| | |
|---|---|
| **Field Trip # 10** | Advanced Object Oriented Programming with ALICE |
| Developed by: | Dr. Debra Chapman |
| Subject: | Object Oriented Programming |
| Short description: | Students will learn about advanced Object Oriented programming concepts, including method scope & interactivity through events using the ALICE programming software. (Students should have completed the Beginning OOP with ALICE learning object) |
| Educational Level: | $6^{th}$ – $8^{th}$ Grade |
| Field trip type: | Workshop |
| Educational Outcomes: | The Student will be able to:<br>• Create an interactive object oriented Alice environment using events<br>• Differentiate between local & global scope (methods & events)<br>• Use camera cuts<br>• Add 3-D text for additional effects |
| Content: | |
| Notes to instructor: | 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 started file (similar to what is created in the Beginning OOP with ALICE learning object) containing objects, methods & events is needed to save time.<br><br>A PowerPoint instructional slide show can be provided. |
| **LESSON PLAN for Advanced ALICE Session** | Part 1 (10 minutes: 10)<br>Review ALICE environment<br>Open provided ALICE started file (containing objects, methods & events)<br>Part 2 (10 minutes: 20)<br>Discuss Method Scope – Local & Global<br>Create Local Methods<br>Create Global (World) Methods<br>Part 3 (10 minutes: 30)<br>Add User Events - Create interactivity between user & program<br>Part 4 (10 minutes: 40)<br>Discuss use of multiple views / Cameras<br>Set up camera views – use camera views within storylines<br>Part 5 (5 minutes: 45)<br>Discuss 3-D text for additional effects<br>Modify properties & methods of text<br>Part 6 (10 minutes: 55)<br>Explore with Alice<br>Modify their Alice Activity on their own |