

MEET YOUR GUIDE

VETRA



TECHTOPIA ISLAND



07



FROM PLAYERS TO CREATORS!

As you sail past the reef, you spot something glowing on the horizon. Strange shapes rise— giant screens, floating keyboards, blinking lights, and 3D printers stacked like sails! Welcome to TechTopia Island—where sailors don't just ride the waves... They code them!



"Here on TechTopia, we don't just use technology —we create it! You'll explore how computers, robots, and 3D printers follow instructions, and then write some of your own!"



MISSION 1 : WHAT IS CODING?

Did you know every game, robot, or smart device is just following instructions someone gave it? That someone is called a programmer, and today—it's you!

Your Challenge:

- Understand what coding is
- Pretend to be a computer (or a boat!)
- Write clear instructions to complete a task

"Computers don't guess. If the code isn't clear, it won't work!"

Try This:

1. Play Code a Boat

- One person is the captain, the other is a boat
- Captain gives step-by-step directions like:
 - ➡ "Take 3 steps forward"
 - ↻ "Turn left"
 - ➡ "Go 2 steps"
- Boat follows the instructions exactly.
- Did the boat end up in the right spot? If not—there's a bug in your code!

2. Play Regatta Race: The Treasure Hunt Game

- Hide a "treasure" and create a map with clear instructions.
- Another team follows the map.
- If they don't find the treasure, improve your code!

👉 Write what you learned:

"I learned that computers need _____ instructions to work."
finding it is part of the fun!"

"Even a small mistake in code is called a bug—and finding it is part of the fun!"

MISSION 2: PROGRAM WITH ARROWS AND COMMANDS

Let's move from the real world to the screen! Code.org lets you tell characters what to do using simple arrow blocks

Your Challenge:

- Use arrow blocks to move a character
- Help BB-8 clean the beach
- Fix bugs and try again!

"Computers don't guess. If the code isn't clear, it won't work!"

Try This:

- Type **code.org** into your browser
- If it's your first visit:
- Accept cookies or close the cookie window
- Set your language and click "Submit"
- Scroll down and click the purple "Elementary School" block (with the bee)
- Scroll again and click "Start Pre-Reader Course" (with the dog and unicorn)
- In the third row, select **Lesson 4: Programming with Rey and BB-8**, then click on **circle 2**
- Close the video that pops up, and click anywhere to remove the shadow
- Drag the blue-green arrow blocks to guide BB-8 to:
 - Collect all the trash
 - Reach the recycling bin
- Click Run to test your program
- If you complete the puzzle, click **Continue**
- If not, click **Reset** and try again

After solving all 10 puzzles, use the back arrow (top left of the page) and choose another course, e.g. **Lesson 3: Programming with Angry Birds and repeat steps.**

"Just like sailing, coding takes practice and precision. Keep testing and improving!"

👉 Reflect:

"When I used more commands in the right order, the robot
-----." "If something didn't work, I
-----."

🌟 More Games to Explore:

- **Lightbot**: Solve logic puzzles (requires Flash on desktop or mobile [app/game for mobile devices](#)).
- **Kodable – Beach Cleanup**: Clean up the beach using arrows

MISSION 3: CODE WITH BLOCKS AND CREATE GAMES

Now that you've mastered arrows, it's time to try block coding—where you control the game characters with full commands!

Your Challenge:

- Use drag-and-drop blocks to write programs
- Make characters jump, spin, or respond
- Try loops and conditions

Try This:

- Go to hourofcode.com
- Click on Activities in the top menu
- Choose your preferred language (right side of the screen)
- Filter results: **Grades:** Choose your age range, **Programming Language:** Select Blocks
- Click a game (e.g. Minecraft, Angry Birds) and hit Start
- Follow the instructions to drag and snap together code blocks to complete each challenge

"Block coding lets you build smart, repeatable instructions—and it's fun too!"

👉 Reflect:

"My favorite block was _____ because it made the character _____."

"The trickiest part was _____ but I solved it by _____."

✨ Another fun option: Return to Code.org and explore Minecraft Adventurer!

