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Introduction

About

This guide was created by Julian Screawn. It was created in conjunction with my master's project, which is a guide to Scratch programming for educators. The purpose of the guide is to enable Scratch educators:

- To create environments where students can have opportunities to develop Scratch usage and programming skills.
- To explore the ways in which Scratch can be used as a tool to enhance the teaching-learning process across the curriculum.

Scratch supports the development of 21st century learning skills such as critical thinking, problem solving, communication, collaboration, creativity and innovation.

The guide will be targeted at teachers (Grade 3 and up) who wish to use Scratch as a tool for helping students develop these 21st century skills. It is hoped that the guide will be helpful to technology teachers and subject teachers who wish to expand their tools for teaching and integrating technology.

Content for the guide is based on both research and my own personal experiences as a Scratch educator.
Underlying Philosophy

One of the main goals of the Scratch program designers was to facilitate learn by designing.

Learning by design:

- Gives students greater sense of control and responsibility for the learning process.
- Encourages creative problem-solving.
- Allows for the designing of projects that are interdisciplinary (art, technology, math, and sciences).
- Helps kids learn to put themselves in the minds of others, since they need to consider how others will use the things they create.
- Provides opportunities for reflection and collaboration.
- Sets up a positive-feedback loop of learning, where students can build on ideas.

(Resnick, n.d.)

This approach to learning and teaching is inspired by the constructivist and constructionist theories of learning and education. Most activities recommended in this guide are based on the constructivist approach to learning.
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