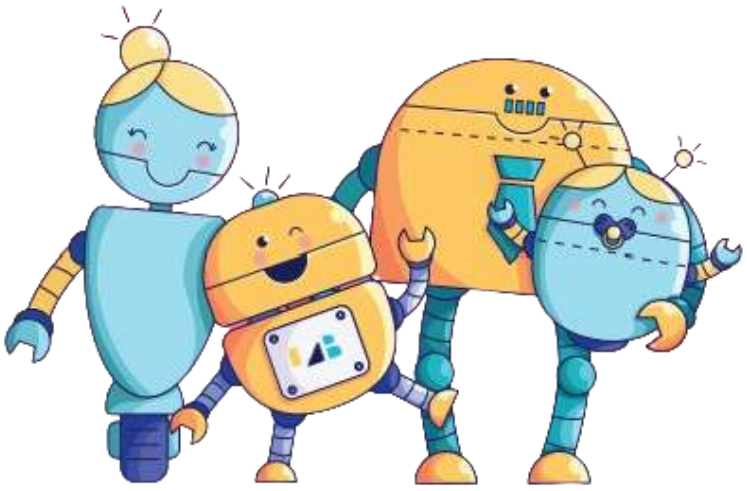

THE LAB
LEARNING WITHOUT BOUNDARIES

THE LAB JUNIOR

Schools around the world now have Coding as a subject within their curriculum, beginning as early as the 3rd grade. In today's high-tech world, kids are introduced to technology before they are introduced to anything that resembles a book.

Get an early start with technology the right way.



MEET THE SENIOR TEAM

DR. OKA KURNIAWAN

Dr. Oka is a Senior Lecturer for Singapore University of Technology and Design. His research areas include Computer Science Education.

CURRICULUM SPECIALIST

DR. SCARLETT MATTOLI

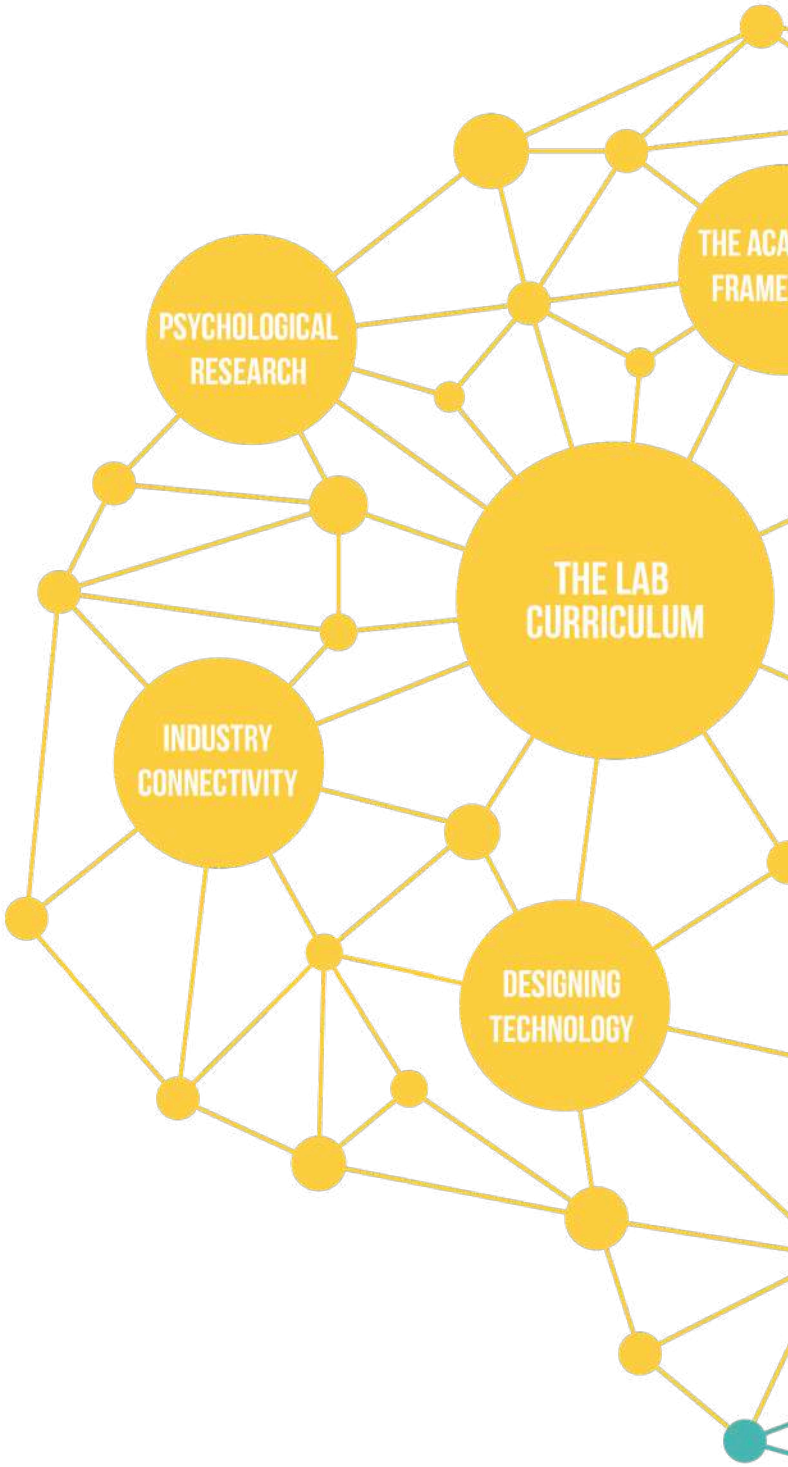
Dr. Scarlett is a Psychotherapist/Counsellor, Coaching Psychologist & Supervisor and Psychometrist, specialising in psychological and therapeutic support.

