Coding Capers: Luci and the Missing Robot - Coding

Coding Capers: Luci and the Missing Robot: by Angela Cleveland is a great read-aloud to help teach the basic concepts of coding in the classroom.

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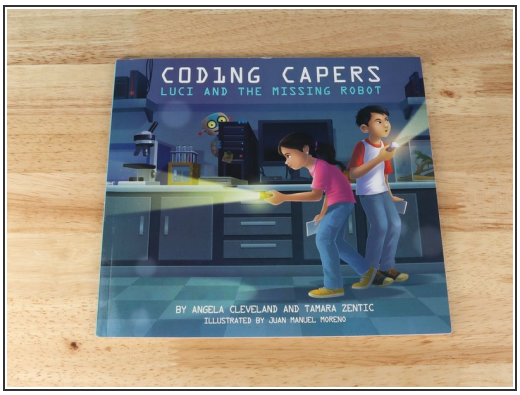
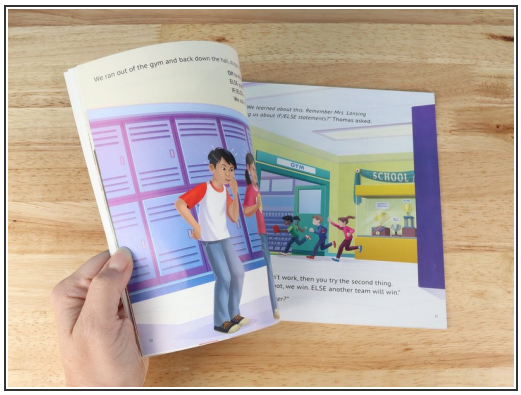
INTRODUCTION

Coding Capers: Luci and the Missing Robot: by Angela Cleveland is a great read-aloud to help teach the basic concepts of coding in the classroom. Below you will find suggestions for projects that pair well with the book. If you'd like your own copy of the book, you can purchase it directly from the publisher or from Amazon.

Step 1 — Book Overview

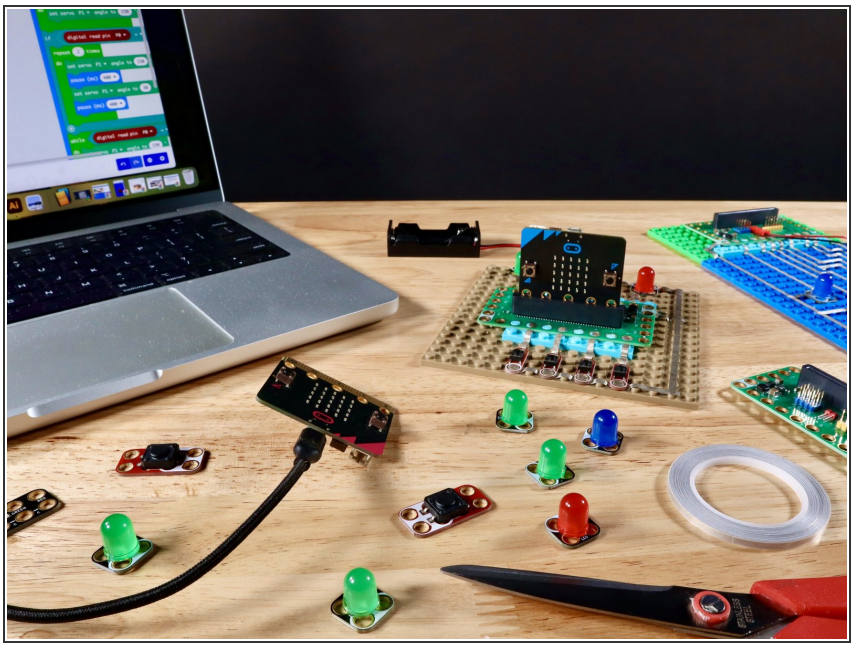






- Join Luci and her friends as they go on an adventure to find a missing robot! In the process they learn the foundational concepts of coding, the increasing capabilities of technology, and the power of persistence.
- Was it just a dream?! Luci wakes up after dreaming about robots only to learn that her teacher has a robot emergency at school! The class robot has disappeared, and the students must decipher codes to locate it, reprogram it, and return it.
- This STEM-friendly tale takes children on a fun game of hide and seek that teaches coding terminology and how technology and computer science work together to create and manage so many of the things we use in our daily lives.
- With a little ingenuity and a lot of perseverance, Luci and her friends follow the clues and end up with a surprise that will allow each of them to help others and inspire the next generation of leaders.

