1 Hour Scratch Programming Lesson

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# Summary

This lesson introduces students to basics of programming using Scratch. In this lessons they will learn what Scratch is, the different types of programs that can be made with Scratch, and have some time to try Scratch, either by following the exercises or by exploring on their own.

# Engineering Connection

Computer programming is common not just in Computer Science, but also in other fields of engineering, such as mechanical engineering. In its simpler forms, it may be just writing some macros to help with calculations in Microsoft Excel or creating an application in Visual Studio to display sensor data. Even outsides engineering in the sciences, scientists use Matlab and Biologists specifically commonly use the R programming language.

# Grade Level(s)

3-12

# Duration

50-60 minutes.

# Cost Per Group

$0

# Materials List

* Computers with Scratch installed, preferably one per student
  + Scratch can be downloaded from here: <http://scratch.mit.edu/scratch_1.4/>. It should be installable to flash drive too if needed.

# Learning Objectives

* Understand that fun things can be done with programming
* Understand that programming does not just have to be lines of text
* Use troubleshooting as a problem-solving method used to identify the cause of a malfunction in a technological system.
* Use information provided in manuals, protocols, or by experienced people to see and understand how things work.

# Procedure

The procedure of the lesson, including assessments, is embedded in the presentation slides. See the slides and slide notes for more.

# References

Exercises 1 and 2 are modified from <http://nebomusic.net/scratch.html> with the author’s permission.