

Creator Game Development Curriculum

**Steve Bean, Jill Denner,
Jacob Martinez and Pat Rex
ETR Associates**

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Overview of the *Creator* Game Development Curriculum

In this overview, you will find the following information:

- Introduction
- About the Curriculum and the Girl Game Company Project
 - Lessons Learned
 - How to Use this Curriculum
 - Modifying the Curriculum
- Getting Started
- Important Links and Contacts for More Information

Introduction

This curriculum consists of lesson plans and accompanying materials for 39 45-minute sessions that teach middle school students how to make games using 2D programming software called Stagecast *Creator*. This material was developed as part of a three-year project funded by the National Science Foundation – grant ESI-0624549. The aim of this project was to increase middle school girls’ interest, ability, and motivation to pursue courses and careers in science and information technology. Although the project was designed as an afterschool and summer program for middle school girls – particularly Latinas, the curriculum can be used for both girls and boys in a variety of settings.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

About the Curriculum and the Girl Game Company Project

The project consisted of two afterschool and summer programs lasting approximately a year and a-half each at several middle schools in an agricultural-based community on the central coast of California. The first group of girls began in April 2007 and graduated in July 2008. The second group began in February 2008 and graduated the summer of the following year. The focus of the project was the hands-on IT-based learning component, which consisted predominately of teaching girls how to design and program their own computer games in Stagecast *Creator* and to a lesser extent in a 3D programming environment called *Storytelling Alice*. It also included instruction and practice in other computer-based programs such as a custom learning management system. Other important content areas were:

- Group Cohesion – activities such as games and recreational activities that promote positive support between peers and between students and adults, especially near the beginning of the program.
- IT-based Personal Enrichment – time spent on Whyville.net, an educational virtual reality site for elementary and middle school youth, where girls had the opportunity to present their games to peers around the world.
- Pair Programming – employing a specific collaborative learning structure for guiding two individuals to work together on the computer.
- Career and Identity Exploration – exposing girls to career possibilities through field trips to local universities and Silicon Valley companies and mentoring partnerships with women in IT fields.

For more information about the complete program, see the Computer Game Design Year-long curriculum that is included in the Teachers' Lounge resources.

Lessons Learned

The program in general and the *Creator* Game Development curriculum specifically underwent a significant revision before the second group of girls began. Because the girls were anxious to get started on their games, we developed a modular “build as you learn” structure. In other words, we would introduce a new programming element and then the girls would learn and practice that element by incorporating it into a game they were building. That way, students had the opportunity to apply what they just learned and received the immediate gratification of having something to show for their efforts. We also developed a genre-based system for the progression of games, starting with a simple maze game with one stage (Sessions 1-12) and progressing to increasingly more complex games – an action game with multiple stages and elements like counters and timers (Sessions 12-24), a trivia game (Sessions 24-30), and finally, an adventure game with all of the previous elements plus character interaction (Sessions 30-38).

In the process of teaching *Creator*, we became aware of some common problems that students were encountering and made some adjustments to the curriculum to address these problems. For one, it is so easy to create rules in *Creator* that students would often make new rules when they ran into problems without deleting those rules that weren't working. As a result, many would end up with long, confusing lists of unnamed and unworkable rules that made problem solving difficult. To solve that problem, we have created an activity on “dirty” and “clean” lists of rules. (See Session 22.) We also recommend that students be frequently reminded of the importance of naming their rules and keeping their lists well organized. Also, because *Creator* sometimes freezes, it's important to periodically remind students to save their work throughout the game-making process and at the end of each session.

How to Use this Curriculum

Using the Materials. This curriculum is divided into 39 45-minute sessions, and most sessions include handouts that are numbered according to the session in which they are used. (All of the handouts are in one pdf document.) This material is designed to be as practical as possible and to be used “out of the box” with little or no modification. It’s important to note, however, that because the program was designed for a predominately Latina audience, many of the handouts are in both English and Spanish.

Using Paired Programming. All of the girls in the Girl Game Company program built their games in pairs using pair programming, and in the *Creator* curriculum, pair programming is used as a model for the demonstration activities. Pair programming is a structured process in which one person acts as the “driver” and operates the computer while the other works as “navigator” and reads and communicates directions. Although the curriculum can be used without pair programming, we recommend it. Having students work in pairs not only saves computer and work space, but enhances the programming process. For more information about pair programming, see “Using Pair Programming” in the Teachers’ Lounge resource cabinet.

Modifying the Curriculum. Most of the sessions begin with a review of the previous session and end with a wrap up or whole group activity, often one that allows students to share their day’s work with the rest of the class. If you want to combine two or more sessions, you should substitute a break for the review time budgeted between sessions. We have found that students this age need a break after an hour and a change in activities after about 35 minutes, even when they are interested and highly engaged in an activity.

If you do not have the time for the entire 39 sessions, consider offering fewer game genres. That’s the advantage of the modular, genre-based structure of this curriculum – it allows you to cover only the genres you have time for. If there is very little time, have the students build a simple maze game only (Sessions 1-12). If there is more time, add on an action game, etc.

Getting Started

A. Learn about *Creator* and the curriculum

1. **Demo and Purchase *Creator*.** *Creator* is available from Stagecast at <http://www.stagecast.com/>. A two-license educational version for both Windows and Mac is available for \$99.95 and separate Windows and Mac versions are available for \$49.95 each. The cost for a 25-user lab package is \$775.
2. **Download the curriculum and accompanying materials.** Download the following:
 - The *Creator* Game Development curriculum
 - Handouts

3. **Play sample games.** To familiarize yourself with the types of games that have been created by students, plays the *Creator* games in the Girl Game Company clubhouse on Whyville (<http://www.whyville.net/>). You will need to open a free Whyville account and get a “newbie” avatar before you can enter Whyville and go to the Girl Game Company clubhouse.
 4. **Take the *Creator* tutorials.** Familiarize yourself with *Creator* by going through the tutorials that come with it. To access them, open *Creator* and then click the “Learn Creator” button in the main menu. Each tutorial should take no more than 10 to 15 minutes to complete.
 5. **Go through the steps on each of the handouts.** Familiarize yourself with the curriculum and learn more about *Creator* by completing the steps on the handouts. So that you will be prepared when students have questions, note any problems or confusion you encounter as you work.
 6. **Plan out your class sessions.** If you need to modify your class plan to fit a schedule other than 39 sessions of 45 minutes each, plan your class sessions according to the suggestions for altering the curriculum above.
- B. Set up the learning environment.
1. **Make sure there are enough working computers with the proper software and working space.** Given the hands-on nature of this course, it’s important that students have access to computers loaded with working versions of *Creator* (or access to class folders on a network). It is also important that all students have room to work and lay out written materials as well as dedicated spaces to store their work. Remember, if you use pair programming, you do not need a separate computer for each student. After the computers are set up, open *Creator* on each one and make sure it is working properly.
 2. **Set up and communicate user protocols.** Working with a computer technician if necessary, write up protocols for how to log in and out, where and how to access and save files, etc. Make this information easily accessible to students via a handout or poster.
 3. **Prepare materials.** Make copies of the handouts for all students. If possible, duplicate the handouts in color. Color graphics are not only more appealing, but the challenges are easier for students to follow when the pictures look like what they see on the screen.
 4. **Set up student folders.** Set up a folder for each student where they can keep handouts and other program materials.
 5. **Saving game files.** Set up a system for saving and retrieving work.

