BE A STEM LEADER

Invest in student, staff and school improvement

CODE BREAKER – YEARS 7-8

Register Here

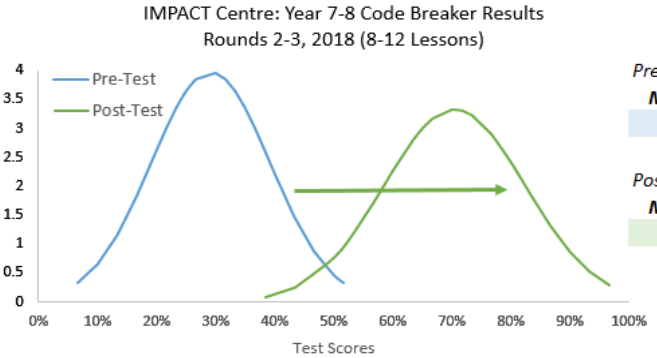
✓ Differentiate teaching and learning

Code Breaker develops students' problem-solving and thinking skills as they actively acquire an understanding of how technologies can work for them. Your students will:

- develop computational, mathematical, design, systems and futures thinking skills;
- learn the basics of block coding and progress to the Python programming language;
- be taught by a specialist teacher from the IMPACT Centre;
- build technology skills and confidence for future online learning and assessments.

✓ Improve outcomes

The following graph demonstrates that the achievement of *Years 7-8 Code Breaker* students significantly improved from pre- to post-assessment in 2018-2019.



Pre-Test		
Mean	***StDev***	***N***
29%	3.01	89

Post-Test		
Mean	***StDev***	***N***
70%	3.59	89

✓ Deliver curriculum

AUSTRALIAN CURRICULUM - Content Descriptors	General Capabilities
Technologies – ACTDIK023, ACTDIK024, ACTDIP026, ACTDIP028	

✓ Develop expertise

- We highly recommend that your supervising staff member/s login, learn alongside your students and collaborate with our specialist teachers.
- They develop curriculum, pedagogy and technology expertise, which transfers to their teaching or leadership role.
- Offer the opportunity to a leader, teacher or aide.
- They earn a PD Certificate aligned to AITSL standards – through active participation in lessons and completion of a short online module.

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Student target group

- Your school determines which students participate – many schools use this program as a differentiation opportunity for mid-high achieving students and/or a signature part of a STEM excellence/extension program.
- Teacher judgement and student interest in the topic should assist selection.

Assessment and reporting

- Assessment involves a pre-test to provide diagnostic data, a post-test to measure distance travelled, and check-in programming tasks collected in a digital portfolio.
- Your school receives a written report containing pre- and post-assessment results, attendance data & survey feedback. You also receive report card comments (OLA).

Course outline

1	Inspiring introduction to *Code Breaker* and online learning skills
2	Pre-Test, overview of programming, think like a computer
3	Graphics and pixels, introduction to block code
4	Programming and problem solving with Block
5	Programming in Blocky - flag challenge
6	Programming syntax - bytes and binary code
7	Password decision making (else/if), problem solving with Python
8	Programming in Python - variables challenge
9	Programming in electronics – electronics kit
10	Debugging code - conductivity with electronics
11	Post-test, programming an electronics kit – code with your kit
12	Futures thinking, the real world of code

Timetabling, group size and costs

- Students participate in 1 x 60 min web conference lesson per week for 12 weeks.
- We negotiate the timetable with you - nominate 2-3 preferred times.
- 3 x 12 week rounds run across the year – *Code Breaker* is available in all rounds.

Round 1: Feb 3-May 22				Round 2: May 25 – Aug 28				Round 3: Aug 31 – Dec 4			
Feb	Mar	Apr	May	May	Jun	Jul	Aug	Aug	Sep	Oct	Nov
Available				Available				Available			

- 14-15 students from your school form an online group.
- **Round 3 cash option is $4300 per group of 14-15 students.**
- *Code Breaker* involves an additional charge of $35pp for an electronics kit.
- You can involve a full class of 28-30 students – this is classified as 2 groups.
- We operate on a cost recovery model – invest a small fraction of FTE or cash.
- Your school is investing in the time of a specialist teacher who works directly with your students and staff and is employed by the Department of Education.
- Consider using FTE, *Investing for Success* funds or internal school budgets.
- See How it works and Investment options and costs for specific details.

STEM SUCCESS

STAFF: Our students have loved being a part of an IMPACT class. Students have gained confidence in their coding skills throughout the program but have also improved with their communication skills and the way they interact with other students. This confidence has improved in usually shy students as they have become comfortable with the technology but are able to interact in the comfort of their own classroom and school.

STUDENT: I was quite proud of myself when coding in blocky, python and whist coding the microbit. I did not think I had the skills to code but it turns out I do. I also learnt how to code, the history of code and the different coding languages.

STUDENT: After the program it made me feel more experienced with technology! In the future I might use coding for business websites, if I want to have my own company and become an entrepreneur.

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