Step 2 — Projects - Overview

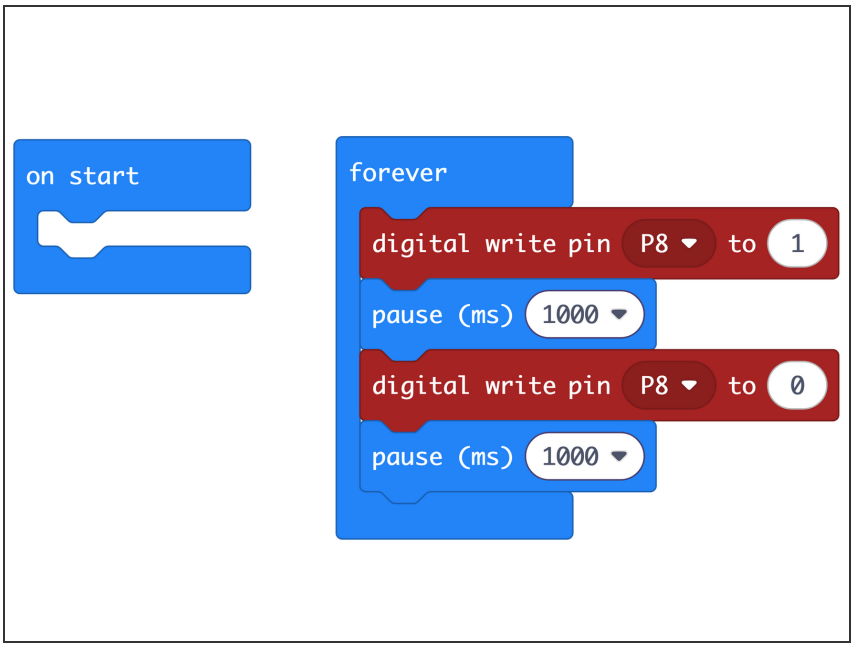


- A great place to start when introducing basic coding concepts to students is MicroBit University.
- Below we will cover different types of **Loops**, **If/Then/Else Conditionals**, and **Variables** with links to chapters within MicroBit University that hit on these topics.

If you are new to coding/physical computing, be aware that the projects linked below will always involve both a physical circuit (with a MicroBit) AND a bit of code created on a computer used to control the behavior of that circuit.

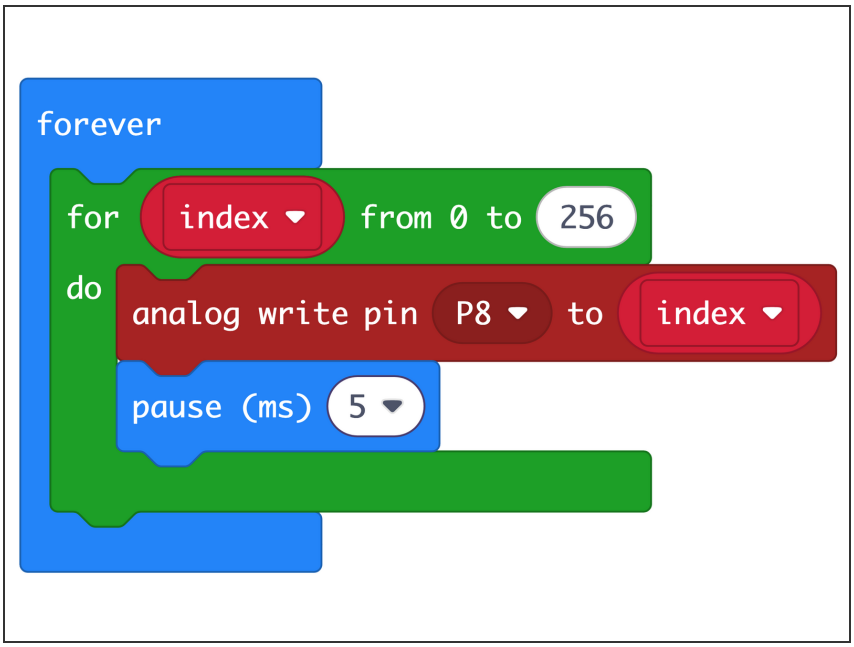
Please note that a lot of the topics from the book are used often in MicroBit University. We are only listing the most basic examples. For more coding examples, refer to the complete MicroBit University guide.

