



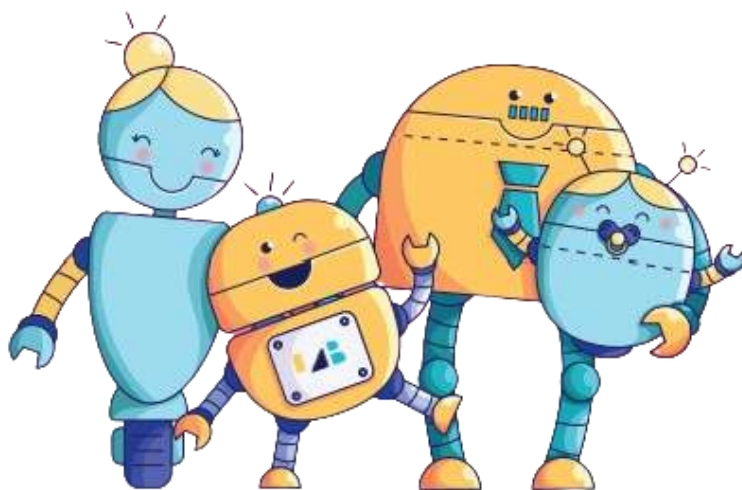
THE LAB

LEARNING WITHOUT BOUNDARIES

THE LAB KINDER

Early Childhood is a wonderful time to spark a kid's interest in Coding, Robotics, Engineering and AI. Young children are naturally curious about the world around them — and today, that world runs on artificial intelligence.

But how best to introduce AI in a way that's positive, creative and age-appropriate? We've got the answer for you.



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.