Important Links and Contacts for More Information

Important Links

- To purchase and download Stagecast *Creator*, go to: <http://www.stagecast.com/>
- To access student games, go to: <http://www.whyville.net/>

Contacts for More Information

If you have any questions about this curriculum or the Girl Game Company project, contact:

Jacob Martinez
ETR Associates
831-438-4060 ext. 246
jacobm@etr.org

Creator Lesson Plans

Session 1

Objective:

- Familiarize students with Stagecast Creator in general and the types of games that can be played in Creator.

Instruction Time: 45 min

Materials/Equipment:

- Access to Stagecast Creator on every computer
- Access to sample Creator games
- Demo Computer and LCD Projector

Procedure:

Introduction to Creator Demo (5 min)

1. Introduce Creator by explaining that it is software they will be learning to use to make games.
2. Open Creator to opening screen. Explain that “sim” is short for “simulation,” a common name for a virtual reality world or something that imitates the real world.
3. Click on “open a sim” and select “Alien Abduction” in the sample sim folder. Briefly show students how to start and play this game. (Hit space bar to beam up cows, and use arrow keys to move space ship.) To make it more interesting, ask students to race against each other.

Game Playing Hands-on Practice (40 min)

1. Have volunteers play some project games at stagecast.net or in the Girl Game Company Clubhouse on Whyville at www.whyville.net. (Note: in order to enter the clubhouse, you must first join Whyville, which is free.)
2. Have all students play sample games.

3. Maintain whole group focus and participation by circulating and encouraging casual game competition.

Session 2

Objectives:

- To provide an overview of Creator by going through Quick Start and Tutorial #1: Getting Started.

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Demo Computer and LCD Projector

Procedure:

Tutorial (40 min)

1. Tell class that now that they've played some games, they will begin learning how to make their own games in Creator. In other words, they will learn how to be "programmers." They will start by going through the Quick Start tutorial, which will give them a quick overview of how to program in Creator.
2. With each student at his/her own computer, tell them to launch StageCast and select "Learn Creator" and then "Quick Start." Monitor their individual progress as they go through the tutorial and assist as needed. After all students are finished or a maximum of 15 minutes, tell the group it's time to move on. Transition to the next tutorial by briefly polling the group on what they've learned so far. Stress that by learning how to create rules – i.e., telling the computer what to do – they are learning how to program.
3. Ask students to select "1- Getting Started" from the Learn Creator menu and go through the tutorial. Monitor individual progress as they go through the tutorial and assist as needed. After all students are finished or 15 minutes, ask them to close the tutorial (top left-hand menu) and return to the StageCast main menu by clicking on the back button.

Group Review/Wrap Up (5 min)

1. Reconvene group and go around the room asking for volunteers to name something they learned from the tutorials.

Session 3

Objectives:

- To provide an overview of Creator’s basic tools and buttons.
- To introduce the concept of programming and other basic computer terms such as “menu” and “sim.”
- To learn basic rules such as how to move and change the appearance of a character, copy and delete.

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Access to two versions of Monty Mole sim (one with and one without rules on every computer
- Demo Computer and LCD Projector

Procedure:

Review/Demo (10 min)

1. On a computer connected to an LCD projector, select “open a sim” from the Stagecast main menu and choose “Montymole.sim.” (This is the example version with rules. This and other sims should be placed in an easily accessible place — such as a class folder in the “sims” folder.)
2. Point out the buttons at the bottom and ask students to tell you what the ones they’ve learned about do (i.e., the rule button, and copy and delete tools).
3. Tell them that the star and rainbow circle are used to create and add new characters. They will learn more about that later.
4. Show them how the stop, play, one-step back and one-step forward button work. Press play and change the speed.
5. Press stop and tell them that if everything is motionless on the stage (including the time bar), then we know we can program. To illustrate that point, press play and try to click on Monty to set him free. Then press stop, click and drag Monty to the other side of the rock fall and press play.
6. Show them the character drawer in the sidelines and demonstrate how to drag more characters into the stage.

Hands on practice (25 min)

1. Have students launch Montymole.sim on their computers and give them time to play with it. Ask them to drag a worm into the tunnel and see what happens. Then ask them to make more worms using the copy tool and press play until Monty eats them all. When he does, they should drag more out of the sideline drawer. Give them several minutes to experiment with new characters (oil, seed, more moles and key).
2. Ask students to close sim, choose “open sim” from the main menu, and select “Montymoleexample.sim” (the same game without the rules). Tell them that this Monty Mole can’t move at all. It’s their job to “program” him so he knows how to move in all directions and be able to turn. Monitor students’ individual progress and assist as needed.

Group Review/Wrap up (10 min)

1. Ask for volunteer to demonstrate what he/she did.

Session 4

Objectives:

- To review how to make rules
- To learn and practice how to create stages in three ways – with a plain colored background, with a background from Creator, and with a background from the Internet

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 4.1: Stages
- Demo Computer and LCD Projector

Procedure:

General Review (5 min)

1. Informally quiz students on the points previously covered, or for the “how-to” questions, ask for volunteers to show on the computer connected to the LCD projector:
 - How do you make a character move in Creator? (use the rule tool)
 - How do you create more characters? (use the copy tool or pull from the sidelines drawer)
 - How do you move an object (character) on the stage? (click and drag when the game is stopped)
 - What do we call the activity that changes the way computer programs work? (programming)
 - How do we delete a character? (click on the delete tool and then the character)
 - Any questions?

Review of making rules: Direct Instruction and Demo (10 min)

1. On a projected computer, review the rule tool and show how to put the tool onto a character.
2. Demonstrate making a “move right” rule, and explain what is shown on Creator when doing so. Stress that one picture is the “before” picture or “When the character is in a certain spot...”, and the other is the “after” picture or “what should happen.” Show a couple examples.
3. Showing a scene with a character and a rock, ask group: “ So if I want to make a rule that he jumps when he gets to the rock, where does he need to be when I click on the rule tool and click on him?” (By the rock). “And what should the rule be?” Guide students to create the rule.

4. It's very important to stress – and remind students often – that the rule now needs to be named (i.e., "jumping") and demonstrate.
5. Take questions.

