

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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## II-OPAL

# Overview:



# Table :

All exercises			
Exercise	Levels	Concepts	Blocks Used
Fun with Basics	0/10	Sequence, Algorithmic Thinking	0
Loopy Loops	0/12	Loops, Debugging	0
Conditional Crops	0/12	Conditional Statements, Pattern Recognition	0
Backyard Functions	0/10	Functions, Variables, Events	0
Dog and the loops	0/8	Loops, Variables, Functions	0
Gardening Conditionals	0/6	Functions, Conditional Statements, Sequence, Algorithmic Thinking	0
Swamp conditionals	0/4	Conditional Statements, Loops, Variables, Sequence, Events, Functions, Decomposition, Algorithmic Thinking	0
Baloon pop functions	0/8	Conditional Statements, Loops, Variables, Sequence, Events, Functions, Decomposition, Algorithmic Thinking	0

Loops and castles	0/8	Loops, Variables, Functions	0
Desert conditionals	0/4	Conditional Statements, Loops, Variables, Sequence, Events, Functions, Decomposition, Algorithmic Thinking	0
Predator bird functions	0/7	Conditional Statements, Loops, Variables, Sequence, Events, Functions, Decomposition, Algorithmic Thinking	0
Functions on the field	0/9	Conditional Statements, Loops, Variables, Sequence, Events, Functions, Decomposition, Algorithmic Thinking	0
Fun with Basics	0/3	r	0
Loopy Loops	0/4	r	0
Conditional Crops	0/4	r	0
Backyard Functions	0/6	r	0
Fun with Basics - Grade 1 & 2	0/8	.	0
Loopy Loops - Grade 1/2	0/8	.	0

# 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).

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