



Educator's Guide to Hour of Code

Overview:

This lesson will work with middle school students on learning basic computer programming skills.

Grades and Subject Areas:

Grades 7-8

Objectives:

- Student can understand why they are participating in an hour of code.
- Student can complete at least two tutorials.
- Student can share their design or game with a friend.

I Can Statements:

- I can explain why I am participating in an hour of code
- I can explain how I am programming by placing blocks
- I can complete all programs assigned with the least amount of blocks

Curriculum Connections:

Alaska Content Standards:

Reading Standards for Literacy in Science and Technical Subjects: 6-8

3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

ISTE Student Standards:

4. Critical thinking problem solving and decision making: a. Identify and define authentic problems and significant questions for investigation

ISTE Teacher Standards:

1. Facilitate and Inspire student learning and creativity: b. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources
2. Engage in Professional Growth and Leadership: a. Participate in local and global learning communities to explore creative applications of technology to improve student learning



Technology Integration:

Hardware and Software Needs

- Laptops or desktops

Tips and tricks

Practice the coding lessons before giving to the kids.

Resources:

Handouts or Downloads

- None

Links to teaching resources

- Hour of Code: <http://code.org/learn#notes>

Web resources

- Hour of Code: <http://www.code.org>

Lesson Directions

Prep Time:

- 5 minutes

Prior to Lesson:

Teacher Prep:

- Make sure the computers are reserved (Cart or Lab)
- Check to make sure the flash based program will work on the computers

Student Prep:

- None

2 Created by Christina Hum - December 3, 2014



Time Needed for Lesson:

70 minutes

Directions:

Step 1: Students watch this video: <http://bit.ly/5minhourofcode>

Step 2: 45 minutes Students go to <http://studio.code.org/s/2/puzzle/1>

Step 3: 15 minutes Students go to <http://studio.code.org/s/artist/stage/1/puzzle/1>

Step 4: Print student Certificates: <http://code.org/certificates>

Extension / Challenge:

Idea 1: Easier: Tynker Grades 5-8: <http://www.tynker.com/hour-of-code/>

Idea 2: More Challenging Middle School: http://codecombat.com/?hour_of_code=true

Idea 3: Advanced High School:

<http://www.makegameswith.us/build-an-iphone-game-in-your-browser/>

Idea 4:

Idea 4: High School Additional Practice : karal <https://codehs.com/hourofcode/>

Idea 5: High School Additional Practice : <http://www.codecademy.com/courses/hour-of-code/0/1>



Name: _____

Day 1 Hour of Code

_____ I can explain why I am participating in an hour of code

_____ I can explain how I am programming by placing blocks

_____ I can complete all programs assigned with the least amount of blocks

Challenge 1: <http://bit.ly/hourcode1>

Challenge 2: <http://bit.ly/hourcode2>

Challenge 3: <http://bit.ly/hourcode3>



Name: _____

Day 2 Hour of Code

_____ I can explain why I am participating in an hour of code.

_____ I can explain what code statements mean.

_____ I can complete all programs assigned fully and completely.

Challenge 1: <http://bit.ly/hourcode3>

Challenge 2: <http://bit.ly/hourcode4>

List for coding statements that you learned today and explain what they do:

Statement 1: _____

What does it do? _____

Statement 2: _____

What does it do? _____

Statement 3: _____

What does it do? _____

Statement 4: _____

What does it do? _____