CHILD PSYCHOLOGIST SPECIALIST

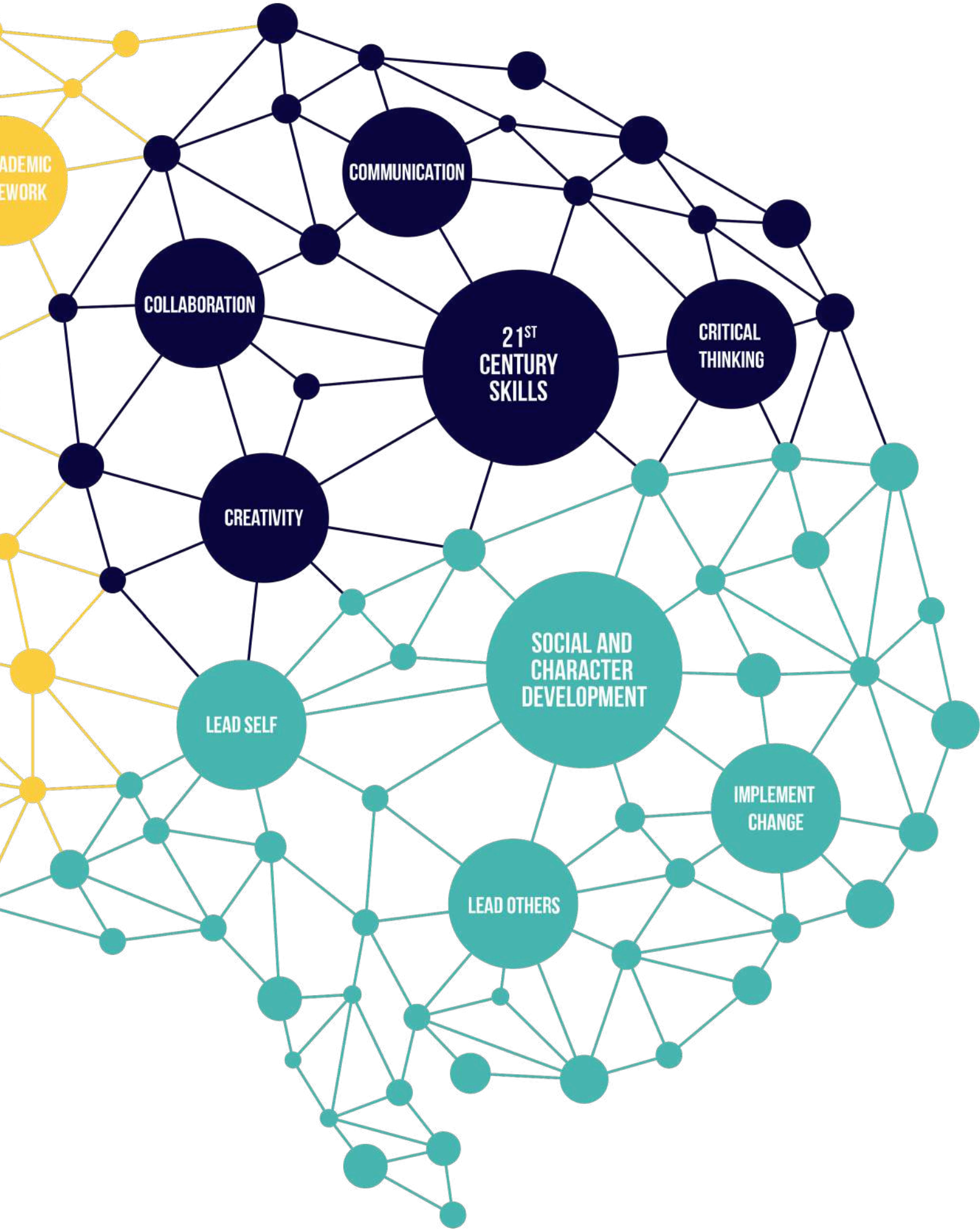
DR. COLLIN ANG

Dr. Collin is the Managing Director of Decision Science and is a thought leader in the industry for digital transformation and analytics

TECHNOLOGY SPECIALIST


PSYCHOLOGICAL RESEARCH
THE ACA FRAME
THE LAB CURRICULUM
INDUSTRY CONNECTIVITY
DESIGNING TECHNOLOGY

CURRICULUM


ADEMIC
EWORK
COMMUNICATION
COLLABORATION
21ST CENTURY SKILLS
CRITICAL THINKING
CREATIVITY
SOCIAL AND CHARACTER DEVELOPMENT
LEAD SELF
IMPLEMENT CHANGE
LEAD OTHERS

EMPOWERING STUDENTS THROUGH COMPUTATIONAL THINKING

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FOUNDATION

FOR AGES 7 & 9 YEARS OLD

A preparatory program to ease students into the Lab Junior program's rigorous requirements.

A broad introductory to allow students to seek the skills of a good programmer

Program Outline

- Classroom-based structure
- A Half Year Foundation Program
- 2 terms of 10 weekly lessons
- Fuses Coding with multiple disciplines
- Ratio 1:6
- Duration 100 mins

JOIN US FOR A FUN-FILLED LEARNING EXPERIENCE!

FOUNDATION TERM 1

Week	Challenge	Math/Science Concept	Coding/Robotic Concept
1	Build and Program a Grabber	Decimals Negative Numbers	Motors
2	Build and Program a Transformer	Decimals Negative Numbers	Motors
3	Build and Program a Van	Physics relating to a car	Motors Logic
4	Build and Program a Drop Tower	Angles Degrees	Motors Logic
5	Build and Program a Scorpion	Multiplication	Motors Logic
