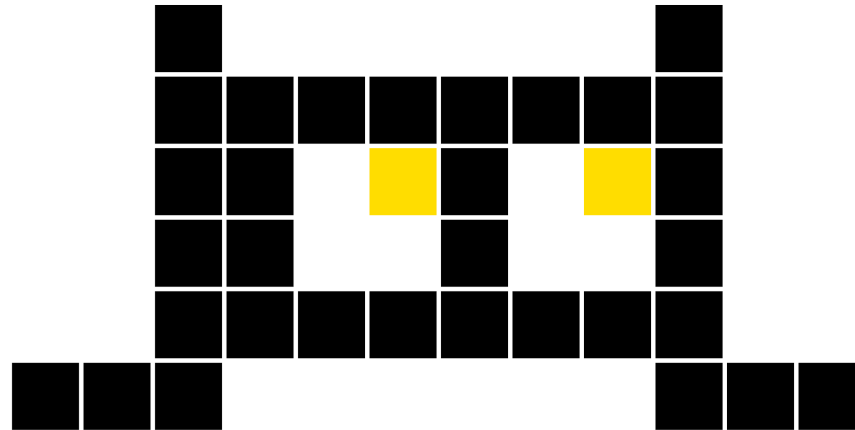


# CURRICULUM

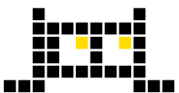
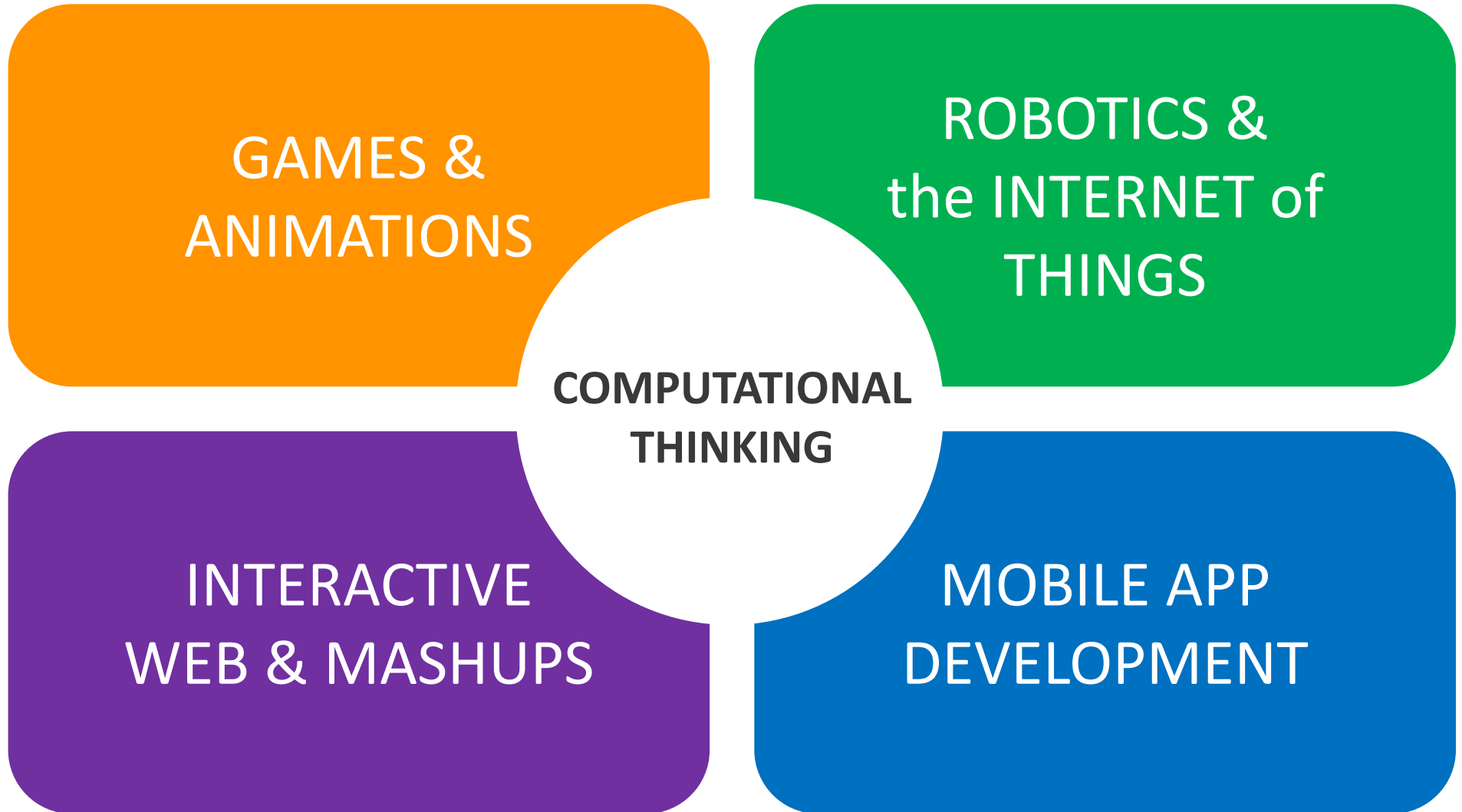