Stages Step 1: Color and Creator Backgrounds Demo and Practice (25 min)

1. Introduce the first game the students will be building, the maze game, by telling them that they will be using what they're working on from now on as part of their first game.
2. Pass out handouts on bringing in background colors and backgrounds for stages (4.1) and ask students to follow along as you briefly demonstrate each step on the handouts.
3. Briefly discuss and demonstrate how to change sizes of screens.
4. Ask students to follow the handouts and create two types of stages and put them in the stage drawer – one with a plain colored background and another with a background from Creator.

Group Review/Wrap Up (5 min)

1. Ask for a volunteer to demonstrate what he/she did with stages.

Session 5

Objectives:

- To learn and practice bringing a character on the stage
- To complete Tutorial 10, on drawing characters using Creator's Paint tool
- To learn and practice how to revise a character and draw an original character using the Creator paint program

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 5.1: Bringing Character onto Stage
- Handout 5.2: Drawing Characters
- Demo Computer and LCD Projector

Procedure:

Review (5 min)

1. Informally quiz students on the points covered in last session, or ask for volunteers to show on the computer connected to the LCD projector:
 - What are the different ways to make new stages? (use blank color, get Creator background, import art from the Internet)
 - How do you add characters to your stage? (pull from the character drawer or another sim)
 - Any questions?

Bringing in Characters Demo and Practice (10 min)

1. Demonstrate each step in the process of bringing in characters onto the stage as outlined in Handout 5.1.
2. Ask students to follow the handout directions and put a character on each of their three stages. Tell them the character they will using will be the main character/player in their maze game.

Tutorial 10: Drawing Characters with Creator's Paint Tool (Approx. 10 min total)

1. Ask students to go through Creator Tutorial 10.

Drawing and Modifying Characters Demo and Practice (20 min)

1. Briefly demonstrate, on projected computer, a review of parts of the tutorial. Demonstrate putting the drawing tool onto a character, then modifying the character, and clearing the character and drawing it from scratch. (5 min)

2. Ask students to open the sims they last worked on, and then to either modify one character or draw one from scratch. (15 min)

Session 6

Objectives:

- To learn about and practice using mouse and arrow keys to move character
- To introduce and start building the maze game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 6.1: How to Make a Maze
- Handout 6.2: Making Characters Move with Arrow Keys
- Demo Computer and LCD Projector

Procedure:

Overall Review (10 min)

1. Ask for volunteers to show the characters they have created
2. Take questions.

Making a Maze, Moving Player Character with Arrow Keys Demonstration (10 min)

1. Explain that now the students are going to learn how to program their first user interactions, or the actions players take when they are playing a computer game. They will use these skills to start making their first game – a maze game.
2. Choose a volunteer driver (the one who operates the computer), and as the navigator (the one who reads directions and explains what to do), take the driver through each step of the Handout 6.2: How to Make a Maze.
3. One of the steps on the handout is to try to have just one object in each square, i.e., if the maze is made of rocks, be careful when copying the rocks and try not to put only 1 rock per square. Stress this step.
4. As the navigator, take the volunteer driver through the steps of Handout 6.2: Making Characters Move With Arrow Keys.
5. Demonstrate how to name the rules for moving up, down, etc. and stress the importance of doing so.

Making a Maze, Moving Player Character with Arrow Keys Hands-on Practice (25 min)

1. Ask students to make a maze, add a character, and make that character move in all directions with the arrow keys. Remind them that they'll also need a background, and that "Adding a Background" handouts are available for those who need them.
2. Post the assignment named in the above bullet so students can refer to it as they work.
6. Tell the students that if they finish early, they should take a handout about making villains move around (7.1) and try to add a villain to their maze.
7. Circulate and answer questions as the students work.

Session 7

Objectives:

- To learn and practice making a villain move around the stage at random
- To learn how to create an end point to a game
- To continue building a maze game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 7.1: Making a Villain Move Around Your Stage
- Demo Computer and LCD Projector

Procedure:

Review (10 min)

1. Ask for volunteers to come up and demonstrate each of the following. Narrate their steps as they work:
 - Making a character move right or left with the arrow keys
 - Making a character move up or down with the arrow keys
 - Making a character move up when it is clicked on

Making a Character Move Around a Stage with “Do Random” Setting and Making End Point Demo (10 min)

1. Introduce the lesson by saying, “You have learned how to create rules to make characters move around the stage on their own and by using keys. But sometimes it’s useful to have characters – especially villains – move at random – in no particular order. You’re going to learn how to do that now.” Stress the difference between the villain who is moving without arrow keys and the main player character.
2. In the role of navigator, help a volunteer student make rules for a villain to move in all four directions and then to put those rules in a “do random” box.
3. Demonstrate how to make an end point for the player character to reach by putting player character at beginning of maze and adding a new character (leave as star) at the end. Move the villain to the end of maze and then save and play.

Making a Character Move Around a Stage with “Do Random” Setting and Making End Point Hands-on Practice (15 min)

1. Have students make a villain move around their mazes using the “do random” feature and add an end point to their maze.
2. Circulate, coach, praise, and ask open ended questions (i.e. “How’d you decide to use that alien?”)

Group Review/Wrap Up (10 min)

1. Have students play each other’s basic games.

Session 8

Objectives:

- To make rules so that villain causes at least one type of harm to main character
- To continue building a maze game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 8.1: Making Villain Hurt Characters
- Demo Computer and LCD Projector

Procedure:

Review (5 min)

1. Review the information covered at the end of the last session by asking a volunteer to come up and demonstrate how to move a character at random around the stage.
2. Ask group to explain the differences in how a villain and the player character move.

Making the Villain Hurt Characters Demo (10 min)

1. Choose a volunteer driver, and navigate him/her through the steps of the Handout 9.1: Making the Villain Hurt Your Main Character.
2. While going through this handout, stress some information about making rules. Point out that when making a rule, a box appears showing a picture of the conditions for the beginning of the rule, and the conditions for how things should end up after the rule. For example, say, "Creator knows that I want my character to move using the arrow keys when it's in a regular square, not next to anything. If I want Creator to know what to do when my character runs into the villain, where does the character have to be when I start making my rule?" (Next to the villain.) Put the character next to the villain, click on the rule tool, put it on the main character and stretch it to include the villain. Point out the box showing the beginning of the rule. "You see here that we're saying to Creator, 'When my character is next to the villain, I want a certain thing to happen.'"
3. Point out that it's important to be careful when constructing a maze that there is only one object per square. If, for example, the villain is supposed to move in the other direction when it gets to a certain obstacle and that obstacle is actually one rock on top of another, then the villain will only turn around when there are two rocks instead of one in the space.