6	Build and Program a Racing Car	Division	Motors Logic
7	Build and Program a Spinning Machine	Multiplication Division	Motors Logic
8	Build and Program a Music Maker	Estimation Range	Motors Logic
9-10	**Final Project**		

FOUNDATION TERM 2

Week	Challenge	Math/Science Concept	Coding/Robotic Concept
1	Build and Program a Printer	Binary Logic	Conditionals (If) Touch Sensor
2	Build and Program a Flipping Fish	Binary Logic	Conditionals (If-Else) Touch Sensor
3	Build and Program a Frog	Binary Logic	Conditionals (If-Else) Brick Button
4	Build and Program a Sit Up Man	Math Operators Logic	Conditionals (If) Ultrasonic Sensor
5	Build and Program a Rowing Machine	Math Operators Logic	Conditionals (If-Else) Ultrasonic Sensor
6	Build and Program a Wheelchair Robot	Math Operators Logic Range (i.e. between)	Conditionals (If-Else) Ultrasonic Sensor
7	Build and Program a Spinning Top	Logic	Conditionals (If-Else-If-Else) Colour Sensor
8	Build and Program a Hopper	Logic	Conditionals (If-Else-If-Else) Colour Sensor
9-10	**Final Project**		

THE LAB Kinder

CORE

FOR AGES 7 & 9 YEARS OLD

Promotes the application of Math and Science

Builds upon the MOE Primary 4 Math and Science syllabus

Uses Lego to engage students into coding and robotics

Program Outline

- Classroom-based structure
- A Full Year Foundation Program
- 4 terms of 10 weekly lessons
- Fuses Coding with multiple disciplines
- Ratio 1:6
- Duration 100 mins

JOIN US FOR A FUN-FILLED LEARNING EXPERIENCE!