- For the first 3 steps see above Activity 2: Coding with simple commands > Hands-On Learning. Then:
- Scroll down and click **Try the Hour of Code** (blue-green block with Minecraft characters)
- Click **Explore Minecraft** (purple button, right column)
- Click **Minecraft Adventurer > Get Started**
- Close the video that pops up
- Choose your character and follow the coding steps
- Use blocks to solve the puzzles by clicking **Run, Reset, and Continue** as needed

MISSION 4: EXPLORE PROGRAMMING IN 3D

TechTopia is not flat! Let's build our own world—and code what happens inside it! With Kodu, you can design terrain, add characters, and make them react to what happens.

Your Challenge:

- Create a 3D game world
- Program your character to move, collect, or score
- Discover how to code interactions!

Try This:

- Go to kodugamelab.com/downloads
- Click the link [KoduSetup.EXE](#) and install the program (Windows only)
- Open Kodu Game Lab and start a New World
- Use the terrain editor to raise land or add water
- Use visual "tiles" to program your character:
- Example: WHEN see apple DO collect

"In Kodu, you're the creator of the world and the rules. Your characters can think, move, or react—it's all up to your code!"

Reflect:

"In my Kodu world, I made _____ when _____."

"One fun rule I added was: _____."

✨ Helpful Video Tutorials:

Getting Started:

- [Kodu Game Lab: Tutorial \(11:49\)](#)

Features:

- [Kodu Game Lab - Beginner - 01 Creating a New World \(5:24\)](#)
- [Kodu Raising Terrain & Water \(6:04\)](#)
- [Kodu Game Lab - Beginner - 02 Saving/Importing/Exporting Worlds \(2:01\)](#)
- [Kodu Game Lab - Beginner - 03 Player Movement \(1:44\)](#)
- [Kodu Game Lab - Beginner - 04 Spawning \(2:55\)](#)
- [Kodu Game Lab - Beginner - 05 Score Points \(2:38\)](#)
- [Teleporting in Kodu \(7:20\)](#)

Sample Projects:

- [Coding for kids | Create a game with KODU game lab | Age 5+ \(4:10\)](#)
- [How to collect an object in Kodu games lab \(4:19\)](#)
- [How to create a target game in Kodu Game Lab \(4:15\)](#)
- [How to Create a Racing Game in Kodu Game Lab \(4:15\)](#)
- [How to Create a World for Your Games in Kodu Game Lab \(4:33\)](#)

BONUS MISSION: DESIGN A 3D SAILING BOAT!

Time to build a real object with code—something you can even print!

Your Challenge:

- Design a 3D object using CAD
- Create your own sailboat
- Save and share your model!

Try This:

- Open your browser and go to <https://www.tinkercad.com>
- Click Sign Up (top-right corner) to create a free account.
- Why? Signing up lets you save your work and access built-in tutorials from Autodesk.
- Once logged in, click Create New Design to start your project.
- Use drag-and-drop shapes to create your boat. Try combining boxes, wedges, and cylinders for the hull, mast, and sails.

"Design is coding too! Each shape, size, and rotation follows math and logic—and your imagination."

Reflect:

"My 3D boat has _____. "I would add _____ to make it even better."

✨ Learn by Watching – General Tutorials:

- [TinkerCAD - Tutorial for Beginners in 10 MINS! \(10:44\)](#)
- [TINKERCAD for Beginners – Simple Basic Tutorial \(7:17\)](#)

📺 Build a Boat – Step-by-Step Examples:

- [TinkerCAD - Sailboat \(8:49\)](#)
- [How to Make a SAILBOAT 🚢 \(10:23, no voice-over\)](#)
- [\[1DAY_1CAD\] SAILING SHIP – Tinkercad Style \(10:33\)](#)

📖 Learn by Reading:

- [Boise State University Tinkercad Guide \(Text & Image\) \(or search for “Boise State Tinkercad tutorial”\)](#)

📺 Remix Ideas – Ready-Made Designs to Explore: (Search for these in the Tinkercad gallery once logged in)

- [Sailing boat](#)
- [Sailing Yacht](#)
- [Small Sailboat](#)
- [Triple hull sail boat](#)