

Title: <u>Computer Game Design Unit</u>	Grades: <u>8th Grade</u>
Subject/Course: <u>Applied Technology</u>	Designer: <u>Sunyee Chang</u>
Topic: <u>Game Design</u>	

Defining Purpose / Desired Results

Established Goals:

4.1 Use electronic reference materials to gather information and produce products and services.

4.3 Use information and communication technologies to synthesize, summarize, compare, and contrast information from multiple sources.

4.4 Discern the quality and value of information collected using digital technologies, and recognize bias and intent of the associated sources.

5.1 Identify and ask significant questions that clarify various points of view to solve problems.

5.4 Interpret information and draw conclusions, based on the best analysis, to make informed decisions.

CTE – Standards for Business and Finance

1. Facilitate and Inspire Student Learning and Creativity
 a. Promote, support, and model creative and innovative thinking and inventiveness
 c. Promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes

2. Design and Develop Digital Age Learning Experiences and Assessments
 a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity

3. Model Digital Age Work and Learning
 a. Demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations

NET-S Standards

Course Objective:

Students will use prior knowledge of using a WYSIWYG HTML editor to present their Game

Computer Game Design Unit

Design Idea.

The students will spend time online researching ideas for game characters and game scenarios to design their own computer-based game.

The students will learn various different styles of gaming (genres) from MMORPG to strategy games.

From the list of genres the students will choose one genre that they believe will be the “next big hit” and design a game proposal based on their choice.

The games they design will be age-appropriate for junior high students.

Basic marketing skills and strategies will also be introduced at the end of this unit.

Learning Outcomes:

Students will be able to recognize various genres of computer-based games.

Students will receive a brief overview of the computer gaming industry.

Students will be able to recognize the many gaming platforms and how 21st century games are able to go cross-platform to achieve more players.

Students will have the opportunity to use their creativity to develop a new computer game and present it to their peers.

Students will use extensive internet based research and various digital tools to create and present their own personalized Computer Game Design.

Students will understand the price factor of the game will affect the number of buyers for that game.

Essential Questions:

- How do gaming companies decide what will be the next big hit?
- How crucial is team effort and team work on designing and implementing a 21st century computer game?
- What happens to a gaming company if a game is poorly designed and executed?
- Is computer gaming important in the 21st century society?

Computer Game Design Unit

- What are various platforms computer games can be played on?
- How does the price of a computer game affect its desirability?

Computer Game Design Unit

Learning Plan

Learning Activities: (Lessons are for 45 minute periods)

Students will earn “computer bucks” for their participation each day in this project. Earning the “computer bucks” will factor into the marketing portion of this project. Student will work in groups for this assignment. Groups will consist of:

Lead Game Designer/Game Mechanics Designer
Graphics Designer
Level Designer

Day 1: Students will receive an overview of the history of computer games.

Day 2: Students will research online the different genres of video games. Students will decide which genres interest them the most. Students will also be introduced to the many gaming platforms.

Due to time restraints, the student projects will focus on computer-based gaming. However they are able to allow the game to go cross-platforms if they have time. As homework, students will do a brief survey of students on campus and get various opinions from their peers as to the genres they are interested in.

Day 3: Students will break into teams of three's: (1) Lead Game Designer/Game Mechanics Designer, (2) Graphics Designer, and (3) Level Designer. The individual money earned by each team member will now be combined into a group budget to design their game.

Day 4~6: Students will work out the storyline, goal, and purpose of their game design in their genre. Students will consider character design, art design, gameplay, etc. Students will type up their proposal using Microsoft Word and insert images of their ideas into their word document.

Day 7~8: Students will present their draft proposal to teacher.

Day 9: Students will revise their draft and continue to do further research and refine their game design.

Day 10~12: Students will devise a marketing strategy to convince other students in the

Computer Game Design Unit

classroom that their computer game is the **MOST FUN**. Students will design a graphic flyer (width and height that can wrap around a 5 ¼ floppy disk) to advertise their new computer game and why other students in the classroom should buy their game. They will decorate a box (a large Kleenex box) with this flyer. In addition, they will tape this flyer to actual 5 ¼ black floppy disks.

Day 13: Once students have their final game design they will post their project on their Weebly website. At this point the remaining group budget will be divided up amongst the group members:

Lead Game Designer/Game Mechanics Designer – **40%**

Graphics Designer – **30%**

Level Designer – **30%**

Day 14~16: Students will present their new computer-based game in front of the class to solicit other students to purchase their game. Games will be sold in \$5 increments, example: \$5, \$10, \$15, etc. Groups will decide how much to price their game.

Day 17: After the presentations are over the students will drop ALL the money in their hands inside different group boxes. As they drop off the money into the group boxes, they will also pick up a 5 ¼ floppy disk with the flyer on it to prove they purchased the game.

