

Introduction to Programming: Scratch

Course Syllabus and Lesson Planner

Description:

In this course there are 6 modules that cover everything from the introduction of Scratch to creating your own custom blocks in Scratch.

- Module 1 gives a basic overview of Scratch and how to make sprites in two different modes.
- Module 2 covers how to use Scripts inside of Scratch.
- Module 3 goes over how to edit a sprites sound, how to make/edit sounds, and how to share your projects.
- Module 4 will combine all of the skills you learned in the other 3 modules and have you make a game.
- Module 5 will show you how to make complex shapes and how to use message broadcasting properly.
- Module 6 will show you how to make a custom block and the different applications of one.

This course, upon completion, will give you the skills necessary to have a well-developed understanding of Scratch programming allowing you to move onto a different programming language like JavaScript or Python.

Course Prerequisites (if applicable):

This course does not require any pre-requisite courses.

Course Requirements:

Computer/tablet/smartphone – Students must have access to a computer with internet access and an internet browser. Simply STEM has been successfully tested using Internet Explorer, Firefox, Chrome, and Safari. In addition, we have tested many versions of smart phone/tablet browsers as well.

Internet Access – Although results may vary, based on connection type and speeds, we have tested our online videos on DSL, Satellite, Cable, and cellular connections. Our courses cannot be download and require internet access to view them.

Course Grading:

Grading will be based on quizzes, project uploads, and teacher requirements.

Lesson Plan:

Module 1 – Introduction	Week 1
Module 1 – Introduction Quiz	Week 1
Module 1 – Introduction Project	Week 1
Module 1 – Painting in Vector and Bitmap	Week 1
Module 1 – Painting in Vector and Bitmap Quiz	Week 1
Module 1 – Painting in Vector and Bitmap Project	Week 1
Module 2 – Scripts: Part 1	Week 2
Module 2 – Scripts: Part 1 Quiz	Week 2
Module 2 – Scripts: Part 2	Week 2
Module 2 – Scripts: Part 2 Quiz	Week 2
Module 2 – Scripts Project Part 1	Week 2
Module 2 – Scripts: Part 3	Week 3
Module 2 – Scripts: Part 3 Quiz	Week 3
Module 2 – Scripts: Part 4	Week 3
Module 2 – Scripts Part 4 Quiz	Week 3
Module 2 – Scripts Project Part 1	Week 4
Module 3 – Costumes Part 1	Week 5
Module 3 – Costumes Part 1 Quiz	Week 5
Module 3 – Costumes Part 2	Week 5
Module 3 – Costumes Part 2 Quiz	Week 5
Module 3 – Costumes Project	Week 6
Module 3 – Sounds Part 1	Week 6
Module 3 – Sounds Part 1 Quiz	Week 6
Module 3 – Sounds Part 2	Week 6
Module 3 – Sounds Part 2 Quiz	Week 6
Module 3 – Sounds Project	Week 6

Module 3 – Sharing Your Projects	Week 6
Module 3 –Sharing Your Projects Quiz	Week 6
Module 3 – Sharing your program Project	Week 6
Module 4 – Building a Game (Make the Play Area)	Week 7
Module 4 – Building a Game (Make the Play Area) Quiz	Week 7
Module 4 – Building a Game (Programming Collision)	Week 7
Module 4 – Building a Game (Programming Collision) Quiz	Week 7
Module 4 – Building a Game (Programming Score)	Week 8
Module 4 – Building a Game (Programming Score) Quiz	Week 8
Module 4 – Pong Game Project	Week 8
Module 5 – Creating Shapes Part 1	Week 9
Module 5 – Creating Shapes Part 1 Quiz	Week 9
Module 5 – Creating Shapes Part 2	Week 9
Module 5 – Creating Shapes Part 2 Quiz	Week 9
Module 5 – Creating Shapes Project	Week 9
Module 5 – Message Broadcasting Part 1	Week 10
Module 5 – Message Broadcasting Part 1 Quiz	Week 10
Module 5 – Message Broadcasting Part 2	Week 10
Module 5 – Message Broadcasting Part 2 Quiz	Week 10
Module 5 – Message Broadcast Project	Week 10
Module 6 – Creating Custom Blocks Part 1	Week 11
Module 6 – Creating Custom Blocks Part 1 Quiz	Week 11
Module 6 – Creating Custom Blocks Part 2	Week 11
Module 6 – Creating Custom Blocks Part 2 Quiz	Week 11
Module 6 – Creating Custom Blocks Part 3	Week 12

Module 6 – Creating Custom Blocks Part 3 Quiz	Week 12
Module 6 – Creating Custom Blocks Part 4	Week 12
Module 6 – Creating Custom Blocks Part 4 Quiz	Week 12
Module 6 – Custom Blocks Project	Week 12
Study for Final Exam	Week 13 (1-2 hours)
Final Exam	Week 13
Final Project Part 1	Week 13
Final Project Part 2	Week 13