



Scratch Programming 3-4 Syllabus

Course Goals

1 Programming

Students are introduced to several programming concepts and practice implementing them using Scratch software.

2 Game Modification

Students design, modify, and create games and movies using programming in Scratch.

3 Construction and Design

Students practice building and designing WeDo robots to be programmed using Scratch software.

Course Topics

1 Scratch

Students learn about Scratch and how to program with it.

2 Movement

Students learn how to make characters in Scratch move and speak.

3 Appearances

Students learn how to modify the appearance of their characters through colors and costumes.

4 Character Creation

Students learn how to create their own characters in Scratch.

5 Logic

Students learn various logic commands that are used in programming.

8 Projects

Students create a short movie, a simple game, and other projects to display what they have learned.

Course Schedule

Day 1

Introduction to Course

Students introduce themselves and receive an overview of Scratch.

Introduction to Scratch

Students learn the layout of Scratch and are introduced to several types of coding blocks.

Movement

Students learn how to create movement in their Scratch programs.

Day 2

Warmups

Students start each day with a quick Scratch activity that reviews a previous concept or introduces a new one.

Looks

Students learn about color changes and costumes in Scratch.

Creating Sprites

Students learn how to create new characters in Scratch.

Day 3

Warmups

Students start each day with a quick Scratch activity that reviews a previous concept or introduces a new one.

Pens

Students learn how to draw lines and shapes using the Pen feature in Scratch.

Sounds

Students experiment with sound effects by creating melodies, layering sounds, and recording their own.

Day 4

Warmups

Students start each day with a quick Scratch activity that reviews a previous concept or introduces a new one.

Review

Students catch up and review the material they have covered.

Day 5

Warmups

Students start each day with a quick Scratch activity that reviews a previous concept or introduces a new one.

Mini-Project: Movie

Students complete an animation project to demonstrate what they have learned so far about Scratch.

Day 6

Warmups

Students start each day with a quick Scratch activity that reviews a previous concept or introduces a new one.

Scratch-a-Thon

Students review what we learned in Week 2 to begin designing games.

Logic

Students learn how to enter conditional commands into Scratch.

Inputs

Students learn how to incorporate keyboard and mouse commands in Scratch.

Broadcasting

Students learn how to create commands that cause changes in the game environment.

Day 7

Warmups

Students start each day with a quick Scratch activity that reviews a previous concept or introduces a new one.

Broadcasting

Students learn how to create commands that cause changes in the game environment.

Random Numbers

Students discuss how to implement random numbers in their programs.

Introduction to Variables

Students learn about variables and how they can be used in games.

Continuing Variables

Students continue to learn about variables and create a game.

Day 8

Warmups

Students start each day with a quick Scratch activity that reviews a previous concept or introduces a new one.

Continuing Variables

Students continue to learn about variables and create a game.

Mini Project - Balloon Shooter

Students apply knowledge of logic and variables to create a Balloon Shooter game.

Day 9

Warmups

Students start each day with a quick Scratch activity that reviews a previous concept or introduces a new one.

Introduction to Final Project

Students learn the expectations for the final project and begin work on it.

Continuing Final Projects

Students continue working on their final projects.

Day 10

Continuing Final Projects

Students continue working on their final projects.

Sharing Projects

Students share their final projects with the class.

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