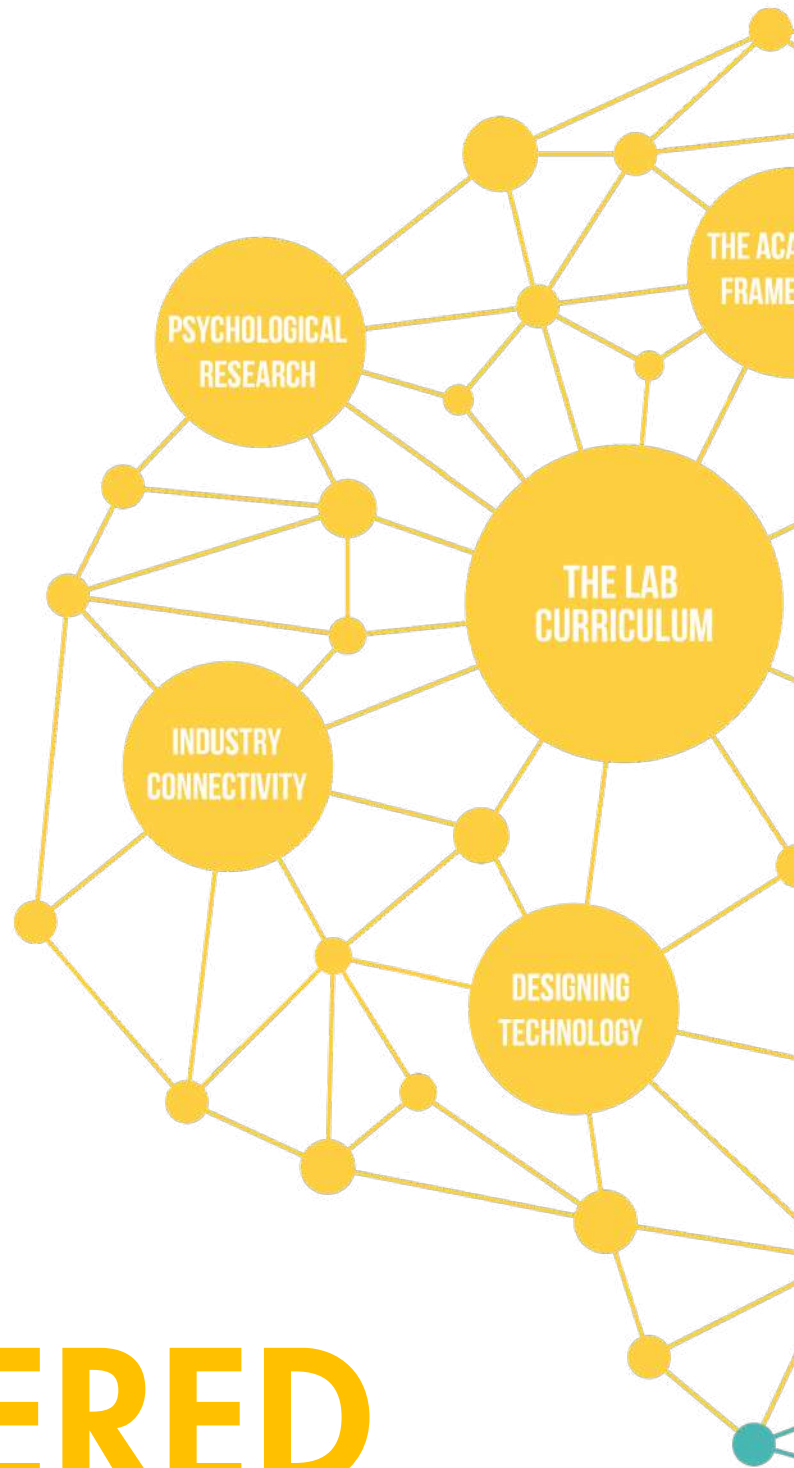
**CHILD PSYCHOLOGIST
SPECIALIST**



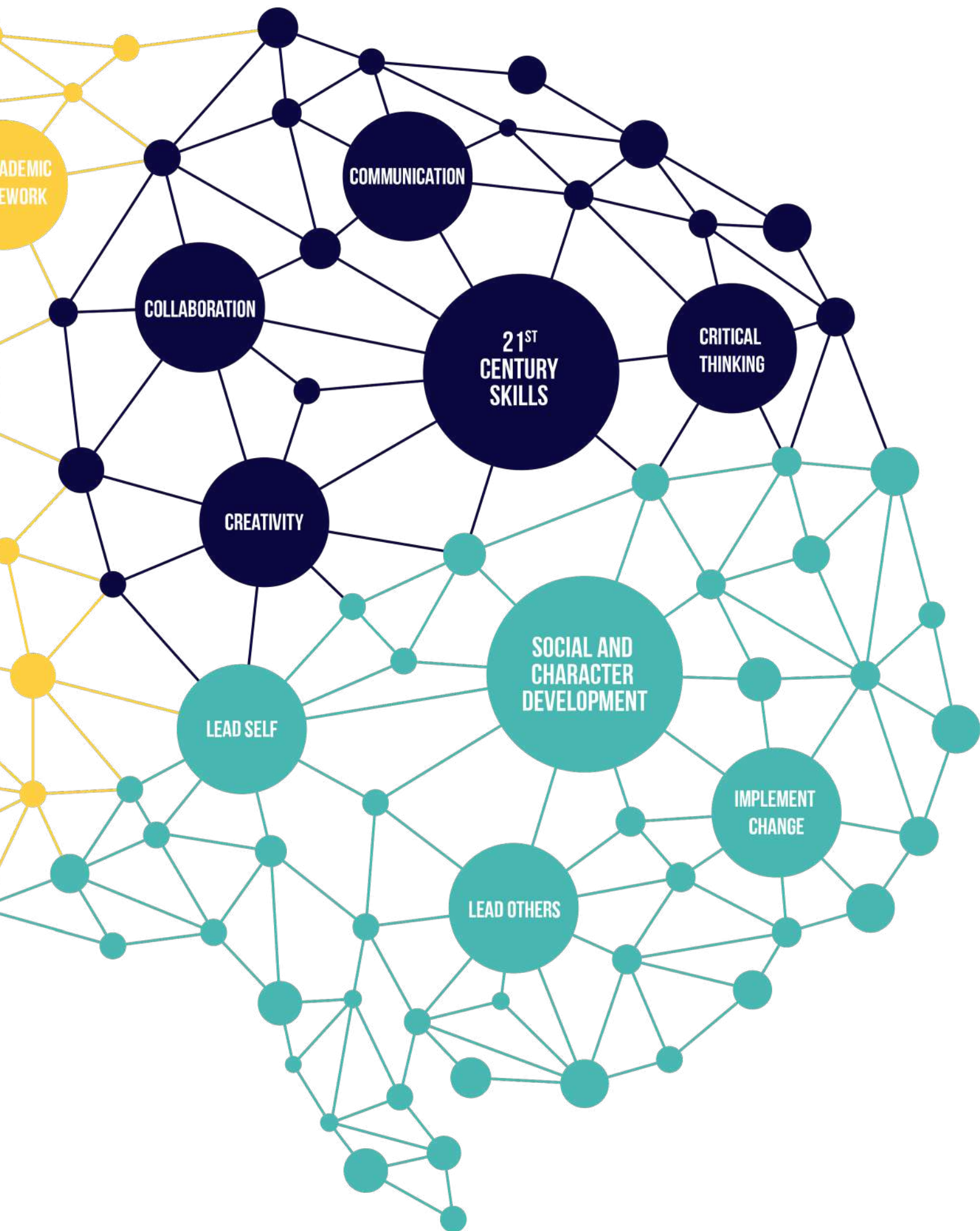
DR. COLLIN ANG

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

**TECHNOLOGY AI & DIGITAL
TRANSFORMATION
SPECIALIST**



AI-POWERED CODING JOURNEY



EMPOWERING STUDENTS THROUGH COMPUTATIONAL THINKING, AI & ROBOTICS





THE WIDEST VARIETY OF ROBOTS & AI-READY LEARNING TOOLS IN THE INDUSTRY



**"Making Learning Fun
for Your Child!"**

FOUNDATION

FOR AGE 5 & 6 YEARS OLD

Curated for
beginners with no
Coding
background.

*A screen free
curriculum!*

Stresses on
cultivating the right
habits in the use of
technology to
students at an early
age.

Program Outline

- Classroom-based structure
- A Half Year Foundation Program
- 2 terms of 10 weekly lessons
- Fuses Coding with multiple disciplines
- Ratio 1:4
- Duration 90 mins

"WE TEACH THE FOUNDATIONS OF AI THROUGH MATHS AND COMPUTATIONAL THINKING – COUNTING, SORTING, GROUPING, MATCHING, PATTERNS, TRUE/FALSE, AND MORE – THE VERY CONCEPTS AI ITSELF USES TO THINK."



FOUNDATION TERM 1

Topic	STEM Concept(s)	Building
Introduction to Lego building and Counting	Counting with large numbers	Structures that spin
Measure Distance by Counting	Measurement by Counting	Movable vehicles
Repeated Actions	Introduction of Loops	Objects that require gears
Directions	Directions (Left and Right)	An insect that crawls
Understanding Loops through Pattern Recognition	Pattern Recognition	An animal that is fierce
Relational Directions	Understanding directions in relation to something	A vehicle with wheels
Understanding Maps	Location	A fun carnival ride