4. Now ask the group: “What types of harm could a villain cause a player in a game?” (The character could disappear, lie on its back and die, turn upside down, return to the beginning of the game. Any other suggestions?)
5. Take one idea from the group – like having the character die or get eaten, and ask, “How could we make that rule?” If a volunteer has an idea, ask her/him to come up and try to make it happen. If no one can figure it out, talk through the thought process involved in making that rule.

Ways to Do Harm Practice (20 min)

1. Ask students to make their villain cause harm first by sending the character back to the beginning and if time, by creating another way for the main character to lose.
2. Circulate, coach and praise students as they work.
3. Tell students that if they finish before the rest of the group, they should look at the “Reset Button” handout (Handout 9.1) and try to add a reset button to their game.

Group Review/Sharing (10 min)

1. Ask students for ideas on how to make a game more challenging (i.e., add more villains).
2. Ask for volunteers who have found a way for the villain to cause a different kind of harm from sending the player back to the beginning of the maze to come up in front of class and show the class what they came up with. If there are no volunteers, poll the group as a whole and ask them to tell the group what they came up with.

Session 9

Objectives:

- To learn about and practice making a reset button
- To learn about and practice adding a “You Win” message to game
- To continue building a maze game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 9.1: Reset Button
- Handout 9.2: Adding “You Win”
- Demo Computer and LCD Projector

Procedure:

Reset Button Demo (5 min)

1. Tell students: “If your character gets eaten or dies, the person playing your game won’t know how to drag your character out of the character drawer, so you’ll need a reset button.”
2. Ask for a volunteer and using Handout 9.1: Reset button, navigate that student to create a reset button.

Caution: When demonstrating how the reset button works, explain that the reset button opens up the last saved version of the game. That’s why it’s important to set up the stage exactly the way it should look at the beginning of the game before saving and testing the reset button.

3. Tell students that if they are still working on their villains or other parts of the game, they should continue. But if they are ready, they should go ahead and create a reset button now.
4. Tell students that if they have moved ahead and have already made a reset button, they should help other students make theirs.

Reset Button Hands-on Practice (15 min)

1. Using the “Reset Button” handout as a guide, ask students to add a reset button to their maze games.
2. Circulate, coach and praise students as they work.

Adding a “You Win” Message Demo (5 min)

1. Show a teacher example or a student's game, and ask the group for a suggestion for what should be the way to win the game.
2. As the students follow along on the "Adding You Win" handout, demonstrate making a "you win" character.
3. Ask the group, "How could we make a rule that a "You Win" message comes up under the conditions of winning?"
4. Use suggestions to guide a volunteer driver to make a rule for a "you win" message.
5. Tell students: "Maybe you want to have a 'You Lose' message somewhere in your game too. If so, go ahead and try it!"

Adding a "You Win" Message Hands-on Practice (15 min)

1. Using the "Adding You Win" handout as a guide, students add a "You win" message to their maze games.
2. Circulate, coach and praise students as they work.
3. Students who finish early should get a "Doors" handout and practice making an introductory/credits page for their game.

Group Review/Wrap Up (5 min)

1. Ask for volunteers to show what they created.

Session 10

Objectives:

- To finish beta version of maze game
- To problem solve and debug

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 10.1: Elements of a Game
- Handout 10.2: Adding Sound (optional)
- Handout 10.3: Adding Special Objects (optional)
- Demo Computer and LCD Projector

Procedure:

Elements of Finished Game Instruction (10 min)

1. Pass out Handout 10.1: Elements of a Finished Game and ask students to use it to decide what more they have to do on their maze games.
2. Circulate and assist as needed.

Finalizing Beta Version of Maze Game Hands-on Practice (30 min)

1. Tell students they will have the rest of this session to get their maze games ready to show to other students and have them beta tested.
2. Students who are ahead of the others have three options:
 - Adding sound to their games using Handout 10.2: Adding Sound
 - Add a special object using Handout 10.3: Special Objects
 - Helping other students finalize the beta version of their games
3. Students finalize the beta version of their games.
4. Circulate, coach and praise students as they work.

Group Review/Wrap Up (5 min)

1. Tell students that they will be “beta testing” their games during the next session. That means they will play each others’ games and give each other constructive feedback, which includes what they like about the game, information on any problems they encountered while playing, and/or suggestions for improvement.
2. If time, ask for volunteers to share any problems they encountered.

Session 11

Objectives:

- To share and evaluate (beta test) each others' games
- To debug and finalize maze games based on feedback

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 11.1: Beta Test Evaluation Sheet

Procedure:

Beta Testing Maze Games (20 min)

1. Pass out at least two copies of the Beta Test Evaluation Sheet (Handout 11.1) to each student.
2. Remind students that the goal is to help each other improve their games. It's important to make positive, constructive comments.
3. As students are playing each other's games, circulate and monitor the process, making sure that each game is being tested by at least three people and is getting equal attention and that students are not spending all their time on any one game.

Group Wrap Up (5 minutes)

1. Reconvene group and ask for their thoughts on the beta testing process, including the types of problems they encountered.

Note: A common problem is that a game will be impossible to win because the only available route is blocked by a villain. In these cases, the developer needs to add alternative pathways.

2. Emphasize as necessary that this is standard procedure that programming and game development teams use all of the time to debug and improve their products.

Debugging and Finalizing Maze Games (20 min)

1. Students respond to feedback and fix any problems noted in their maze games.
2. Give students who are finished with their games the option of adding special features (see handouts for Session 10) or helping other students.

Session 12

Objectives:

- To finalize and share maze games
- To introduce next game students will be making – an action game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 12.1: Action Game Rubric

Procedure:

Finalizing Maze Games (15 min)

1. Students finalize their maze games.
2. Students who are finished assist other students.

Group Sharing (20 min)

1. Students demonstrate their finished games to entire group.
2. Praise the students for what they have accomplished.

Group Wrap Up (5 min)

1. Introduce the next game by telling students that they will begin building a new game in the next session – an action or “arcade” game.
2. Distribute Handout 12.1: Action Game Rubric and explain the different elements that will be required.

Session 13

Objectives:

- To discuss elements of an action game
- To introduce the concept of a back story and the information to include on an introductory page
- To begin designing the action game's back story

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Access to the game "Flight Club" on the Stagecast website
- Handout 13.1: Back Story Design Worksheet

Procedure:

Game Genre Discussion (15 min)

1. Continue the discussion started at the end of the last session by opening up "Flight Club" on the Stagecast website (<http://www.stagecast.com/cgi-bin/templator.cgi?PAGE=Cool/worlds/users/FlightClub.html>) and having a volunteer student play it. Tell students that this is an example of an action game made in Creator.
2. Ask students to describe the elements of an action game. If not mentioned, include the following definition:
"An **action game** is a game that challenges a player's speed, dexterity, and reaction time. Action games often include tactical conflict, exploration challenges, and puzzle-solving, but these are not defining elements. Action games are the broadest and most inclusive genre in gaming, encompassing many diverse sub-genres such as fighting games, first-person shooters, beat 'em ups, and platform games." (definition taken from Wikipedia.org.)
3. Ask for volunteers to share what they like and don't like about this genre.

