Unit 1: Introduction to Scratch

Content Area: **Technology**
Course(s): **Technology**
Time Period: **Generic Time Period**
Length: **Weeks**
Status: **Published**

Unit Overview

Students will create Scratch accounts and be introduced to the key computational concept of sequence through a series of activities that provide various levels of structure -- including a tutorial, a simple creative challenge, and an open-ended exploration.

Standards

TEC.5-8.8.1.8.A.5	Select and use appropriate tools and digital resources to accomplish a variety of tasks and to solve problems.
TEC.5-8.8.1.8.D.1	Model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics.
TEC.5-8.8.1.8 A.1	Use appropriate technology vocabulary.
TEC.5-8.8.1.8 A.2	Use common features of an operating system (e.g., creating and organizing files and folders).
TEC.5-8.8.1.8 B.1	Demonstrate an understanding of how changes in technology impact the workplace and society.
TEC.5-8.8.2.8.E.1	Work in collaboration with peers and experts in the field to develop a product using the design process, data analysis, and trends, and maintain a digital log with annotated sketches to record the development cycle.

Essential Questions

How can creative computing help one use computational concepts across many disciplines and contexts?

How can engaging in creative computing prepare one for a career as a computer scientist or programmer?

How does interacting with a computer as a designer, rather than a consumer, increase knowledge, creativity, imagination, and literacy?

How can reflection enable us to grow and learn?

Application of Knowledge: Students will know that...

- Creative computing offers opportunities to design and make for the computer, not just listen, observe, and use
- Creative computing offers opportunities to engage with others as audience, coaches, and co-creators
- Reflecting about your practice enables one to review and rethink your creation

Application of Skills: Students will be able to...

- Add a project to a studio
- Engage in an exploratory, hands-on experience with Scratch
- Establish a Scratch account
- Explore the Scratch online community and review the Scratch community guidelines
- Give appropriate feedback on design ideas and works-in-progress within a critique group
- Post comments on other Scratch projects
- Start a personalized design journal for documenting their design process and reflections

Assessments

- Successful completion of tutorial
- Design Journal (personal reflection and self assessment by student)

Suggested Activities

- Students will watch the Scratch overview video and view sample projects. Students will be asked to imagine what is possible with Scratch.
- Students will set up Scratch accounts to save and share their projects.
- Students will create a design journal (either digital or standard notebook) to write down notes and reflect on the process of creating Scratch projects.
- Students will go to the "Scratch Surprise" studio and make the Scratch cat do something surprising.
- Students will learn how to create a studio and add a project to the studio.
- Students will gather in small peer groups to give and receive feedback on ideas, projects, and drafts.

Activities to Differentiate Instruction

Peer-to-peer "Tech Buddy" support

Students may work at their own pace

Advanced students may use their computer skills to enhance their Scratch program

Students who complete the daily assignment and are up-to-date on all projects may choose from one of the following activities if time permits in the period:

- Practice their math and ELA skills using recommended online educational websites provided by the teacher
- Play activities and games on teacher's website at www.quia.com
- Keyboarding exercises
- Smart Board Challenges

Integrated/Cross-Disciplinary Instruction

LAL -- literacy skills involved in reflective journaling

Math -- sequencing and computation

Art -- principles of design

Resources

- Computers with speakers
- Network connection
- Projector or SmartBoard with speakers
- Scratch programming language -- http://scratch.mit.edu
- Scratch overview videos -- http://vimeo.com/65583694 and http://youtu.be/-SjuiawRMU4
- Sample project studio -- http://scratch.mit.edu/studios/137903
- Scratch Surprise handout (in Creative Computing doc)
- Critique Group handout (in Creative Computing doc)