Step 3 — Projects - Forever Loop



- **Forever Loop** (almost all of the chapters involve loops, these are some of the most basic)
  - Chapter 1 - Single LED
  - Chapter 2 - Two LEDs
  - Chapter 8 - LED Matrix

Step 4 — Projects - For Loop



- **For Loop**
  - Chapter 1 - Single LED (Guide C)
  - Chapter 8 - LED Matrix (Guide D)
  - Chapter 15 - Piezo Four Buttons (Guide D)

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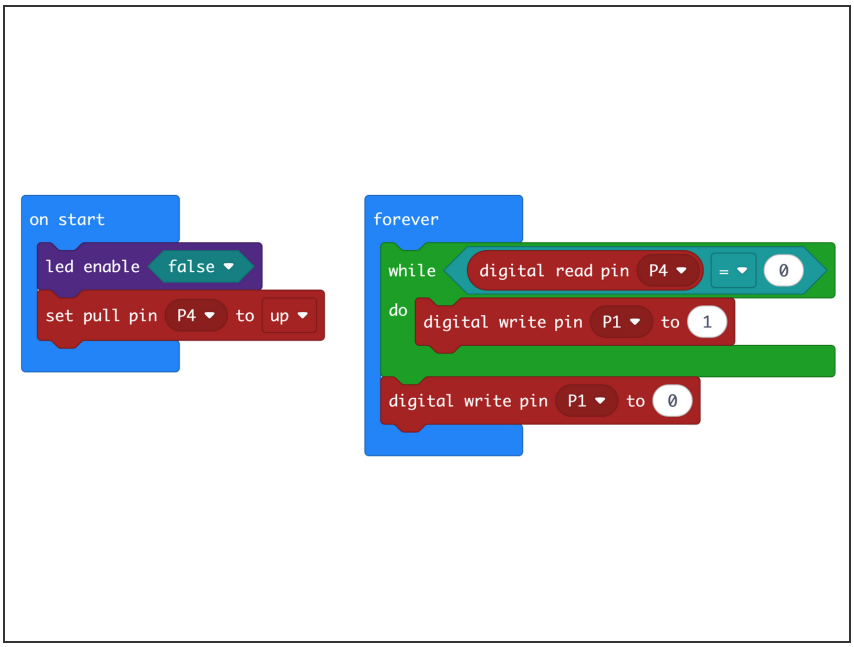
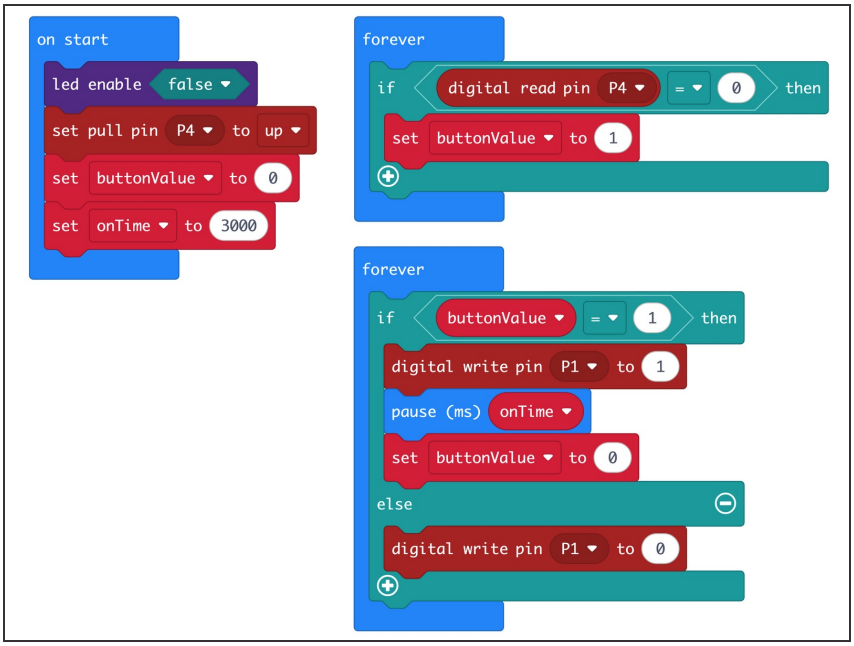
Step 5 — Projects - While Loop