Back Story Discussion (10 min)

1. Explain to the class that a back story is a narrative prior to the beginning of a game that explains what the game is going to be about. To be able to play the game, the player must know this "back story." In other words, the game maker must create an introductory page that explains what the game is about.
2. To help generate ideas, pass out Handout 13.1: Back Story Design Worksheet and go around the room asking each student to explain to the rest of the class how they might answer the first question on the handout – Who is the main character and why are they in the situation? Tell them they may make up a story about anything they would like.

- **For example:** The main character of my story is an alien named Fred. Fred is asked to protect his planet from a meteor shower approaching his planet.

Back Story Design (20 min)

1. Ask students to work individually or in pairs to answer the questions on the worksheet in as much detail as possible.
2. Circulate while students are working, assisting and requesting more detail as needed.

Session 14

Objectives:

- To introduce and practice building an introductory page/adding text

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 14.1: Adding Text

Procedure:

Review (5 min)

1. Ask for volunteers to explain the purpose of a back story and introductory page.
2. Tell students you will first demonstrate one way to make an introductory page and then give them time to build one for their game.

Introductory Page/Adding Text Overview and Demonstration (15 min)

1. Acting as navigator with a volunteer driver, use Handout 14.1 to demonstrate one way to add text to an introductory page.
2. Demonstrate changing the text size and color of the text.
3. Tell the students that they need to input the details from their game design worksheet into the game.
4. Encourage student to play with the text editing tools after they type their text in the box.

Introductory Page Build (20 min)

1. Students begin to build their introductory pages.
2. Circulate among students and assist as needed.

Group Wrap Up (5 min)

1. Ask for volunteers to show their introductory pages to the rest of the class.

Session 15

Objectives:

- To understand the elements of an action game
- To practice building characters and first play stage of an action game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 15.1: Making an Action Games, Parts 1 and 2
- Handout 15.2: Character and 1st Play Stage Design Sheet

Procedure:

Elements of Action Game Discussion (5 min)

1. Distribute Handout 15.1: Making an Action Game and explain to students that they will use it to help them determine what elements to include in their games.
2. Explain to students that they will have some time to work on their introductory pages today if needed; those who are finished with their introductory pages may begin to design their characters and the first play stage of their action game.
3. Distribute Handout 15.2: on adding characters and building the 1st play stage.

Finalizing Introductory Page and Designing 1st Play Stage (30 min)

1. Students finish building introductory page of action game or if finished, begin designing the characters and the first play stage.
2. Circulate among students and assist as needed. Encourage those who are still working on their introductory pages to finish.

Group Wrap Up (10 min)

1. Ask for volunteers who were working on their play stages to show their work to the rest of the class.

Session 16

Objectives:

- To share student work and generate ideas/motivation
- To learn how to shoot or drop projectiles
- To continue building characters and first play stage of an action game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 16.1: Shooting or Dropping Bombs

Procedure:

Review/ and Group Sharing (15 min)

1. Prior to class, identify two games that you think would motivate the other students with their game design and ask those students if they would be willing to formally present their games.
2. While each game is projected, ask their creator to describe its back story and how the play stages will work.
3. Open the floor to questions or positive feedback. If necessary, role model the questions (e.g., How did you come up with the idea for that type of character (or story)? What parts of the game do you think will be the most difficult to make?)

Shooting or Dropping Bombs or Projectiles Demo (10 min)

1. Acting as navigator with a volunteer driver, use Handout 16.1 to demonstrate how to shoot or drop bombs or projectiles.

Action Game Build Continued (20 min)

1. Explain to students that if they do not know or need help using the Creator Paint tool or creating a new stage, they can use the handouts.
2. Students continue to work on building their first play stage and use Handout 16.1 to make projectiles.
3. Circulate and assist students as needed.

Session 17

Objectives:

- To continue building the first play stage of an action game
- To learn how to make doors between stages and move characters through them

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 17.1: Doors

Procedure:

Review (5 min)

1. Review the information covered during the last session by asking a volunteer to come up and demonstrate how to add a bomb or projectiles.

Making Doors and Moving Characters through Them Demo (10 min)

1. Acting as navigator with a volunteer driver, use Handout 17.1: Doors to demonstrate how to make a door between two stages and move a character through it.

Building First Play Stage Continued (40 min)

1. Students continue building their first play stage and the door between it and their introductory page.
2. Students who finish early have the option of helping other students or using Handout 18.1: Making a Character Eat Something to add that feature to their game.

Session 18

Objectives:

- To learn how to make a character eat something before moving to another stage
- To continue building the first play stage of an action game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 18.1: Making a Character Eat Something

Procedure:

Review (5 min)

1. Review the information covered during the last session by asking a volunteer to come up and demonstrate how to make a door and move a character through it to the next stage.

Making a Character Eat Something before Moving to Another Stage Demo (15 min)

1. Acting as navigator with a volunteer driver, use Handout 18.1 to demonstrate how to make a character eat something before moving to another stage.

Building First Play Stage Continued (25 min)

1. Students continue building their first play stage and the connection between it and their introductory page and if desired, adding the “eating” feature just demonstrated.
2. Tell students that they need to be finished with their first play stage and have started on their second play stage by the end of the next session.
3. Students who are finished have the option of helping other students or begin building their second play stage using Handout 19.1: 2nd Play Stage Design Worksheet.
4. Circulate and assist students as needed.

Session 19

Objectives:

- To finish building the first play stage of an action game
- To begin designing and building their 2nd play stage

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 19.1: 2nd Play Stage Design Worksheet

Procedure:

Finalizing First Play Stage (15 min)

1. Students finalize their first play stage and fix any problems they find. Students who are finished have the option of helping other students or working on their second play stage.
2. Circulate and assist students as needed.

Designing and Building Second Play Stage (30 min)

1. Distribute Handout 19.1: 2nd Play Stage Design Worksheet and ask students to use it to design their second stage.
2. Tell students they can begin building their second stage as soon as the worksheet is filled out. Remind them that they may change their design later.
3. Circulate and assist students as needed.

Session 20

Objectives:

- To continue building the 2nd play stage
- To introduce the concept of a counter (optional)
- To introduce the concept of the gallery walk

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 20.1: Bombing an Object to Get Points (optional)

Procedure:

Review (10 min)

1. Do a quick review of recently learned skills (e.g., making doors, using “follow me,” making a character eat something, dropping bombs) by asking for volunteers to demonstrate some aspect of each skill.
2. Ask students to identify any problems they have encountered and discuss solutions.

