

The background is a dark blue field filled with various line-art icons in light blue and yellow. These include: a speech bubble with 'HTML5', a speech bubble with 'JS', a speech bubble with binary code '01101000' and '01101001', a Python logo, a satellite, a planet with a ring, a network diagram, an '@' symbol, a computer monitor and tower, a globe, a laptop with binary code on its screen, a Wi-Fi symbol, a cloud, a magnifying glass, a group of stylized people, and another satellite. The text '</>tk' is repeated in the corners.

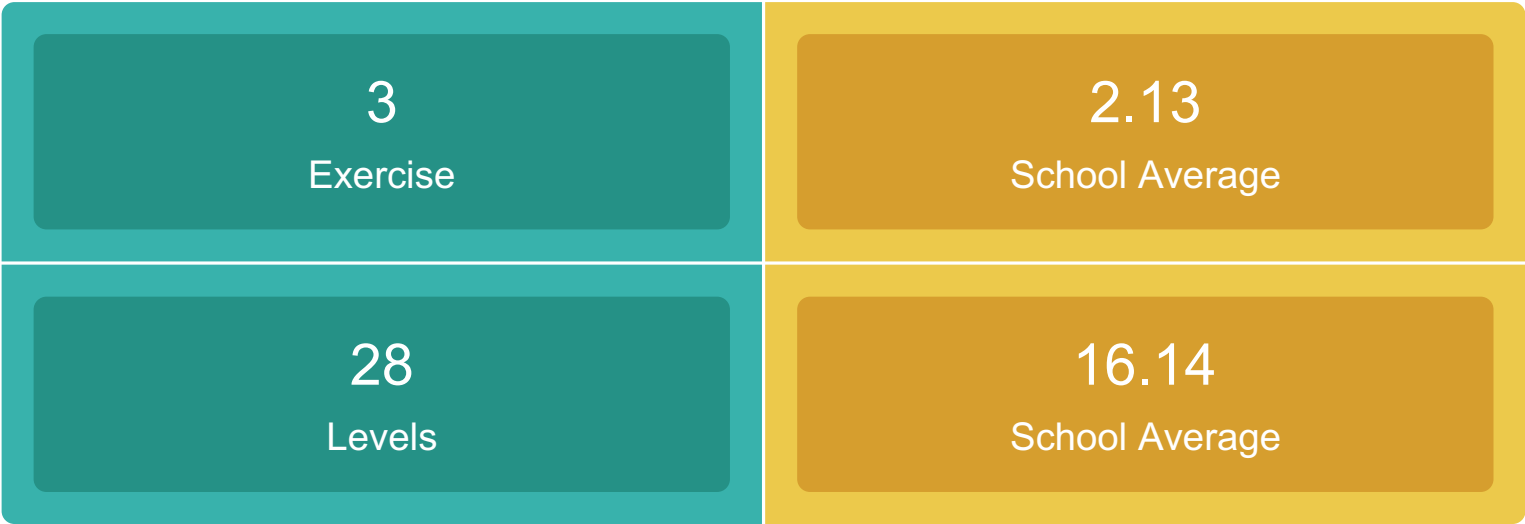
`</>tk`

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5 - Onyx

# Overview:



# Table:

| All exercises     |        |   |             |
|-------------------|--------|---|-------------|
| Exercise          | Levels | Concepts                                    | Blocks Used |
| Fun with Basics   | 10/10  | Sequence, Algorithmic Thinking              | 133         |
| Loopy Loops       | 12/12  | Loops, Debugging                            | 208         |
| Conditional Crops | 6/12   | Conditional Statements, Pattern Recognition | 126         |

# List of Concepts:

## Decomposition

Breaking down a problem into smaller, more manageable parts.

Computational Thinking Concepts

## Pattern Recognition

Identifying similarities or patterns within problems.

Computational Thinking Concepts

# Abstraction

Simplifying complex problems by focusing on essential details and ignoring unnecessary information.

Computational Thinking Concepts

# Algorithmic Thinking

Developing step-by-step instructions or rules to solve a problem.

Computational Thinking Concepts

# Sequence

Understanding and writing instructions in a specific order.

Programming Concepts

# Variables

Introducing the concept of containers for storing information.

Programming Concepts

# Loops

Repeating a set of instructions multiple times.

Programming Concepts

# Conditional Statements

Making decisions in the program based on certain conditions.

Programming Concepts

# Events

Reacting to user inputs or specific occurrences in the program.

Programming Concepts

# Functions

Creating reusable blocks of code to perform specific tasks.

Programming Concepts

# Data Types

Introducing the idea of different types of data, such as numbers, text, and Boolean values.

Programming Concepts

# Input and Output

Understanding how programs receive information (input) and produce results (output).

## Debugging

Identifying and fixing errors or mistakes in the code.

## Comments

Adding explanations and notes within the code for better understanding.

## Event Handling

Responding to events triggered by user actions or other parts of the program.

## Graphics and Animation

Introducing basic concepts of drawing and creating movement in a program.

## Simulation

Creating virtual scenarios to model real-world situations.

## Collaboration

Encouraging teamwork and sharing of code with others.

## Iteration

Repeating a set of instructions or a process.