Learn to **C**ode, **C**ode to **L**earn

## CODING ACADEMY

The premier coding & computational thinking school

# FOUR DOMAINS ROOTED IN COMPUTATIONAL THINKING





## COMPUTATIONAL THINKING (CT)

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CT is a set of concepts and approaches for formulating a problem and expressing its solutions in a way that an information-processing agent, be it computer or human, can effectively execute.

CT supports problem solving across all disciplines, including the humanities, sciences and engineering.

CT is the core skill that LCCL Coding Academy promotes in all its learning domains.

**IT-enabled Mindset, ITeMS™** is formulated by Prof Leong Hon Wai, Professor of Computer Science at the School of Computing, NUS.

In the ITeMS™ modules, students learn to develop an IT-enabled mindset, which is the ability to leverage on CT to apply to problems across all domains, to ask new questions, solve new problems and seek new solutions.

**ITeMS™ is a highly recommended module to students of all ages, regardless of interest.**

### MODULES

- Tiny Tots Programme
- ITeMS™ for Kids
- ITeMS™ for Teens
- ITeMS™ for Young Adults



## GAMES & ANIMATIONS

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Students learn CT by coding their own games and animations.

### MODULES

- GP1: Game Programming I
- GP2: Game Programming II
- GP3: Game Programming III
- MC1: Minecraft Modding I
- MC2: Minecraft Modding II
- MC3: Minecraft Modding III



## INTERACTIVE WEB & MASHUPS

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Students code & publish their own interactive apps & mashups with a combination of modern web technologies.

### MODULES

- JS1: Interactive Web with JS I
  - JS2: Interactive Web with JS II
  - JS3: Interactive Web with JS III
- Interactive Web & Mashup Projects



## ROBOTICS & IoT

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Students bring coding to life in the physical world with robots, micro-computers & everyday items.

### MODULES

- RC1: Robotics & Coding I
- RC2: Robotics & Coding II
- RC3: Robotics & Coding III
- MB1: micro:bit I
- MB2: micro:bit II
- MB3: micro:bit III



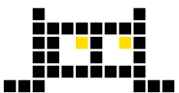
## MOBILE APP DEVELOPMENT

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Students code & publish their own mobile apps.

