Getting to Know Scratch

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Introduction

Scratch builds upon decades of research on Logo and other constructionist programming environments. Available free of charge, Scratch aims to distinguish itself from other environments by making programming *more tinkerable* (enabling learners to create programs by snapping together graphical blocks), *more meaningful* (adding programmability to the media-rich activities that are popular in today's youth culture), and *more social* (providing young people with the opportunity to remix and build upon one another's ideas, images, and programs).

With Scratch, young people can create their own interactive stories, games, animations, and simulations – and share their creations with one another online (Figure 1). The Scratch website (http://scratch.mit.edu), launched in 2007, has become a vibrant online community, with members (mostly ages 8 to 16) sharing, discussing, and remixing one another's Scratch projects. With more than 1,000,000 projects, the collection of projects is incredibly diverse, including science simulations, virtual tours, newsletters, adventure games, animated dance contests, and interactive tutorials. As young people program and share Scratch projects, they develop as computational thinkers: they learn important computational and mathematical concepts, as well as strategies for designing, problem solving, and collaborating.

Figure 1. The Scratch programming environment, sample projects, and sample blocks stack.

Workshop activities and expected outcomes

The Scratch workshop at *Constructionism 2010* will involve a mixture of presentation, hands-on activity, and discussion. The workshop will begin with an overview of the ideas and motivations underlying the design of Scratch, and analysis of how Scratch has been used in different contexts and settings. Participants will then have the opportunity to create their own interactive projects with Scratch, reflect on their learning experiences, discuss how Scratch compares with other constructionist environments, and brainstorm about future directions for the design and use of Scratch. We welcome participation by people of all backgrounds (educators, researchers, developers) and all levels of Scratch experience (novice to expert).

Keywords

Scratch; programming; learning; collaboration; community; media