SOME RATIONALES FOR ALICE PROGRAMMING

LESSONS PLANS

In addition to preparing students for the changed and changing nature of school and work, teachers are also expected to prepare them to perform well on state mandated tests that often do not measure what they know and, more importantly, what they need to know. This is especially true with some of the Career and Technical Education (CTE) course content that is based on 2008 and older information and technology, and on assessments that are based on this vintage information and technology. Additionally, the duration of instructional materials is dictated, and specific instructional methods are highly recommended, even when they do not enhance the learning outcomes of the population served. Therefore, balancing these competing and often conflicting expectations and interests can be challenging. There is also the task of instructing academically-challenged students, regardless of their instructional modifications, to retain concepts and skills on which they are assessed on the same level as all other students.

The foregoing concerns and constraints notwithstanding, it is always my expectation, along with my instructional objectives, that all students achieve at least a 90% proficiency on their respective assessments. The last semester test result data shows that only 55% of the students did achieve that expected outcome. However, 85% achieved 80% or higher.

Alice Programming appears to be an ideal process or tools for accomplishing several of the concerns referenced above. It will be taught one day per week, to two sections of 7th grade students in a class titled Personal Characteristics of Careers and Career Employment. Except for some Online Internet searches and self-assessments, this class has a prescribed curriculum that does not include any instructional materials on technology. Students take a state-mandated, post-assessment that is based directly on the curriculum. Ironically, many of the students express a strong interest in becoming game designers, which is probably based primarily on their playing games without an understanding what is required to develop them. Alice will give them a good foundation in programming, and it can buttress or support much of the required instructional content in challenging and engaging ways. Additionally, the tool can serve as a vehicle for teaching students discipline, persistence, and about opportunities, and it can be a pathway for students who are uncertain about what is required for them to do in order to pursue career goals and objective in challenging and realistic ways.

Students will be encouraged to work on their Career Choice projects throughout the semester and to work on several “Worlds” for the same career or several different careers. Mini-tutorials will be provided as needed.
# LESSON PLAN

**W. Brower**

**Class:** Personal Characteristics of Careers and Employment  
**Grade:** 7  
**Week:** 1

## Introduction

**Essential Question**  
What do Computer Programmers and Game Designers do?

### Materials
- Introduction
- Alice
- PowerPoint

## Objectives

At the completion of this lesson, students will be able to:

- List some tasks that computers programmers do.
- Locate and open Alice 2.4 from Alice.org.
- Complete the Tutorial Section of Alice.

## STRATEGIES

1. On the ActivBoard, teacher will write down responses to today’s essential question: “What do computer programmers and game designers do?” Teacher will discuss with students some misconceptions about the computer programming and gaming industries.
2. Using the ActivBoard, the teacher will demonstrate to students how to find and open Alice on the Internet, and to complete Tutorial 1.
3. At the closing of the period, the students “Ticket out the Door” to describe one thing that they found interesting about what Alice can do.
4. Students will be given a PowerPoint presentation and a list of links to tutorials on Alice.

## EVALUATION

Teacher will monitor student progress by answering questions, probing students about what they are learning, and responding to the “Ticket out the Door.”

## Special Educ. Modifications

All IEP modifications will be met—preferential seating, extended time, and reduced number of completed exercises.
<table>
<thead>
<tr>
<th>REVIEW/DO NOW</th>
<th>Essential Questions: What are some of the features and capabilities of Alice?</th>
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<tbody>
<tr>
<td>OBJECTIVES</td>
<td>At the completion of this lesson, students will be able to:</td>
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<td>- Explain some of Alice’s features and capabilities.</td>
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<td>- Create a short Alice program by making an object do at least four things.</td>
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<td>- Develop a Career Choice Commercial story line for students to create their own “Alice” project.</td>
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<td>STRATEGIES</td>
<td>1. Teacher will ask students what they have learned about Alice since last instructions.</td>
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<td>2. Teacher will then discuss with students their perception of the Alice program.</td>
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<td>3. Teacher will address the “Ticket out the Door” slips from Day 1 with class and have students share what they were meaning.</td>
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<td>4. Teacher will demonstrate to students how to create a world and create an object in the world.</td>
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<td>5. Students will then create a world with two items in it and make them perform at least four actions. (Jump, Move, Talk, Walk, etc.)</td>
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<td>6. Students will share their clip with a partner.</td>
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<td>7. When all students have shared their clips, students will be given the Career Choice project sheet for Alice.</td>
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<td>8. Students will begin using Alice’s objects list to brainstorm and develop an idea to create a commercial related to their chosen career.</td>
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<td>9. Teacher will assign student “Ticket out the Door” to be that all students must turn in their rough idea of the objects to use in the world related to their career.</td>
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**LESSON PLAN**

