

Field Trip # 9

Developed by:

Subject:

Short description:

Educational Level:

Field trip type:

Educational

Outcomes:

Content:

Notes to instructor:

Beginning Object Oriented Programming with ALICE

Dr. Debra Chapman

Object Oriented Programming

Students will learn about introductory Object Oriented programming concepts, including objects, properties, & methods using the ALICE programming software.

6th – 8th Grade

Workshop

The Student will be able to:

- Add objects to the Alice World
- Modify object's properties & methods
- Add new object methods
- Create decisions structures (if statements)
- Create repetition structures (loops)
- Use events to fire methods

It is recommended that the instructor have at least one assistant in the lab to assist learners with the programming. This learning object can easily be fit into a 50 minute time frame or expanded as time allows. The instructor can cover as much material as time permits & allow students to create their own ALICE projects. This activity should be done in a computer lab or a classroom with laptop computers. The instructor should have a computer connected to an overhead projector for demonstration.

A PowerPoint instructional slide show can be provided.

LESSON PLAN for
Beginning ALICE
Session

Part 1 (10 minutes: 10)

Introduce ALICE - Discuss OOP & Objects
 Create the Alice Background

Part 2 (10 minutes: 20)

Add Objects to Alice environment
 Position the Objects
 Examine Object Properties

Part 3 (20 minutes: 40)

Methods

- Use object methods
- Create additional object methods
- Decision Structures
 - Create if statements / if then else statements for decisions
- Repetition
 - Create loops to repeat actions

Part 4 (10 minutes: 50)

Discuss object events
 Add events to fire methods

Part 5 (5 minutes: 55)

Explore with Alice
 Modify their Alice activity on their own