Map Reading Skills by following multiple instructions	Coordinates	A space satellite
Mental Rotation	Mental representations of multi-dimensional objects	A flying machine
Final Project		



FOUNDATION TERM 2

Topic	STEM Concept(s)	LEGO Building Problem Statement
Measure Distance by Estimating	Estimating distances	A robot that helps seniors
Pattern Recognition through Observation	Pattern Recognition Loops	A robot that helps humans to denotate landmines
Visualizing Directions	Visualization Skills Directions	A robot that reaches high places
Map Reading with Coordinates	Map Reading Coordinates	A home cleaning robot
Mental Rotation with 2D	Mental representations of two-dimensional	A robot that can navigate dangerous places
Mental Rotation with 3D	Mental representations of three-dimensional	A robotic arm
Decomposition	Breaking problems into smaller ones	A robot that explores other planets
Troubleshooting	Problem Solving skills	A robot that serves customers
Debugging	Finding errors and solving them	A robot that makes deliveries
Final Project		

CORE

FOR AGE 5 & 6 YEARS OLD

Introductory course
to the world of
technology
and programming

*Built upon the
MOE Primary 1
Math syllabus*

Promotes
Computational
Thinking through
play

Program Outline

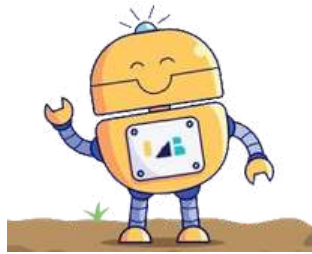
- Classroom-based structure
- A Full Year Foundation Program
- 4 terms of 10 weekly lessons
- Fuses Coding with multiple disciplines
- Ratio 1:4
- Duration 90 mins

"WE TEACH THE FOUNDATIONS OF AI THROUGH MATHS AND COMPUTATIONAL THINKING – COUNTING, SORTING, GROUPING, MATCHING, PATTERNS, TRUE/FALSE, AND MORE – THE VERY CONCEPTS AI ITSELF USES TO THINK."



