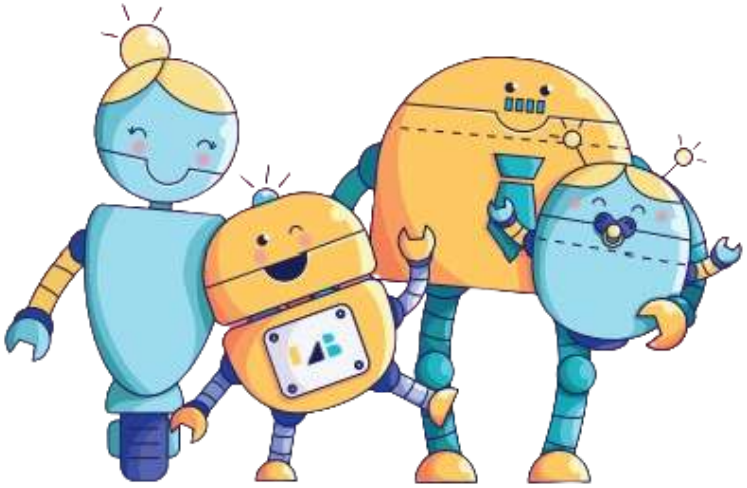

THE LAB
LEARNING WITHOUT BOUNDARIES

THE LAB KINDER

Early Childhood is a wonderful time to spark a kid's interest in Coding, Robotics, Engineering. Young children are curious about the world around them, and today that would include technology. But how best to promote positive, creative and educational engagement with technology? We 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

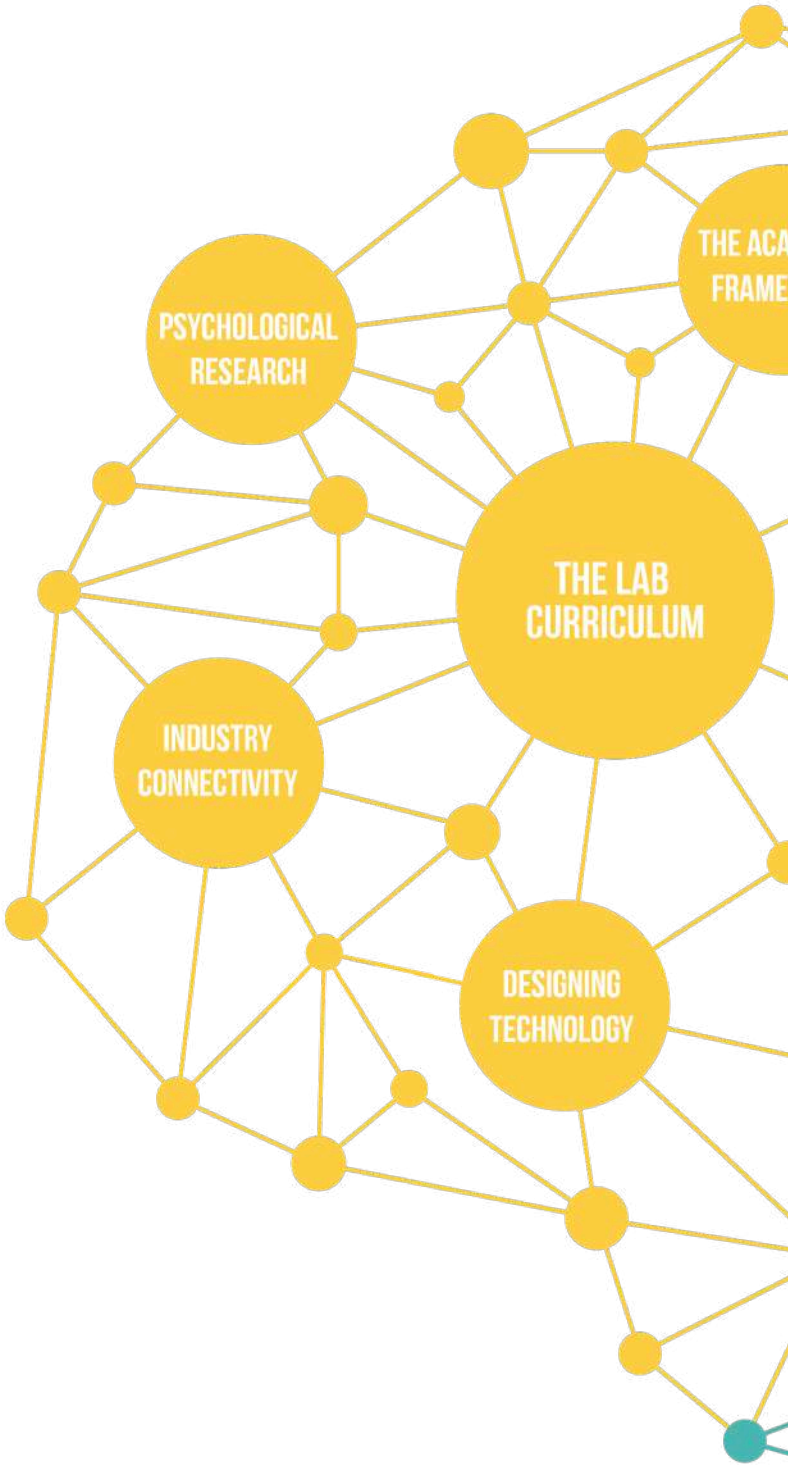
Dr. Scarlett is a Psychotherapist/Counsellor, Coaching Psychologist & Supervisor and Psychometrist, specialising in psychological and therapeutic support.