Designing and Building Second Play Stage Continued (30 min)

1. Students continue building their second play stage.
2. Students who are finished have the option of helping other students or trying to add a counter using Handout 20.1: Bombing an Object to Get Points.

Note: Building a counter is difficult and is recommended for advanced students only.

3. Circulate and assist students as needed.

Preview of Next Session (5 min)

1. Explain to students that next time they are going to participate in an activity called a “Gallery Walk.” Explain that the name “gallery walk” comes from visiting museums and art galleries, where people walk around to look at different exhibits and pieces of art. Tell students that this activity is going to be similar to visiting a gallery or museum except that instead of looking at art or exhibits, they are going to look at each others’ games.

2. Emphasize that their games are “works in progress” and that they should all be proud of their accomplishments at any stage of completion. Finally, express confidence that every single one of them has at least one thing in their project that they should be proud of. Be sure to include this step because many students may feel uneasy showing their work. Some youth feel like their work isn’t very good and are reluctant to show it for fear of being embarrassed or feeling like they are going to be judged or unfavorably compared to other work by their peers.
3. Explain to students that they will each have a few minutes to showcase their game. After each game is shown, other students will give feedback using a feedback form. This information is will help them make their games better.

Session 21

Objectives:

- To share students' work in progress and get feedback from other students in the form of a "gallery walk," thereby promoting a learning environment where peer consultation and idea-sharing is the norm

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 21.1: Feedback Form

Procedure:

Introduction to Gallery Walk (5 min)

1. Remind students of what you discussed at the end of the last session. The purpose of the gallery walk is to give each other positive and constructive feedback, e.g., information about what is good and what could be improved.
2. Remind students that they all have something to be proud of yet there is always room for improvement.
3. Pick the students (or ask for volunteers) who will be the ones to present their games in each of three 10-minute rounds – divided so that everyone can present in one of the rounds – and divide the rest of the class into the same number of small groups.

Note: The number of presenters and rounds will vary depending on the size of the class and if students are working in pairs. If the class is very large, you may have to break this activity into two sessions.

Gallery Walk (35 min)

1. Ask the Round One presenters to visually walk through an appropriate portion of their games and explain what part is their favorite and what part they are most proud of. Each game maker should have an equal amount of time to showcase his/her game.
2. Watch the time to make sure that everyone gets close to equal time and enforce ground rules around respect and "no put downs."
3. After 5 to 8 minutes, have students fill out the feedback form (Handout 21.1) and give the completed forms to the presenters to refer to when they return to their work.

4. Repeat the above process until all rounds are completed and all students have had an opportunity to showcase their work.

Whole Group Reflection (5 min)

1. Reconvene large group and ask one or two groups to share what they saw in someone else's games. Did they get any new ideas? Was there anything that impressed them?

Session 22

Objectives:

- To emphasize the importance of naming characters and rules and keeping lists of rules organized
- To respond to peer feedback and finish building the 2nd play stage

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 22.1: Renaming a Character and Rule
- Handout 22.2: Clean List of Rules

Procedure:

Organizing and Naming Demo and Discussion (20 min)

1. Comment on the fact that many of the games they are making have a long list of rules. Ask students if they are having problems keeping them all straight. Explain that this is a common problem. That's why it's important to name your characters and rules and keep them organized and why you are going to do a quick review of naming before they continue to work on their games.
2. Acting as navigator with a volunteer driver, using Handout 22.1 to demonstrate how to rename a character (either a new one you have drawn or one in the character drawer).
3. Now make a simple rule for this newly named character to move one square to the right. Then demonstrate how to name this rule "move right."
4. Distribute Handout 22.2 which gives examples of "clean" and "dirty" lists of rules. Ask the class how having a clean list might help them and how a dirty list will make it difficult. If not mentioned, explain that a clean list will help them manage their rules and not have duplicates.
5. Ask students to make sure that all their rules and characters are properly named.

Responding to Feedback and Finishing 2nd Play Stage (25 min)

1. Students respond to feedback received during the gallery walk and finalize their second play stage.
2. Students who are finished have the option of helping other students or working on a credits page using one of two handouts – either 9.1 Adding You Win or 14.1 Adding Text.

3. Circulate and assist students as needed.

Session 23

Objectives:

- To finish building the 2nd play stage and other parts of their action game they have been working on
- To build a credits page

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 9.1: Adding You Win
- Handout 14.1: Adding Text

Procedure:

Review (10 min)

1. Tell students that they are almost done with their action games. They will have time today to finish the game itself. Then all they need to do is make a credits page.
2. Ask students if they remember the two ways to add text. If anyone does, ask them to demonstrate. If not, briefly demo the steps for adding text outlined on Handouts 9.1 and 14.1.

Finalizing Action Game and Building Credits Page (35 min)

1. Students finish games and build a credits page.
2. Students who are finished should help other students.
3. Circulate and assist as needed.

Session 24

Objectives:

- To share action games with peers
- To introduce and begin thinking about next game – the trivia game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 24.1: Trivia Game Rubric

Procedure:

Group Sharing (30 min)

1. Students demonstrate their finished games to entire group.
2. Praise the students for what they have accomplished.

Trivia Game Genre Discussion (15 min)

1. Ask the class if anyone knows what a trivia game is or if they can give examples. Some board game examples include Trivial Pursuit and Scene It. A trivia game consists of a set of questions designed to test the knowledge of the player.
2. Explain that they will have an option to make a game about any topic that they want. They may also make a game about a topic that they are currently learning in class. If they decide to make a trivia game about a current topic that they are learning, it may help their fellow classmates get ready for a test or review important material.
3. Distribute Handout 24.1: Trivia Game Rubric and go through each section with them.

Session 25

Objectives:

- To introduce and begin thinking about Trivia Game

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer
- Trivia game demo (a Creator sim)
- Handout 25.1: Trivia Game Topic Ideas

Procedure:

Review (5 min)

1. Review last session's discussion of a trivia game by asking for volunteers to define a trivia game and name the elements required per Handout 24.1 Trivia Game Rubric.

Trivia Game Research and Discussion (20 min)

1. Have students play the trivia game demo.
2. Reconvene whole group and ask for volunteers to explain what they liked and didn't like about the sample game.
3. Ask students if they have any ideas about their own trivia games. If they do not volunteer ideas, mention the following:
 - Subjects they are covering in school.
 - Issues in their community (fitness, violence, etc.)
 - Extracurricular activities they are interested in (music, sports, etc.)
 - Any subjects that they think other people would be interested in.