### MODULES

- SW: Swift Programming
- Mobile App Development with Swift



# STUDENT PROGRESSION

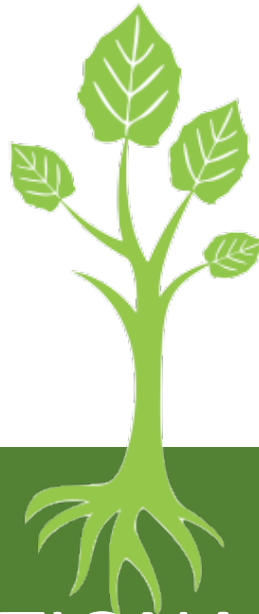
**CODING  
FUNDAMENTALS**



**ALGORITHMS**



**SYSTEMS DESIGN**

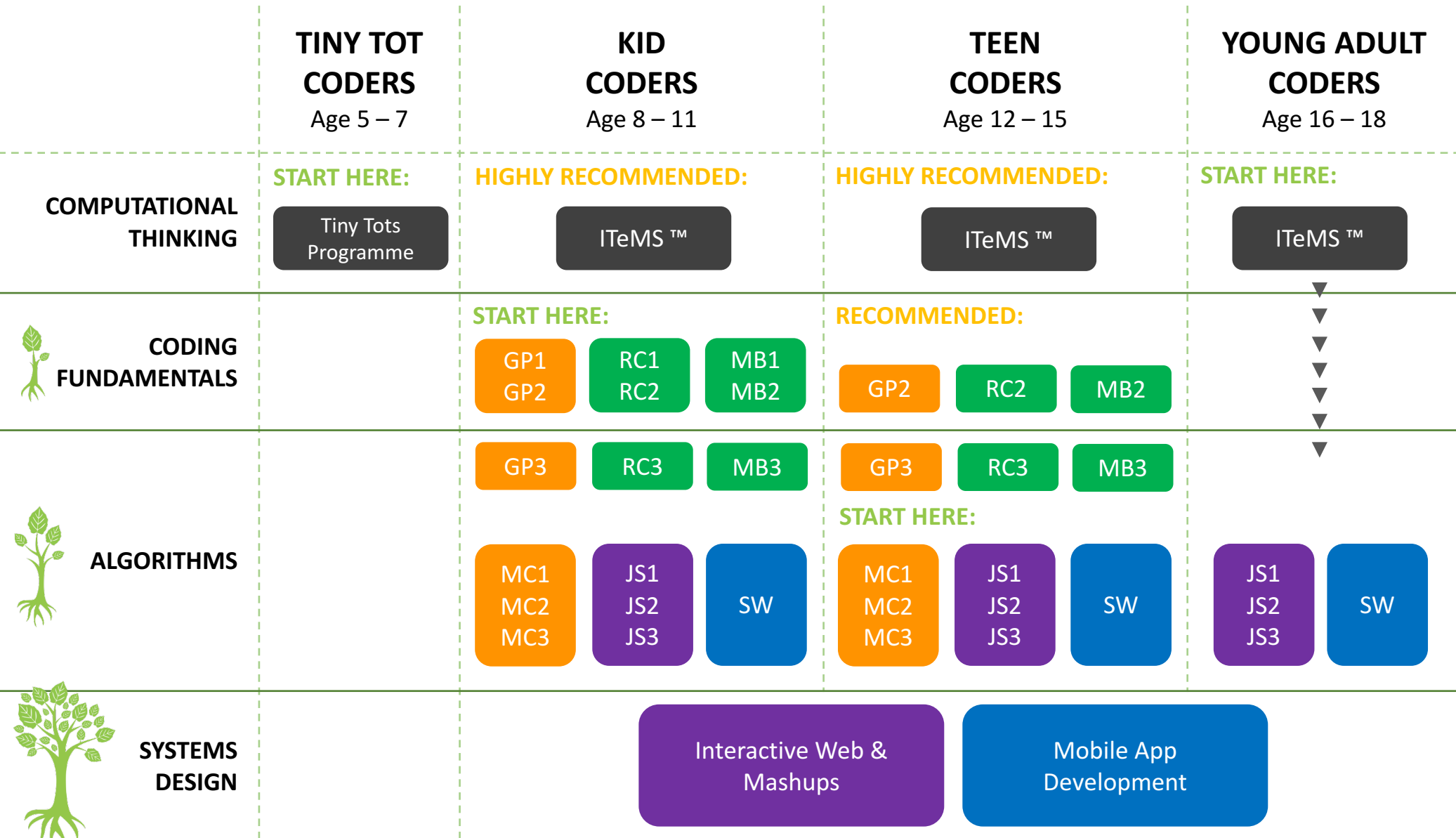


## COMPUTATIONAL THINKING

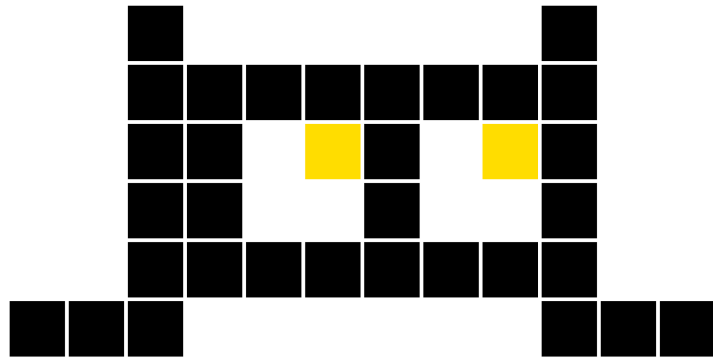
Fundamental CT concepts embedded in all levels of progression



# LEARNING ROADMAP



# CONTACT



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## CODING ACADEMY

The premier coding & computational thinking school

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