

HOW LONG?

MAXIMUM 3 MONTHS

50 HOURS OF CODE



KID@CODE
Code & Math for KIDS & TEENS!

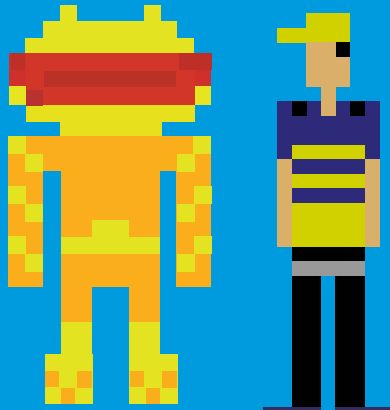


$$e^{i\pi} = -1$$

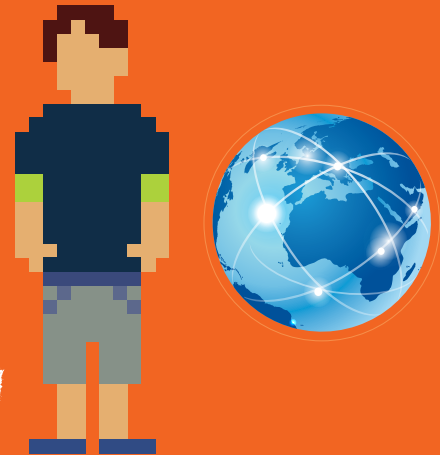
PYTHON PROGRAMMING

```
tom = Turtle()
tom.shape('turtle')
tom.speed(100)
tom.color('green')
for c in [1, 2, 3, 4]:
    tom.forward(100)
    tom.right(90)
```

