

"Curiouser and curiouser!"

Lesson 1

-- Quote from Alice in Wonderland

This semester we will be investigating computer programming and Information Technology using Alice!

Alice is a piece of software which allows students to create **virtual worlds** containing complex scenes of many objects. The objects may then be programmed to behave in interesting and fun ways. For example a cat object could be programmed to generate a purring sound when clicked upon. The programming approach is to drag and click colorful blocks representing conventional programming concepts and then enter values to fine tune the block's behavior. The end result is a computer program which animates a virtual scene under the students control and responds to inputs.

Alice is **free** software created by Carnegie Melon University and backed by stacks of research suggesting that it is an excellent first exposure to programming.

The objectives and requirements this project was designed for are:

Objectives

- Introduce students to the concept of programming a computer.
- Maintain curiosity and engagement through an innovative curriculum.
- Create a few simple pieces of software.
- Encourage students to take further IT studies.
- Provide a framework within which students may demonstrate their ability to be self directed.

Requirements

- No programming or command line experience.
- Teachers with limited programming experience.

- Timeframe of 10-12 hours including an assessable project.
- Assume a constructivist learning approach with teachers acting as facilitators.

Scope and Sequence -- Work for semester

Lesson	Task	Date
1	Review <i>Curiouser and curiouser!</i> Google document -- Review and Sign-In	TBD
2	Tutorial 1 & 2- Located in Alice 2.2 under Help Menu (@ 16 minutes) Link Alice Lesson 2/3	TBD
3	Activity 1A - Skater moving in a virtual world	TBD
4	Activity 1B - Object moving in a virtual world (short story) Link Alice Lesson 4	TBD
5	Tutorial 2 - Located in Alice 2.2 under Help Menu (@ 14 minutes) Link Alice Lesson 5/6	TBD
6	Activity 2 - Objects in virtual world using methods	1TBD
7	IT Career Research Assignment Link Alice Lesson 7	TBD
8	Tutorial 3 - Located in Alice 2.2 under Help Menu (@ 17 minutes) Link Alice 8/9/10	TBD
9	Video -- More complex techniques http://alice.org/index.php?page=what_is_alice/what_is_alice (Lower video @ 12 minutes)	TBD
10	Activity 3 - Story using more complex techniques	TBD
11	IT Career Presentation Link Alice Lesson 11	TBD
12	Final Individual Project -- Game Link Alice Lesson 12	TBD

Currently Alice is located on the computers in the HS Lab, Library and HS Math Room (can add code but cannot view program in HS math computers). You must open the folder labeled Alice on the Desktop then start the program.

References:

www.dickbaldwin.com/alice/Alice0920.htm 6/23/2010
<http://quotations.about.com/od/moretypes/a/alice1.htm> 6/23/2010

IT Career Cluster Investigation with Alice!

Summer Institute 2010 BTC
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