

Being able to recognize patterns is a *fundamental step* in the process of Computational Thinking.

- Patterns are opportunities for efficiency when solving problems.
- Patterns help determine which operations can and need to be done to solve a problem.
- Recognizing patterns is *critical* for utilizing computers to automate a solution to a problem.
- Patterns allow operations to be repeated, saving time.

Recognizing Patterns in Problem Solving

- **Codes**—bar codes, QR codes, Morse code, alphanumeric codes
- **Deciphering codes**—decoder ring, Rosetta stone (ancient Egyptian hieroglyphs)
- **Cholera epidemic in London**—patterns of Cholera outbreak and water pump use
- **La Bella Principessa** by Leonardo DaVinci

Examples of Patterns

- Patterns in nature—honeycomb, sunrise/sunset, tides
- Limericks
- Shakespeare's plays
- Art—Van Gogh's brushstrokes
- Crop harvesting

Access the Course: [Problem Solving through Computational Thinking for Educators](#)

Access this Module: [Pattern Recognition](#)