

The tk logo, featuring the characters "</>tk" in a stylized, colorful font. The "</>" part is in teal, and the "tk" part is in yellow and red.

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DWPS

4 - Morganite

Overview:

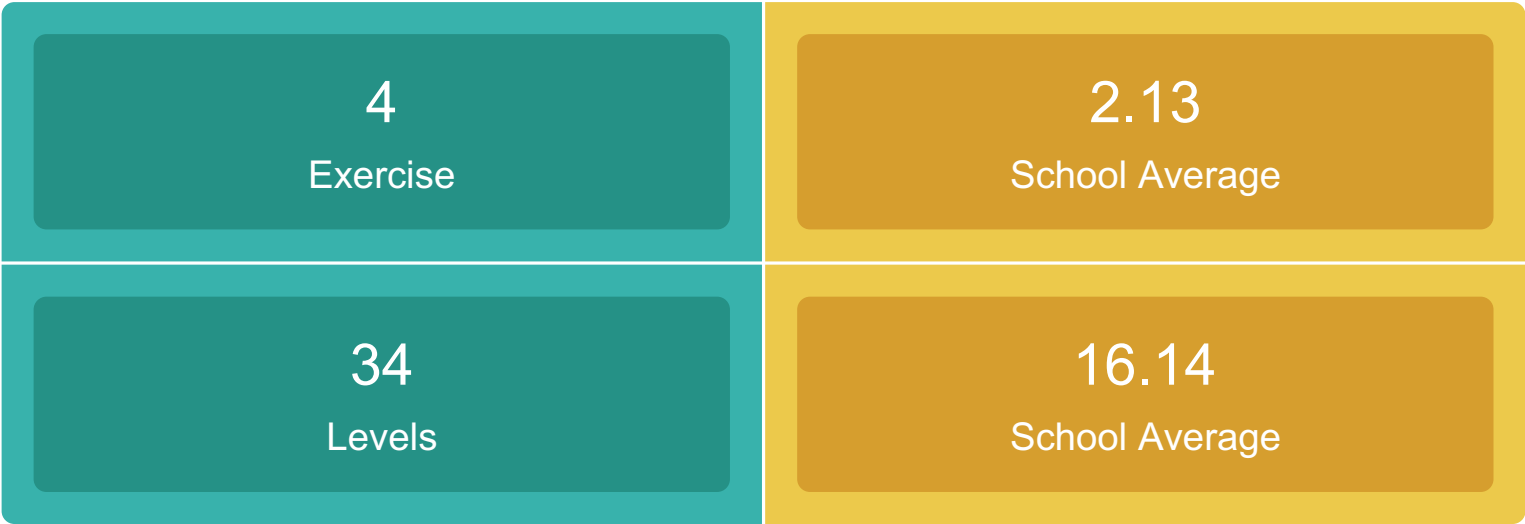


Table:

All exercises			
Exercise	Levels	Concepts	Blocks Used
Fun with Basics	10/10	Sequence, Algorithmic Thinking	124
Loopy Loops	12/12	Loops, Debugging	187
Conditional Crops	5/12	Conditional Statements, Pattern Recognition	276
Backyard Functions	7/10	Functions, Variables, Events	247

List of Concepts:

Decomposition

Breaking down a problem into smaller, more manageable parts.

Computational Thinking Concepts

Pattern Recognition

Identifying similarities or patterns within problems.

Abstraction

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

Algorithmic Thinking

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

Sequence

Understanding and writing instructions in a specific order.

Variables

Introducing the concept of containers for storing information.

Loops

Repeating a set of instructions multiple times.

Conditional Statements

Making decisions in the program based on certain conditions.

Events

Reacting to user inputs or specific occurrences in the program.

Functions

Creating reusable blocks of code to perform specific tasks.

Data Types

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

Input and Output

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

Programming Concepts

Debugging

Identifying and fixing errors or mistakes in the code.

Programming Concepts

Comments

Adding explanations and notes within the code for better understanding.

Programming Concepts

Event Handling

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

Programming Concepts

Graphics and Animation

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

Programming Concepts

Simulation

Creating virtual scenarios to model real-world situations.

Programming Concepts

Collaboration

Encouraging teamwork and sharing of code with others.

Programming Concepts

Iteration

Repeating a set of instructions or a process.

Programming Concepts