CORE TERM 1

Week	Challenge	Math/Science Concept	Coding/Robotic Concept
1	Build and Program a Jackpot Machine	Whole Numbers	Sequence Randomness
2	Build and Program a Rhino	Rounding Estimation Range	Sequence Randomness Range
3	Build and Program a Weathercaster	Flowcharts	Flowchart in Programming
4	Build and Program a Grabber	Decimals Positive and Negative Numbers	Wait Until ()
5	Build and Program a Dog Car	Angles	Turns
6	Build and Program a Base Car	Geometry	Loops Wait Until ()
7	Build and Program a Colour Sensor Car	Logic	Conditionals (If-Else) Colour Sensor
8	Build and Program a Bulldozer	Recap Session	Recap Session
9-10	**Final Project**		

THE LAB Junior

CORE TERM 2

Week	Challenge	Math/Science Concept	Coding/Robotic Concept
1	Build and Program a Ultrasonic Car	Relational Operators (i.e. less than)	Conditionals (If) Ultrasonic Sensor
2	Build and Program a Wally Robot	Relational Operators (i.e. more than)	Conditionals (If-Else-If) Ultrasonic Sensor
3	Build and Program a Guitar	Relational Operators (i.e. equals to)	Conditionals (If-Else-If) Ultrasonic Sensor Sound
4	Build and Program a Wheel of Fortune	Fractions	Conditionals (If) Randomness Touch Sensor
5	Build and Program a Samurai	Relational Operators (i.e. less than)	Conditionals (If) Ultrasonic Sensor Touch Sensor AND Operator
6	Build and Program a Camera	Logic	Conditionals (If-Else-If-Else) Colour Sensor Touch Sensor AND Operator
7	Build and Program a Bulldozer	Area Perimeter	Conditionals (If-Else-If-Else) Touch Sensor
8	Build and Program a Helicopter	Arithmetic Sequence	Wait Until () Touch Sensor
9-10	**Final Project**		

CORE TERM 3

Week	Challenge	Math/Science Concept	Coding/Robotic Concept
1	Build and Program a Balancer Robot	Angles	Conditionals (If-Else-If-Else) Gyro Sensor
2	Build and Program a Gyro Car	Range	Conditionals (If-Else-If-Else) Gyro Sensor
3	Build and Program a Beyblade Launcher	Range	AND Operators OR Operators Touch Sensor
4	Build and Program a Shooting Gun	Logic Statements	Nested Ifs Ultrasonic Sensor Touch Sensor
5	Build and Program a Bike with Traffic Light	Logic Statements	Nested Ifs AND Operators
6	Build and Program a Safe Deposit Box	Range	Reflected Light Intensity Colour Sensor
7	Build and Program a Game Master Robot	Light Intensity Reflection of Light	Proportional Integral Derivative
8	Build and Program a Bug Robot		String and Integer Ultrasonic Sensor
9-10	**Final Project**		

CORE TERM 4

Week	Challenge	Math/Science Concept	Coding/Robotic Concept
1	Build and Program a Scissors, Paper, Stone Game Machine	Probability Percentages	Variables Random Touch Sensor
2	Build and Program a Pie Thrower	Algebra	Variables Passcode System
3	Build and Program a Catapult	Algebra Time Range	Variables Random
4	Build and Program a Hand Biting Crocodile game	Algebra Time Range	Variables Touch Sensor
5	Build and Program a Pulley System	Physics Ambient Light Intensity	Variables Light Sensor
6	Build and Program a Satellite Robot	Calibration Ambient Light Intensity	Variables Light Sensor
7	Build and Program a Game Console	Variables X Y axis	Variables
8	Build and Program a Bike	Speed	List/Array
9-10	**Final Project**		

THE LAB Junior

JOIN US AT

COMMIT TO A YEARLY MEMBERSHIP
&
GET PROMOTIONAL RATES!

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10 Classes	$700 ($70/class)
40 Classes	$2,600 ($65/class)

*** Registration fee is $80 per student*

SIGN UP NOW AT
WWW.THELAB.SG/SIGNUP

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