Trivia Game Idea Brainstorming (20 min)

1. Divide class into groups of two and distribute Handout 25.1: Trivia Game Topic Ideas to each pair.

2. Explain that they will now think of different ideas for trivia games with their partner. After they are done, they will share their ideas with another pair and get feedback on their ideas, which will help them decide on what topics to choose for their games.
3. Have each pair write down at least three different ideas for trivia games.
4. Halfway through the remaining time, ask them to share their ideas with the pair next to them.
5. Circulate and facilitate discussion between pairs as needed.
6. Wrap up by telling students that if they will be starting to build their trivia games during the next class session, so they need to decide on a topic by then.

Session 26

Objectives:

- To begin building Trivia Game by making questions and answers

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer
- Handout 26.1: Trivia Game Question and Answer Sheet

Procedure:

Making Trivia Game Questions and Answers (35 min)

1. Distribute Handout 26.1: Trivia Game Question and Answer Sheet to each student and explain the following:
 - They will need to complete this sheet before they may build the game in Creator.
 - They should write down each question they want to ask, along with the correct answer and some incorrect answers.
 - They may use the internet to help look for questions and answers, but they must record where they found the answer in the space provided.
 - When they complete the handout, they should raise a hand to get it checked.
 - Once approved, they may begin to build the introduction page with the title and directions on how to play the game.
2. Circulate and assist as needed while students work on the questions and answers to their trivia game.

Group Wrap Up/Sharing (10 min)

1. Ask for volunteers to share their ideas for topics and questions and answers with the rest of the class.

Session 27

Objectives:

- To continue building Trivia Game by making introductory page and question stages

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer

Procedure:

Introduction (5 min)

1. Announce to class that they must finish their introductory pages and be started on their question stages by the end of the session. Remind class that they should have a title and a description of their game on their introductory page.
2. Remind students to look at the Trivia Game Rubric (Handout 24.1), and the sample game if they need some ideas on how to construct their game. Assure students that the question stages should not take too long to make because they can use the same design for each stage and simply change the words.

Building Trivia Game Continued (30 min)

1. Circulate and assist as needed while students work.
2. Students who finish with their introductory should start on building the question stages.

Group Wrap Up/Sharing (10 min)

1. Ask for volunteers to share their day's work with the rest of the class.
2. Tell students that they will need to finish their games by the end of the next session.

Session 28

Objectives:

- To finish building Trivia Game

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer

Procedure:

Building Trivia Game Continued (45 min)

1. Students spend the entire session finishing their trivia games.
2. Students who finish early have the option of helping other students or evaluating and helping to debug the games of other students who are finished.
3. Circulate and assist as needed.
4. Wrap up by telling students that they will be evaluating each other's games during the next session as they did with the action games and then debugging their own games.

Session 29

Objectives:

- To evaluate and debug Trivia Game

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer
- Handout 29.1 Trivia Game Debugging Sheet

Procedure:

Trivia Game Peer Evaluation (20 min)

1. Explain to the class that they will now evaluate each other's games and give feedback to help them improve it as they did with their last games. Remind students to score the games carefully to help the creators make the best game possible.
2. Distribute Handout 37.1 Trivia Game Debugging Sheet to each creator and have them put their name on it and leave it by the computer with their game.
2. Rearrange class so each student is sitting at a new game to evaluate. Try to arrange students so that they are not evaluating their friend's game.
3. Circulate and help students to provide constructive feedback.

Finalizing Trivia Game (15 min)

1. Ask students to return to their games and read the feedback from the evaluators.
2. Announce that they will have 15 minutes to use the feedback to improve their games.
3. Circulate to assist as needed and make sure each student is using the feedback.

Group Wrap Up (10 min)

1. Lead a discussion about the experience of building a trivia game, asking the students what they learned from it, what they liked and disliked, etc.
2. Discuss the debugging process, asking students what kinds of problems they found.

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3. Congratulate students on a job well done.
 4. Tell students that they will share their finished games with each other during the next session and then begin work on a new game – an adventure game.

Session 30

Objectives:

- To share trivia games with peers
- To introduce the next game – the adventure game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 30.1: Adventure Game Rubric

Procedure:

Group Sharing (30 min)

1. Students rotate and play each other's trivia games.
2. Praise the students for what they have accomplished.

Introduction to Adventure Game (15 min)

1. Explain to the class that they are now going to begin to create their next game. The game will be an adventure game.
2. Ask if anyone can describe what an adventure game is.
 - Definition: "An **adventure game** is a [video game](#) in which the player assumes the role of protagonist in an [interactive story](#) that is driven by exploration and [puzzle-solving](#) instead of physical challenges such as combat.^[1]"
3. If not mentioned in the discussion, include the following:
 - Usually involves a "quest" (e.g., character is searching for something)
 - Character must often complete a task, or series of tasks, before moving on or winning)
 - Does not usually involve speed or reaction time – unlike an action game
 - There are multiple levels/stages, which are usually increasingly difficult
 - Often the character must get information from other characters
 - Often, the player must make choices or solve puzzles

4. Explain that they will build their game on a topic that they are studying in school. That way, others will be able to play their games and learn from them.
5. Distribute Handout 30.1: Adventure Game Rubric and have them follow along as you go through the requirements.
6. Ask the class if they have any questions.

Session 31

Objectives:

- To share ideas for adventure game
- To begin designing and building the adventure game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- adventuregamesample.sim
- Handout 31.1: Back Story Design Worksheet

Procedure:

Review (5 min)

1. Ask for volunteers to quickly give you elements of an adventure game.

Playing and Evaluating Sample Adventure Game (20 min)

1. Announce to the class that they will now use the rubric they received last time (Handout 30.1) to score a sample game. They should also write notes about what they liked and didn't like.
2. Ask students to open and play the adventure game sample file "adventuregamesample.sim"
3. Circulate and make sure students aren't having problems playing the game.
4. Once everyone has played the game, ask students to total up their points and ask for volunteers to give their scores.
5. Ask volunteers to tell the class what they liked and didn't like about the game. Ask for volunteers to tell the class what they learned from the game.

Beginning Design of Adventure Game/Elements of Story (20 min)

1. Remind students that the adventure games they will be making must be on a topic that they have studied or will study. Point out the topics on the rubric.

Note: Substitute topics being taught in your school.

6th grade

ancient Egypt
ancient China
Pangaea & plate tectonics

8th grade

Industrial Revolution

7th grade

medieval China
medieval Japan
medieval Europe

Any grade

multiplication & division
decimals, fractions & percents
reading comprehension
nonviolent social change

2. Explain to the class that every story has a beginning, middle, end, exposition, conflict/climax, resolution, and moral.
3. Explain to the class that we will now create a story as a class.
4. Ask for a volunteer to choose the topic.
5. Ask for a volunteer to choose a main character. Explain to the class that the story could be fictional that takes place during a time period that they are learning about. Complete the section by describing the main character in words or by drawing what the main character will look like.
6. Ask for another volunteer to describe the beginning (exposition), middle (conflict), and end (resolution). Remind the girls that they can write a description, draw it or use a combination of both.
7. Ask for questions.
8. Distribute Handout 31.1: Back Story Design Worksheet. Tell the class that they are now going to begin designing their adventure game by completing the design document.
9. As students work on their design sheets, circulate and assist as needed.

