding assistant

Introducing Cody!

Cody is our state-of-the art AI technology, which delivers live student support built into the platform. Cody improves student learning outcomes and platform engagement, with:

- A real-time code checker
- Prompts to help students when they get stuck
- Video translation into multiple languages (coming soon)
- Adaptive student quizzes, which adjust tests according to individual student aptitude (coming soon)

Deliver, Track and Assess

Set your educators up with comprehensive tools to teach, track and assess student learning. Our intuitive dashboard and reporting system makes managing student cohorts a breeze. Junior Engineers Online allows administrators to:

- Use existing courses, or create your own class curriculum from over 100 digital projects
- Customise individual student learning pathways, providing easy extension activities from ready-graded coding libraries
- Allocate cohorts, view and track their understanding, activity, and aptitude
- Download progress and achievement reporting at a glance
- Automated grading and comprehensive reporting

Digital Technologies Curriculum Alignment

Junior Engineers Online provides foundational coding skills for students in primary and secondary school. Learning pathways are customised to class capabilities and knowledge levels. Like any language, coding requires consistent practice to master. Junior Engineers Online uses engaging digital projects that gradually increase in difficulty, helping students build confidence and proficiency through a wide range of coding languages and platforms.

Junior Engineers Online Curriculum

BLOCK CODING

SCRATCH

GRADES 02-06 | RANGE BEG-ADV

26 VIDEOS

SCRATCH PROJECT LIST:

INTRODUCTORY:
8 VIDEOS
SCRATCHBEGINNER:
8 VIDEOS
SCRATCH INTERMEDIATE:
7 VIDEOS
SCRATCH ADVANCED:
3 VIDEOS

MINECRAFT

GRADES 02-06 | RANGE BEG-ADV

35 VIDEOS

MINECRAFT PROJECT LIST:

MINECRAFT BEGINNER:
21 VIDEOS
MINECRAFT INTERMEDIATE:
11 VIDEOS
PYTHON ADVANCED:
3 VIDEOS

MICRO:BIT

GRADES 02-06 | RANGE BEG-ADV

8 VIDEOS

MICRO:BIT PROJECT LIST:

MICRO:BIT BEGINNER:
3 VIDEOS
MICRO:BIT INTERMEDIATE:
5 VIDEOS

TEXT CODING

PYTHON

GRADES 04-10 | RANGE BEG-ADV

30 VIDEOS

PYTHON PROJECT LIST:

PYTHON INTRODUCTORY:
5 VIDEOS
PYTHON BEGINNER:
7 VIDEOS
PYTHON INTERMEDIATE:
12 VIDEOS
PYTHON ADVANCED:
6 VIDEOS

JAVASCRIPT

GRADES 04-10 | RANGE BEG-INT

26 VIDEOS

JAVASCRIPT PROJECT LIST:

JAVASCRIPT INTRODUCTORY:
12 VIDEOS
JAVASCRIPT BEGINNER:
4 VIDEOS
JAVASCRIPT INTERMEDIATE:
10 VIDEOS

CURRICULUM YR 1-2

Students learn introductory computational thinking by using and describing algorithms that include sequences of instructions and decisions, and by using digital systems to produce simple solutions. They have opportunities to experience and develop their skills in using different components like a mouse, touchpad and keyboard.

ACT9TDI2K01
Students identify and explore digital systems and their components for a purpose

ACT9TDI2P01
Students investigate simple problems for known users that can be solved with digital systems

ACT9TDI2P02
Students follow and describe algorithms involving a sequence of steps, branching (decisions) and iteration (repetition).

ACT9TDI2P04
Students use the basic features of common digital tools to create, locate and communicate content.

CURRICULUM YR 3-4

A focus on computational thinking, simple digital solutions and following and implementing simple algorithms.

ACT9TDI6P02
Students follow and describe algorithms involving multiple alternatives (branching) and iteration (repetition)

ACT9TDI6P05
Students implement simple algorithms as visual programs involving control structures, variables and input

CURRICULUM YR 5-6

A focus on expanding introductory to intermediate programming skills, problem-solving, and digital project management.

ACT9TDI6P02
Students follow and describe algorithms involving multiple alternatives (branching) and iteration (repetition)

ACT9TDI6P05
Students implement simple algorithms as visual programs involving control structures, variables and input

CURRICULUM YR 7–8

A focus on the design and development of algorithms involving complex branching and iteration; students implement their code as visual programs including variables, using multiple digital systems which process and transmit data.

ACT9TDI8P05
Students design algorithms with nested control structures and represent them using flowcharts and pseudocode

ACT9TDI8P06
Students trace algorithms to predict their output for given inputs and identify any errors

ACT9TDI8P09
Student Implement, modify and debug programs with control structures (eg loops and conditionals) and functions

CURRICULUM YR 9–10

A focus on development and modification of innovative digital solutions, including the design and validation of algorithms in object-oriented programming languages.

ACT9TDI8P05
Students design algorithms with nested control structures and represent them using flowcharts and pseudocode

ACT9TDI8P06
Students trace algorithms to predict their output for given inputs and identify any errors

ACT9TDI8P09
Student Implement, modify and debug programs with control structures (eg loops and conditionals) and functions

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