W. Brower

Class: Personal Characteristics of Careers and Employment  
Grade: 7  
Week 3

| REVIEW/DO NOW | TIME | Essential Question:  
|---|---|---|
|  |  | What are the features and capabilities of Alice?  
|  |  | How can Alice facilitate your learning in all areas?  

| OBJECTIVES |  | Students will be able to:  
|---|---|---|
|  |  | • Create a story board for their Career Choice commercial.  
|  |  | • Use story boards to create an Alice program.  

| STRATEGIES |  | 1. Teacher will show students an example of what is expected on the Career Choice story board.  
|---|---|---|
|  |  | 2. Teacher will demonstrate an Alice program written that follows the project guidelines.  
|  |  | 3. Teacher will teach students how to copy and Billboard images to use in their Career story.  
|  |  | 4. Students will begin working on their story boards and working with the Alice program.  
|  |  | 5. Ticket out the Door: “Are you having any specific problems with Alice or this assignment that need to be addressed the next time?”  

| EVALUATION |  | Teacher will monitor student progress by answering questions, probing students about what they are doing, and responding to the “Ticket out the Door.”  

| Special Educ. Modifications |  | All IEP modifications will be met—preferential seating, extended time, and reduced number of completed exercises.  

| Materials |  | Alice Program  
|---|---|---|
|  |  | Career Choice  
|  |  | Rubric/Work Sheet  


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| STRATEGIES | 1. Teacher will respond to “Ticket out the Door” from Day 3                                 | |
|            | 2. Teacher will ask students to share in their share groups what they are doing with Alice, where they are going with Alice, and develop a time schedule for completion. | |
|            | 3. In designated groups, students will assign themselves one of three roles: Developer, Editor, and Proofer. | |
|            | 4. Each student will perform a different role for each rotation.                           | |
|            | 5. Students will develop a list of responsibilities for each job.                         | |
|            | 6. Students will work on their Alice project.                                              | |

| EVALUATION | Teacher will monitor student progress by answering questions, probing students about what they are doing, and responding to the “Ticket out the Door”. |

| Special Educ. Modifications | All IEP modifications will be met—preferential seating, extended time, and reduced number of completed exercises. |
# Lesson Plan
**W. Brower**

**Class:** Personal Characteristics of Careers and Employment  
**Grade:** 7  
**Week:** 5

## Review/Do Now
**Time:**  
**Essential Question:**  
What are the features and capabilities of Alice?  
How can Alice facilitate your learning in all areas?

## Objectives
Students will be able to:  
- Finalize a story board for their Career Choice Commercial.  
- Complete their Alice program.

## Strategies
1. Students will work on Alice program.  
2. Students will divide into groups and perform their job responsibilities.  
3. Students will then meet with groups, discuss the findings, and make a plan of action on how to make changes to the Alice program.

## Evaluation
Teacher will monitor student progress by answering questions, and probing students about what they are doing.

## Special Educ. Modifications
All IEP modifications will be met—preferential seating, extended time, and reduced number of completed exercises.

## Materials
- Alice Program  
- Career Choice Rubric/Work Sheet
CAREER CHOICE COMMERCIAL RUBRIC/WORKSHEET

You will use the information below to create a commercial advertising your career choice. You may create/develop as many “Alice Worlds” for your career choice or for as many career choices as you desire. In addition to researching your career choice or choices, you are also required to develop basic knowledge, understanding, and skills in the use of Alice Programming, and one day each week will be devoted to formal instructions in this exciting and engaging activity. The others days will be devoted to specific career curricular/instructional activities and research designed to assist you scoring 90% or more on the post-assessment.

What is your Career Choice/Job?

Who Am I?—What are your personal values and how do they relate to your career?

What are your work values?

What are your hobbies?

What are things that interest you and why (Data, Ideas, People or Things)?

What is my most favorite school subject and why?

How would you describe your personality?

Why My Career/Job Ambition Matches My Values (Creativity, Independence, Job Security, or Variety)?

What are your Primary and Secondary Learning Styles, as determined by the self-assessments?

What does your RAISEC (Realistic, Artistic, Investigative, Social, Enterpriser, or Conventional) Score tell you about your personality match with your career choice?

In which Career Cluster is your Career Choice?

What are the educational/certifications requirements for your career choice?

What are the skills (Mental, Physical, Social or Spatial) and transferable skills (Adaptability, Decision-making, Listening, or Technology) you would bring to the career?

What are some vocabulary words and lingo associated with your career choice?

What are some significant and recent events that have occurred in your career cluster (globalization, telecommuting, society, technology, workplace trends, etc.)?