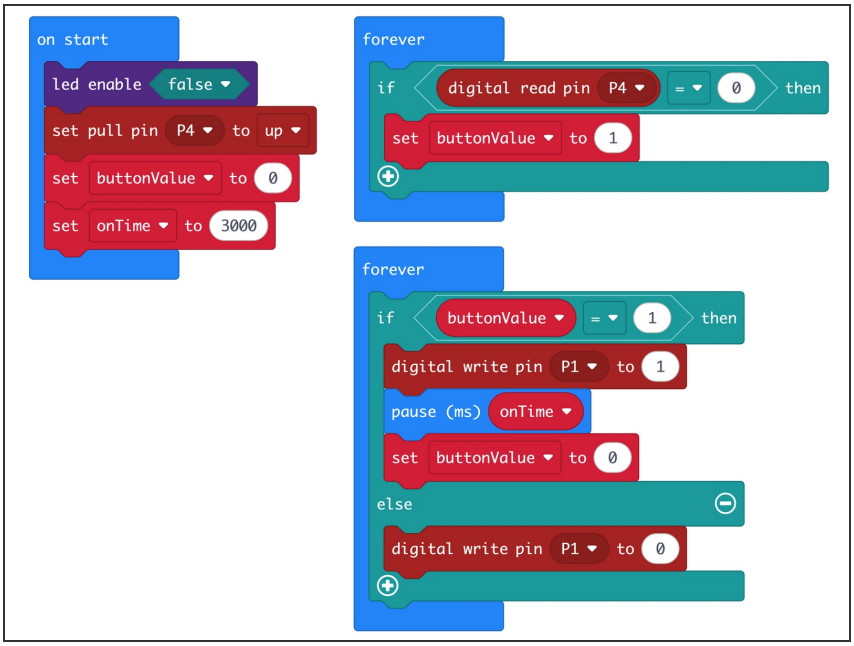
- **While Loop** (used in other guides as well)
  - Chapter 2 - Two LEDs (Guide D)
  - Chapter 4 - Single Button (Guide A)
  - Chapter 7 - Four Buttons Four LEDs (Guide B)

Step 6 — Projects - If/Then/Else Conditionals



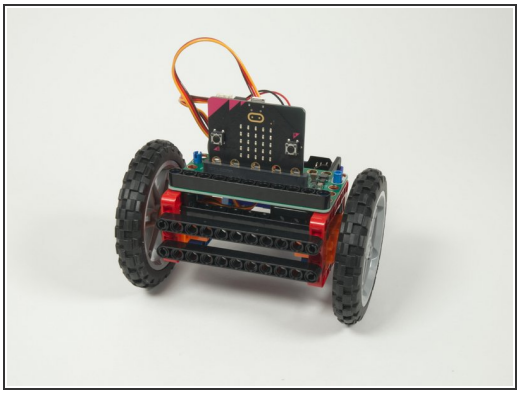
- **If/Then/Else** (these are also in most chapters, but these are the most basic)
  - Chapter 3 - Four LEDs (Guide C)
  - Chapter 4 - Single Button (Guides B, C, and D)
  - Chapter 5 - Two Buttons

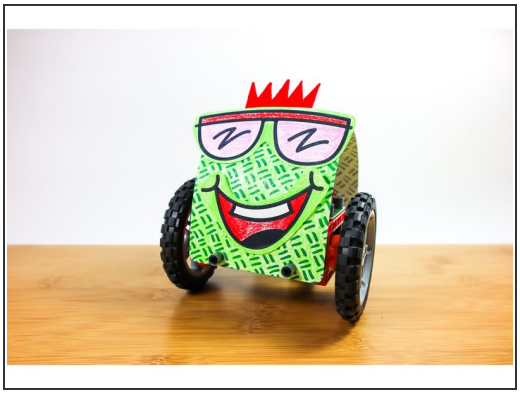
Step 7 — Projects - Variables



- **Variables** (in multiple guides, but here are a few)
  - Chapter 4 - Single Button (Guides B, C, and D)
  - Chapter 6 - Four Buttons