CHILD PSYCHOLOGIST SPECIALIST

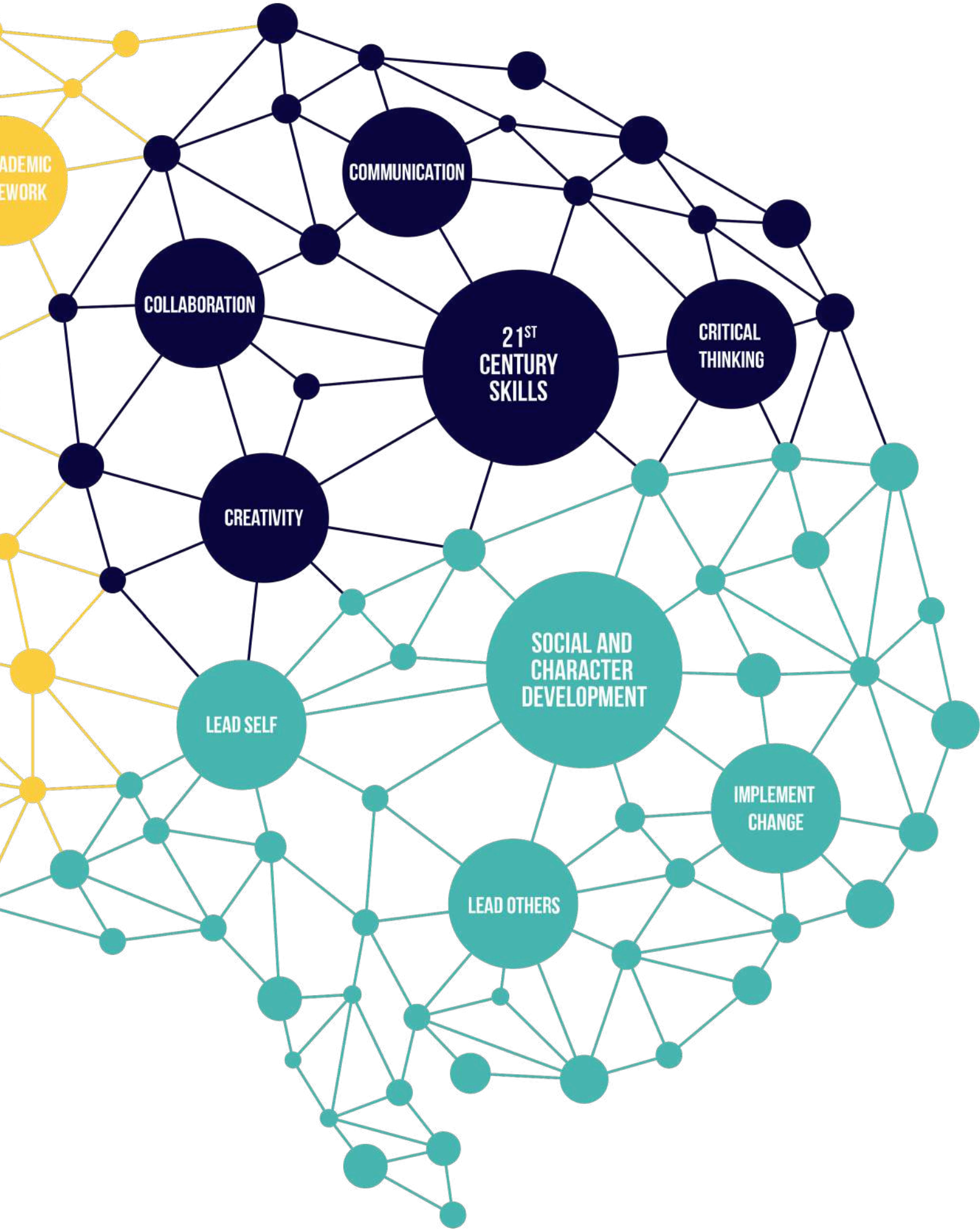
DR. COLLIN ANG

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

TECHNOLOGY 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

THE LAB
LEARNING WITHOUT BOUNDARIES

THE LAB
Kinder

FOUNDATION

FOR AGE 5 & 6 YEARS OLD

Curated for beginners with no Coding background.

A screen free curriculum!

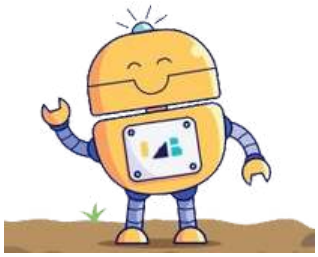
Stresses on cultivating the right habits in the use of technology to students at an early age.