Session 32

Objectives:

- To share ideas for adventure games
- To continue designing and building adventure game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer

Procedure:

Review/Group Sharing (10 min)

1. Ask for volunteers to share their ideas for their adventure games with the rest of the class.

Building and Designing Introductory Page for Adventure Game (35 min)

1. Explain to the class that they will now begin to build the introductory page to their adventure game. Remind the class that this page is used to tell the player about the game they will play and how to play it. They may take the first 10 minutes to finish their back story worksheets (Handout 31.1) if they are not already finished.
2. Explain to the class that they must have a title and a description about what their game is about by the end of the session. They should include as much information about the story so the player knows what their goal is.
3. Ask students to take out the rubric (Handout 30.1) and use it to make sure that they include all of the necessary elements.
4. Circulate and assist as needed while students finish their back story and work on their introductory page.
5. Students who finish early have the option of beginning to build their first play stage or helping other students.

Session 33

Objectives:

- To continue building adventure game

Instruction Time: 45 min

Materials/Equipment:

- Access to StageCast Creator on every computer
- Handout 33.1: Character and 1st Play Stage Design

Procedure:

Building and Designing Adventure Game Continued (40 min)

1. Explain to students that they are now going to build their player character and 1st play stage. If they were not here the previous day they should first build their introduction page.
2. Distribute Handout 33.1: Character and 1st Play Stage Design. Tell students that they can use it to design their player character and their 1st play stage but may simply begin building if they want to.
3. Explain that they must have their player character created, start on their first play stage, and a door connecting the introduction page to their 1st play stage.
4. Explain to students that if they do not know how or need help using the Creator Paint tool or creating a new stage, they should look at the handouts on these topics.
5. Circulate and assist as needed as students begin to build their player character and 1st play stage.

Group Wrap Up (5 min)

1. Ask for volunteers to share their day's work with the rest of the class.

Session 34

Objectives:

- To finish building 1st play stage

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer

Procedure:

Building Adventure Game Continued (35 min)

1. Explain to the class that they will continue to build their player character and 1st play stage. They may also begin to build other characters. Tell them that next session they will learn to have characters speak to each other.
2. Tell the class that they should be finished or almost done with their 1st play stage and have a door between it and the introductory page by the end of the session.
3. Circulate and assist as needed as students continue to work on their games.
4. Students who finish early have the option of assisting other students or beginning work on their 2nd play stage.

Group Wrap Up/Sharing (10 min)

1. Ask for volunteers to share their day's work with the rest of the class.

Session 35

Objectives:

- To learn how to make characters talk to each other
- To finish building 1st play stage and begin building 2nd play stage

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer
- Handout 35.1: Creating Text Between Two Characters
- Handout 35.2: 2nd Play Stage Design

Procedure:

Making Characters Talk to Each Other Demo (15 min)

1. Remind students that a common element of an adventure game is for the player character to get clues from other characters during the journey. Tell them that you are now going to demo how to make text between two characters.
2. Distribute Handout 35.1: Creating Text Between Two Characters and ask students to follow it as you demonstrate.
3. Acting as navigator to a volunteer driver, go through the steps outlined on the handout.

Finishing 1st Play Stage and Building 2nd Play Stage (30 min)

1. Tell students that they will have the rest of the session to work on their adventure games. They need to be finished with their 1st play stage and at least beginning to work on their 2nd play stage.
2. Distribute Handout 35.2: 2nd Play Stage Design and tell students that they may use it to design their 2nd play stage but are not required to do so.
3. Students spend the rest of the session working on their adventure games. Those who are finished with their 2nd stage may start on their 3rd play stage.
4. Circulate and assist as needed.

Session 36

Objectives:

- To continue building adventure games

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer

Procedure:

Building Adventure Game Continued (30 min)

1. Tell students that they will have the next half hour to work on their games and then they will share what they have done with the rest of the class.
2. Circulate and assist as needed as students work.

Group Sharing (15 min)

1. Ask for volunteers to present their games to the class. They should give the title and a brief description of their game and show the player character and any other work they have done.
2. Ask the class for questions after each presentation.
3. Tell class that they need to be finished or near completion of their adventure games by the end of the next session.

Session 37

Objectives:

- To finish building adventure games

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer
- Handout 37.1: Next Steps

Procedure:

Building Adventure Game Continued (45 min)

1. Distribute Handout 37.1: Next Steps and remind the class that these steps will help them complete their games on time. Also remind students to check their rubric (Handout 30.1) to make sure they are including all the necessary elements.
2. Circulate and assist as needed while students finish their adventure games.
3. Students who are finished have the option of assisting other students or evaluating the games of other students who are finished using Handout 38.2: Debugging Sheet.
4. Tell students that they will be helping each other “debug” their games during the next session and then they will have the rest of the time to fix any problems and finalize their games.

Session 38

Objectives:

- To evaluate each others' game and debug
- To finalize building adventure games

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer
- Handout 38.1: Adventure Game Debugging Sheet

Procedure:

Adventure Game Peer Evaluation (20 min)

1. Explain to the class that they will now evaluate each other's games and give feedback to help them improve it. Explain that they should score the game carefully to help the creators make the best game possible.
2. Distribute Handout 38.1: Adventure Game Debugging Sheet to each creator and have them put their name on it and leave it by the computer with their game.
3. Rearrange class so each student is sitting at a new game to evaluate. Try to arrange students so that they are not evaluating their friend's game.
4. Circulate and help students to provide constructive feedback.

Finalizing Adventure Game (15 min)

1. Ask students to return to their games and read the feedback from the evaluators.
2. Announce that they will have 15 minutes to use the feedback to improve their games.
3. Circulate to assist as needed and make sure each student is using the feedback.

Group Wrap Up (10 min)

1. Lead a discussion about the experience of building an adventure game, asking the students what they learned from it, what they liked and disliked, etc.

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2. Discuss the debugging process, asking students what kinds of problems they found.
 3. Congratulate students on a job well done.
 4. Tell students that in the next session, they will have an open house to share their games with each other and other students. Ask them to be thinking about the games they created and decide which ones they want to showcase.

Session 39

Objectives:

- To showcase the games students created
- To celebrate the end of the class

Instruction Time: 45 minutes

Materials/Equipment:

- Access to Stagecast Creator on every computer
- Certificates of Completion

Procedure:

Open House and Graduation (45 min)

1. Students demonstrate their games to each other and visitors and answer questions as others play their games.
2. Students receive certificates of completion and acknowledgement.