CORE TERM 1

Topic	Math/Science Concept	Tech/Eng Concept
Introduction to Robots and Coding	Components of a robot	LEGO Build and Code: Vehicle
Electric Circuits and Electrical Conductivity	Electric Circuit identification and Classification of objects with and without electrical conductivity	Manipulation of Snap Circuits Manipulation of LED Matrix through Coding
Numbers to 10 Programming: Events and Sequence	Numbers to 10	Event and Sequence Gyro Sensor Buzzer
Ordinal Numbers and Pattern Recognition	Ordinal Numbers (Positions to 6th) Time Speed	Manipulation of Motors Pattern Recognition through grouping
Math Operators Programming: Events and Sequence	Greater/Lesser Than Loudness (i.e. Frequency)	Event and Sequence Voice Sensor Gyro Sensor
Moments	Moments - Clockwise and Anti-clockwise	LEGO Build and Code: Fishing Rod
Motor Manipulations with Angles, Power and Speed	Angles Power Speed	Manipulation of Motors
Positive and Negative Numbers	Subtraction within 10 and Negative numbers	LEGO Build and Code: A Crocodile Jaw
Additions to 10 and Sequence	Numbers and Additions to 10	Sequence Manipulation of Motors LEGO Build and Code: Terminator
Final Project		



CORE TERM 2

Topics	Math/Science Concept	Tech/Eng Concept
Animations	X Y axis	LCD Screen
Fractions Programming: Events and Random	Fractions and The Value of Money	Manipulation of Motors Events and Random
Sequence (Movements)	Understanding of Angles in Geometry	Sequence Pattern Recognition
Subtraction within 10 Programming: Positive and Negative	Numbers and Subtraction within 10 Positive and Negative Numbers	Manipulation of Motors
Additions and Subtraction within 10	Concept of Symmetry Mechanism of a Balancing Beam	Symmetrical structures with Strawbees
Sound Programming: Sequence with Sound. Motor and RGB Light	Concept of Sound	Sequence Touch Sensor
Map Reading Sequence with movement and turns	Mapping 3D Visualization	Sequence
Introduction to Gears	Gear Ratio Speed	LEGO Gears
Remote Controlled Devices and Introduction to Drone	Map Visualization Aerodynamics of a Drone	Technology of a Drone Infra-red Bluetooth Wifi
Final Project		



CORE TERM 3

Topics	Math/Science Concept	Tech/Eng Concept
Measuring Force with Touch Sensor	Concept of Force Math Operators	Touch Sensor Manipulation of Motors
Sequencing with Lego Robotics Programming	Music	Sequence Lego Build and Code: Racing Car
Coding with X and Y in programming world	X and Y axis	Using of X and Y axis in Coding
Exploring sensors with Lego Robotics Programming	Binary Greater/Less Than	Touch sensor Ultrasonic sensor Lego Build and Code: Robot Cat
Gears and Sequence	Gearing	Sequence Lego Build and Code: Automatic Door
Sequencing with Lego Robotics Programming using Time	Concept of Time: Analog vs Digital	Sequence Time Lego Build and Code: Terminator
Mechanism of a Robot Hand	Mechanics of a Robotic hand	Lego Build and Code: Grabber
Infrared sensor with Codey Rocky	Infrared sensor Infrared vs Ultrasonic Proximity	Infrared sensor
Math Operators with Ultrasonic sensor	Math Operators	Ultrasonic Sensor Lego Build and Code: Robot Cat
Final Project		



CORE TERM 4

Topics	Math/Science Concept	Tech/Eng Concept
Sequencing with Lego Robotics Programming using Speed	Speed	Sequence
3D Printing with X, Y and Z axis	Graphs (X, Y and Z Axis)	Technology of 3D printing
Learning aerodynamics with Lego Robotics Programming	X and Y axis	Touch sensor Lego Build and Code: Flying Bird
Introduction to Augmented Reality	Directions	Technology of Augmented Reality
Colour Sensor with Spike Robot	Colour Speed Sound	Colour Sensor
Concept of Light	Concept of Light Reflection/Refraction Light Intensity/ Luminosity	Colour Sensor Lego Build and Code: Light sensor robot
Loop and AND/OR operator with Codey Rocky	Logic and Pattern Recognition	AND/OR Operator Loop If-Then Condition
Sound and Colour with Lego Robotics Programming	Sound Colour	Colour Sensor Touch Sensor Lego Build and Code: Camera
Introduction to Virtual Reality		Technology of Virtual Reality Gyro Sensor
Final Project		

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COMMIT TO A YEARLY MEMBERSHIP
&
GET PROMOTIONAL RATES!

10 Classes

\$650 (\$65/class)

40 Classes

\$2,400 (\$60/class)

*** Registration fee is \$80 per student*

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