Step 8 — Projects - Robotics

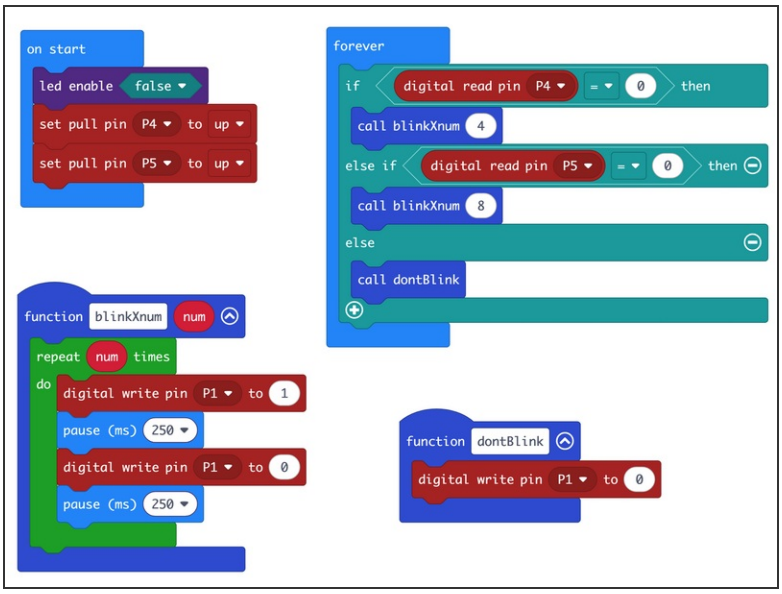


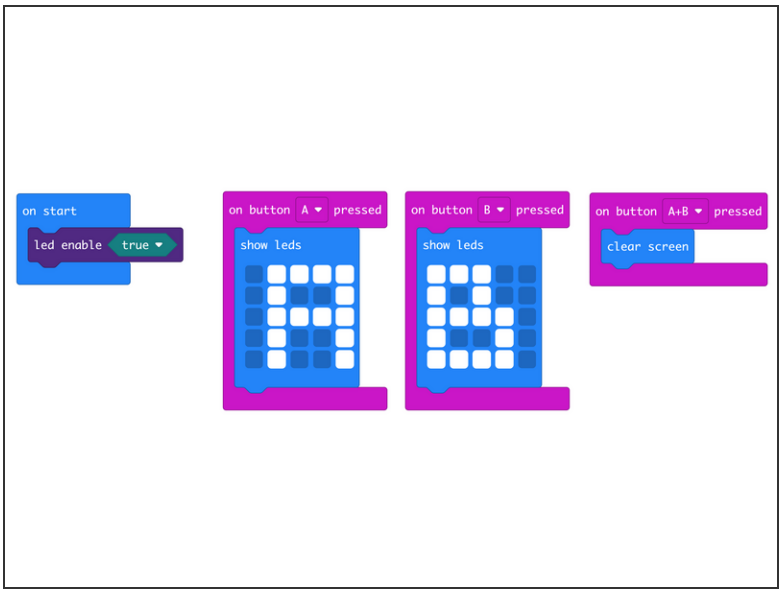




- Building and coding a **Bit Board Rover** is a great way to cap off the book.
- You can even customize your **Bit Board Rover** with this **Funny Faces Template!**

Step 9 — Projects - Extended Learning





- **Functions**, **Parameters**, and **Event Handlers** are not topics covered by the book, but are a great extension of learning and are used regularly in [MicroBit University.]
  - **Functions** are first used in [Chapter 5 - Two Buttons (Guide B)].
  - **Parameters** are first used in [Chapter 5 - Two Buttons (Guide C)].
  - **Event Handlers** are used in [Chapter 10 - Buttons A and B.]