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

JOIN US FOR A FUN-FILLED LEARNING EXPERIENCE!

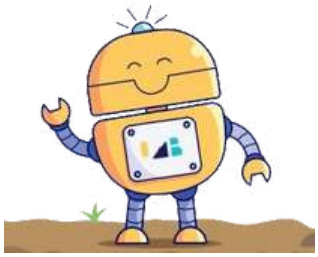
FOUNDATION TERM 1



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

THE LAB Kinder

FOUNDATION TERM 2



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

THE LAB
Kinder

THE LAB
Kinder

CORE

FOR AGE 5 & 6 YEARS OLD

Introductory course to the world of technology and programming

Built upon the MOE Primary 1 Math syllabus

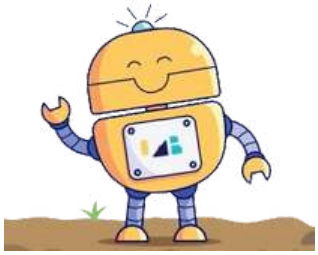
Promotes Computational Thinking through play

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

JOIN US FOR A FUN-FILLED LEARNING EXPERIENCE!

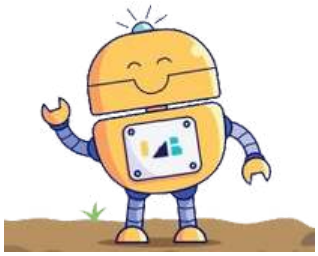
CORE TERM 1



Week	Topic	Math/Science Concept	Tech/Eng Concept
1	Introduction to Robots and Coding	Components of a robot	LEGO Build and Code: Vehicle
2	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
3	Numbers to 10 Programming: Events and Sequence	Numbers to 10	Event and Sequence Gyro Sensor Buzzer
4	Ordinal Numbers and Pattern Recognition	Ordinal Numbers (Positions to 6th) Time Speed	Manipulation of Motors Pattern Recognition through grouping
5	Math Operators Programming: Events and Sequence	Greater/Lesser Than Loudness (i.e. Frequency)	Event and Sequence Voice Sensor Gyro Sensor
6	Moments	Moments - Clockwise and Anti-clockwise	LEGO Build and Code: Fishing Rod
7	Motor Manipulations with Angles, Power and Speed	Angles Power Speed	Manipulation of Motors
8	Positive and Negative Numbers	Subtraction within 10 and Negative numbers	LEGO Build and Code: A Crocodile Jaw
9	Additions to 10 and Sequence	Numbers and Additions to 10	Sequence Manipulation of Motors LEGO Build and Code: Terminator
10	**Final Project**		

THE LAB
Kinder

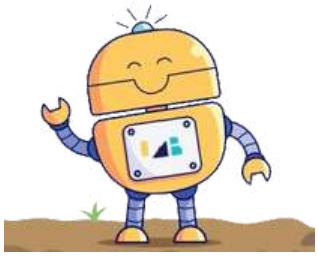
CORE TERM 2



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

THE LAB
Kinder

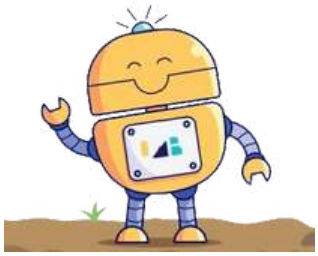
CORE TERM 3



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

THE LAB
Kinder

CORE TERM 4



Week	Topics	Math/Science Concept	Tech/Eng Concept
1	Sequencing with Lego Robotics Programming using Speed	Speed	Sequence
2	3D Printing with X, Y and Z axis	Graphs (X, Y and Z Axis)	Technology of 3D printing
3	Learning aerodynamics with Lego Robotics Programming	X and Y axis	Touch sensor Lego Build and Code: Flying Bird
4	Introduction to Augmented Reality	Directions	Technology of Augmented Reality
5	Colour Sensor with Spike Robot	Colour Speed Sound	Colour Sensor
6	Concept of Light	Concept of Light Reflection/Refraction Light Intensity/ Luminosity	Colour Sensor Lego Build and Code: Light sensor robot
7	Loop and AND/OR operator with Codey Rocky	Logic and Pattern Recognition	AND/OR Operator Loop If-Then Condition
8	Sound and Colour with Lego Robotics Programming	Sound Colour	Colour Sensor Touch Sensor Lego Build and Code: Camera
9	Introduction to Virtual Reality		Technology of Virtual Reality Gyro Sensor
10	**Final Project**		

THE LAB
Kinder

JOIN US AT

THE LAB
Kinder

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*

SIGN UP NOW AT
WWW.THELAB.SG/SIGNUP

CONTACT US

North East: Buangkok Square
Blk 991 Buangkok Square #03-07
Singapore 530991

North: Woods Square
12 Woods Square Tower 1 #04-68
Singapore 737715

East: Kinex Mall
11 Tanjong Katong Road
#03-01/02 Singapore 437157

Central: Taste Orchard
160 Orchard Road #03-07
Singapore 238842

contact@thelab.sg

(+65) 8916 0017

THE LAB
LEARNING WITHOUT BOUNDARIES