

## **Think Like a Coder: The World Machine (Ep.1)**

### **PART 1 — Warm-up**

#### **Talk!**

- Do you like robots?
- What can robots do?
- Do you know any movies with robots?
- What does a *programmer* do?

#### **GUESS THE MOVIE BY THE ROBOT!**

- Which robot would you like to be friends with? Why?
- What's something good or bad about robots?

#### **Match**

Word	Meaning
1. robot	something that does work
2. machine	direction or command
3. code	a long metal string
4. maze	a machine that can move and act
5. instruction	instructions for a computer
6. wire	a puzzle with paths

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# The Prison Break — Think Like a Coder, Ep 1

Video: <https://ed.ted.com/lessons/the-prison-break-think-like-a-coder-ep-1>

## Multiple-Choice Questions

1. **Who are the two main characters in this episode?**
  - A) A girl and her teacher
  - B) A girl and her robot companion
  - C) A boy and a robot dog
  - D) A knight and a dragon
  
2. **What is the overall goal of the characters?**
  - A) To escape from prison
  - B) To win a race
  - C) To collect three artifacts to save the world
  - D) To build a robot army
  
3. **What programming concept is highlighted in this lesson?**
  - A) Functions
  - B) Variables
  - C) Loops
  - D) Arrays
  
4. **In the lock-picking problem, how many positions can each tumbler be set to?**
  - A) 10
  - B) 50
  - C) 100
  - D) 1,000
  
5. **Which of the following best describes your task in the Think section?**
  - A) Draw a picture of a lock
  - B) Program the lock pick to try all tumbler combinations
  - C) Memorize the number of tumblers
  - D) Write a poem about escape
  
6. **What would you do if instead of one dial there were four, each ranging from 1 to 100?**

7. How could Ethic (the girl) run through all possible combinations?

## Essay-Style Questions

1. Summarize the episode's main storyline in your own words.

**Guidance:** Explain how Ethic and her robot companion Hedge search for artifacts and confront programming puzzles—particularly the lock challenge—to advance their quest. Mention how looping through tumbler combinations models problem-solving logic.

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2. Explain why loops are essential in solving the lock-picking problem.

**Guidance:** Discuss how loops enable systematic repetition, allowing Ethic to cycle through each tumbler position (1–100) and thereby test every possible combination safely and efficiently, without writing out each step manually.

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3. Imagine there are four tumblers instead of one. How could you program Ethic's device to handle all combinations?

**Guidance:** Describe using nested loops—one loop for each tumbler. The outermost loop sets the first tumbler, then inner loops handle the remaining three, iterating through all 100 possibilities for each. This ensures exhaustive coverage in a structured way.

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4. Why is it important for new developers to think like a coder when solving problems?

**Guidance:** Reflect on the value of logical thinking, breaking complex problems into manageable parts, and using programming structures (like loops) to automate tasks. Emphasize how this mindset supports clarity, efficiency, and correct outcomes.

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5. What do you think saves the world in this story: human creativity (Ethic) or robotic precision (Hedge)? Explain.

**Guidance:** Encourage exploration of how creativity and logic complement each other—Ethic’s intuitive problem framing plus Hedge’s methodical execution make success possible.

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## 6. How did this video affect your view of coding and problem-solving?

**Guidance:** Invite personal insights—whether learners feel more confident about programming, are excited to explore puzzles, or understand how coding can make problem-solving approachable and creative.

### **PART 2 — Reading and Vocabulary**

 ( *comprehension practice* )

Ethic is a young inventor. She built a robot called Hedge.  
But Hedge made a big mistake — he created a giant maze that covers the world!  
Ethic wants to fix it. She remembers her friends — Adila, Octavia, and Lemma.  
Together, they plan to stop Hedge.  
They send many people into the maze with long wires to help Ethic find the crystal.  
If they work together, they can save the world.

In the end, Ethic finds Hedge and changes one number in his program.  
She saves the world and helps people live freely again.

### **PART 3 — Grammar Focus**

[Verbos irregulares em inglês - Toda Matéria](#)  
[Irregular Verbs Exercises](#)

#### **Grammar Topic: Past Simple (Regular and Irregular Verbs)**

##### **Explanation (simple terms):**

We use the past simple to talk about finished actions.

- Regular verbs: *create* → *created*, *help* → *helped*
- Irregular verbs: *make* → *made*, *find* → *found*

##### **Practice:**

Fill in the blanks:

1. Ethic \_\_\_\_\_ (make) a robot named Hedge.
2. She \_\_\_\_\_ (work) with her friends to stop him.
3. They \_\_\_\_\_ (use) wires to find the crystal.
4. Hedge \_\_\_\_\_ (build) a big maze.
5. Ethic \_\_\_\_\_ (fix) the problem in the end.

## **PART 4 — Speaking and Creative Task**

### **Create a New Robot**

Students draw a simple robot and describe it using at least 5 sentences:

- What does it do?
- What can it fix?
- What is its name?

## **PART 5 — Reflection and Wrap-up**

### **Discussion:**

- What did Ethic learn?
- What is teamwork?
- What is one thing you want your robot to do?