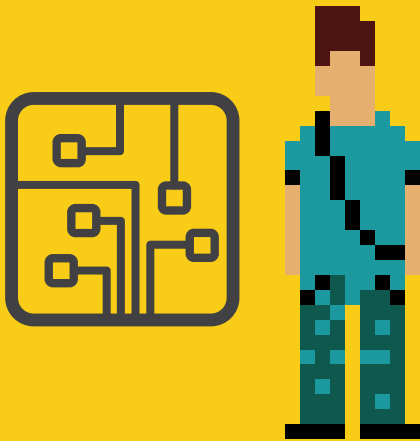
ROBOTICS



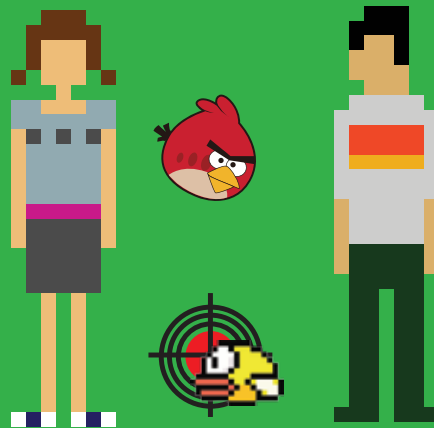
WEB DEVELOPMENT



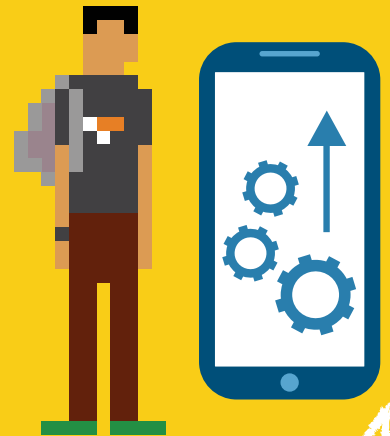
ELECTRONIC



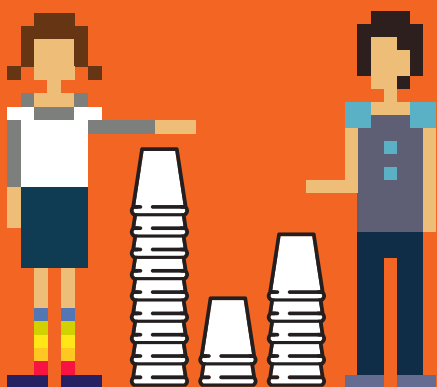
GAME PROGRAMMING



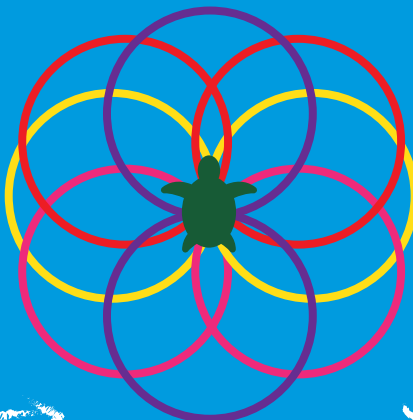
MOBILE APP



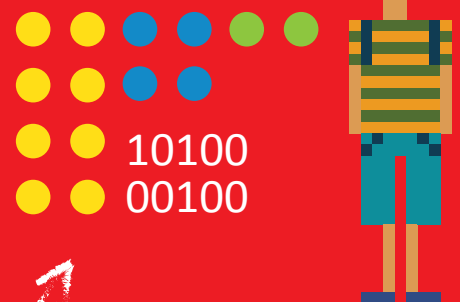
MATH & LOGIC



IGCSE & TURTLE



BINARY NUMBER



SYLLABUS

BUILD MOBILE APP	Create 3 to 6 Mobile Apps	<ul style="list-style-type: none"> • PaintPot • TalkToMe • MoleMash • Ladybug Chase • Xylophone • Broadcast Hub • SMS Answering • And many more!
	Learning Outcomes	<ul style="list-style-type: none"> • Create Graphical User Interface (GUI) • Event and Event Handler • GUI Components (Button, Text Box, etc.) • Media Components (Sound, Text To Speech, Sound Recognition, etc.) • Phone Sensors (Accelerometer, GPS to Find Phone, Detect Orientation, etc.)
ELECTRONIC, ARDUINO & RASPBERRY PI	Build 3 to 6 Electronics Projects	<ul style="list-style-type: none"> • Blinking LED Wave • Traffic Controller • Trying Out a Piezo Buzzer • Animating LED Matrix • Stopwatch • Analog Thermometer • And many more!
	Learning Outcomes	<ul style="list-style-type: none"> • Basics of Electronics • LED, Resistors, Capacitors • Jumper Cable, Bread Board • Push Button, Pull Down/Up Resistors • Buzzer & Light Sensor • DC Motor
PYTHON (CODE & MATH)	Math Learning Outcomes	<ul style="list-style-type: none"> • Euclidean Geometry • Pythagorean Theorem • Trigonometry • Probability • Number Theory • Counting & Measurement
	Python Learning Outcome	<ul style="list-style-type: none"> • Variable & Expression • Loops & Repeat • If-else to make decision • Function 1 • Data Types (String, Int, Float,...) • Data Structures (List, Tuple, Dictionary,...)
WHAT MATERIALS ARE WE USING?	K-Studio	Python Programming Language, Turtle, Mathematics
	Hour of Code	Angry Bird, Flappy Bird, Anna & Elsa, Artist, Infinity GameLab
	MIT	MIT App Inventor, Mobile App Development
	Code Combat	Python & JavaScript Programming Languages
	BlocklyDuino	Electronics, Arduino & Raspberry Pi
	AWS & Cloud 9	Web Design & Development, Cloud Computing
WEB DEVELOPMENT	Children will learn to create their very first website by learning HTML, CSS and JavaScript to form the Graphical User Interface (GUI). Also, they will use their Pythonic experience to create their server side application and make it available on Cloud. At the end of this step, every student will have an online website under his/her own name.	
UNPLUGGED	<ul style="list-style-type: none"> • RoboCup • Conditional Cards • Binary Number • Cryptography • Computer Hardware Anatomy • Image Processing and Pixels • Search and Sort Algorithms • And many more! 	