Students can't put money into their own group box. The box/group with the most money will win a prize. 😊

Computer Game Design Unit

Rubric: Applied Tech – Computer Game Design Rubric

	Excellent/ Proficient (A) 10 pts Proficient Knowledge	Good / Fairly Proficient (B) 8 pts Good Knowledge	Average (C) 6 pts Basic Knowledge	Below Average (D) 4 pts Not Really Understanding Course Assignment	Unsatisfactory (F) 2 pts Did not implement the required actions or elements.
Use of time & Effort	<p>Excellent/ Proficient (A)</p> <p>Student shows effort and strive for his best while working on their Game Design assignments.</p> <p>Assignment shows efficient use of classroom lab time.</p>	<p>Good / Fairly Proficient (B)</p> <p>Student shows some effort while working on their Game Design assignments.</p> <p>Assignment shows efficient use of classroom lab time.</p>	<p>Average (C)</p> <p>Student shows little effort while working on their Game Design assignments.</p> <p>Assignment was worked on during classroom lab time.</p>	<p>Below Average (D)</p> <p>Assignment shows little or no work during classroom lab.</p>	<p>Unsatisfactory (F)</p> <p>No signs of effort during class assignments.</p>
Use of New Tools & Techniques	<p>Excellent/ Proficient (A)</p> <p>Has an advanced & knowledgeable understanding of Current Tool & Can navigate the software.</p>	<p>Good / Fairly Proficient (B)</p> <p>Good Understanding of software & tools required for assignment.</p>	<p>Average (C)</p> <p>Has a basic understanding of software & tools required for assignment.</p>	<p>Below Average (D)</p> <p>Needs Better understanding of software & tools required for assignment.</p>	<p>Unsatisfactory (F)</p> <p>Did not implement the required actions or elements.</p>
Skills & Improvement	<p>Excellent/ Proficient (A)</p> <p>Student shows extensive knowledge of Game Design & Weebly and/or is showing extreme improvement from previous assignments.</p>	<p>Good / Fairly Proficient (B)</p> <p>Student has updated their skills in Game Design & Weebly and/or is showing some improvement from previous assignments.</p>	<p>Average (C)</p> <p>Student has maintained skills in Game Design & Weebly and final result lacks precision.</p>	<p>Below Average (D)</p> <p>Student work demonstrates almost no precision or control of the elements in Game Design & Weebly.</p>	<p>Unsatisfactory (F)</p> <p>No signs of Improvement or Not applying learned skills</p>

Computer Game Design Unit

Creativity	Excellent/ Proficient (A)	Good / Fairly Proficient (B)	Average (C)	Below Average (D)	Unsatisfactory (F)
	Several of the graphic elements and/or images used in the Project reflect an exceptional degree of student creativity in their assignment.	One or two of the graphic elements and/or images used in the Project reflect student creativity in their assignment.	One or two graphic elements and/or images used in the Project were made or customized by the student, but the ideas were typical rather than creative (.e.g, did not clean up the chroma key completely).	The student did not really make or customize any of the items in the Project. Elements were too basic.	Did not implement the required actions or elements.

Teacher Sample

Game Title: Soccer Typing Pro

Genre: Education/Sports

Game Objective: Players use the keyboard to play against the computer (offline) or other players (online) by typing quickly and accurately to win the soccer game.

There will be letters on top of each soccer character to help maneuver each character around the field to help move the soccer ball to the goal.

The strategy is to keep the eye on the monitor so the player can choose the correct word to move the ball to the best soccer character to achieve scoring a goal.

Typing accurately will help the soccer ball pass to the next character without missing the shot. Typing quickly affects how quickly the ball is passed before the other team intercepts. If the other player/computer types faster, then the

Computer Game Design Unit

other team will have a character intercept the ball. This rallies back and forth until a goal is achieved.

Storyline: The player starts at the Little League Soccer Club. Then as the player gains more experience they will increase to Pro Soccer. The fastest and most accurate player/typist will be able to enter FIFA.

Online version will have a leader board so others can see how far they've progressed.

How to Level Up: Leveling up is based on how many soccer games the player wins.

Number of Players: One player per soccer team. Players can go online to play multi-player mode so they can compete against their friends.

Easter Egg Surprises: Available only online. Once certain levels are unlocked, players will have the opportunity to use the "mouse only" mode. This will give the player an opportunity to improve their mouse clicking skills.

Computer Game Design Unit

Images from Soccer Gaming Pro:



Original Image from: <http://compucraze.net/wp-content/uploads/2009/07/soccer-smash.jpg>

Photo edited image:



Computer Game Design Unit

Marketing Image:



Original image from: <http://direct.clipart.co.za/detail/38-soccer-ball-on-grass>

Sample Online Webpage for Soccer Typing Pro:

<http://techvoices.weebly.com/computer-game-design-unit.html>

How to Level Up: Leveling up is based on how many soccer games the player wins.

Number of Players: One player per soccer team. Players can go online to play multi-player mode so they can compete against their friends.

Easter Egg Surprises: Available only online. Once certain levels are unlocked, players will have the opportunity to use the "mouse only" mode. This will give the player an opportunity to improve their mouse clicking skills.

Image from Soccer Gaming Pro:



Original Image from: <http://compucraze.net/wp-content/uploads/2009/07/soccer-smash.jpg>