

**SimCity 3000:
Building Teamwork and Organization through Gaming**

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Part 1: Overview

“Talent wins games, but teamwork and intelligence wins championships”

- Michael Jordan.

About SimCity 3000

Game Genre, platform, game play

SimCity is a simulator game on the development and maintenance of a city. Sim City 3000 comes with citizens, traffic, commerce, industry, utilities, taxes, revenues, natural disasters and other aspects of normal life. Sim City 3000 is a Computer format game. Sim City 3000 is an older version of Sim City 4.

Target Audience

The audience rating is E for everyone (all ages), although I recommend it for intermediate elementary through adult. The target audience for this unit is 9th through 12th grade Video Production Students. The parallel relationship between the development and maintenance of a city and the production phases of a film makes this game a perfect match for the instruction of teamwork and collaboration skills.

Standards

California State Standards Addressed

The standards used are taken from the California Department of Education Arts, Media and Entertainment Technology Career Cluster and Information Technology Model Curriculum Standards.

- 2.0 Students understand the principles of effective oral, written and multimedia communication in a variety of formats and contents.
 - 2.1 *Reading:* Specific applications of ELA grade 9-10 standards (2.1-6; 11-12 2.1-6), including analyzing and following technical directions,

- 2.2 *Writing:* Specific applications of ELA grade 11-12 (1.0, 2.5, and 2.6) including writing persuasive essays; writing job applications/resumes; and delivering multimedia presentations.

Problem Solving and Critical Thinking

- 5.0 Students understand how to create alternative solutions using critical and creative thinking skills, such as logical reasoning, analytical thinking and problem solving techniques. (5.1, 5.3)
- 7.0 Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace and community settings. (7.2, 7.3, 7.4)

Leadership and Teamwork

- 9.0 Students understand effective leadership styles, key concepts of group dynamics, team and individual decision-making, and conflict resolution.
- 9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the home, school, community, and workplace setting.
- 9.3 Understand how to organize and structure work individually and in teams for effective performance and goal attainment.
- 9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
- 9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
- 9.6 Understand the fluid and diverse organizational structures in the field.
- 9.7 Cultivate consensus, continuous improvement, respect for the opinions of others, cooperation, adaptability, and conflict resolution.

Information Technology:

Information Support and Services: Students will understand how to analyze the need for, plan, manage, and support the use of business systems to accomplish

business goals and objectives. They will demonstrate competency by successfully participating in a system development project that improves the performance of an organization.

Folsom High Expected Student Learning Results (ESLRs)

- Collaborative Workers
- Effective Communicators
- Constructive Thinkers
- Self-directed Learners
- Quality producers/performers
- Responsible Citizens

Goals and Objectives

Our main goals and objectives in this unit are for students to understand and use the skills needed for collaborative, cooperative team and work in the real world beyond the school walls. This class is group based, where the students work in production teams. Presenting this important aspect of learning in a game format will make a lasting impression on the students, as well as having fun.

Gaming verses direct Instruction

Games have always been a part of all cultural life. And with the new age of technology, there are a plethora of games to play. Many educational games are out there for educators to enhance the curriculum. Many teachers hesitate to play games because of the ‘entertainment’ factor.

“Research tells us that games are excellent teaching tools. Games provide high engagement and stimulate accelerated and effective learning.” (2002)

Mark Prensky, author of *Digital Game-Based Learning* lists many reasons why games engage learners:

- “Games are a form of fun. That gives us enjoyment and pleasure.
- Games are a form of play. That gives us intense and passionate involvement.
- Games have rules. That gives us structure.
- Games have goals. That gives us motivation.
- Games are interactive. That gives us doing.
- Games have outcomes and feedback. That gives us learning.
- Games are adaptive. That gives us Flow.” (2001)

Simulation games are meant to simulate real world situations. The Armed forces, airlines and many businesses use simulation games and programs to train their personnel. Simulation games such as Sim City 3000 help enhance teaching in many subjects such as; math, language arts, economics, science, and reading. Sim City 3000 like many games is also interactive involving a team effort to overcome the challenges they face or may face in the real world. Games give control to the student as the teacher acts as facilitator, guiding the student as he/she takes responsibility for his/her own learning.

Teacher Prep notes

- Each student will need a blank journal or notebook.
- You may want to poll your students to find out who may have experience playing games.
Create the student teams with a balance of experienced members
- It will help you a great deal if you play the game a few times first before the students play.
- The *student activity sheets* are for copying and use with the students.

Part 2: Let's Play

Before You Begin

The minimal configurations that you will need to play this game are:

- Windows 98 or Windows 95
- 300 MHZ Intel Pentium III or AMD K6-2 processor
- 64MB
- 4x CD/DVD-ROM drive
- 8MB video card with Direct X 8.0 compatible drive
- Direct X 8.0 compatible sound card
- Keyboard
- Mouse
- Free hard drive space for saved games

Recommended:

- 500MHz or faster Intel Pentium III or AMD Athlon processor
- 128 MB or more RAM
- 16X CD/DVD-ROM DRIVE
- 32 MB DIRECT3D compatible video card with DirectX 8.0 compatible driver

The students will need the following basic computer skills:

- starting an application
- using a mouse
- using menus and submenus
- clicking and dragging
- saving and loading files onto a CD, floppy or hard drive

The game manual is also on the disk, it will help to make at least one hard copy for reference

(Copyright will allow a copy for educational purposes) Do not allow the students to use the guide until unit 1, simulation 2.

Number of Computers needed: The ideal situation would be one computer for each student, but the game can be played with a limited amount of computers. A class of 36 would have a minimum of six groups, that's six computers. If you only have one computer consider each team using the unit at separate times, or using a projector and playing the game as a whole class with one mayor randomly selected.

Unit 1: Imagine

Introduction

Building and maintaining cities are much like the film production process. There is a preproduction or planning stage, production or working stage, and postproduction or maintenance stage. This simulation lesson will teach the students the importance of planning, teamwork and collaboration in all aspects of the production process. The students will work in small teams (5 to 6) to complete this unit. The students will experience the results of lack of teamwork and planning as they first observe the game without input, then work individually and finally as a team as they maintain a preselected city.

Simulation 1: Can't Touch This!

Description

In Unit one, lesson one the students will just be observers. Students will choose a preselected city (a lot like Sacramento area) and run it without any input or changes to the game. This observation will last 15 minutes (more if time allows). The second half of the lesson will involve only one student's input without help from the other team members or game guidelines. During this time the students will record observations in their city journals. Teachers, observe the students as the frustration level rises due to lack of input to save their city.

Goals and Objectives

- Students will use observation skills to record movement and challenges in a simulation game.
- Students will demonstrate understanding of the vocabulary of the game and city departments by using the words appropriately in their journal writings.
- Students will work cooperatively and collaboratively and respect the other team member's decisions and opinions as observed by the teacher.

Scheduled Class Time

The time requirements are always flexible with Sim City 3000. The activity is meant to be used for one period. Jumping In questions can be done whole class, teams or individuals.

Simulation 1 - Jump Start Questions

Take a few moments to answer the following questions in your journal:

- Have you ever wondered how many people it took to run a city?
- What would happen if we did not have any police or city ordinances?
- Suppose we had no fire department, how would we handle emergencies?
- Suppose we had no leadership, teamwork or planning in the development and maintenance of the City of Folsom, what would become of the city?

The Activity

It takes a team to run a city, just like it takes a team to produce a film or broadcast. In this activity you will see what happens when a city has no direction or leadership. Your group's job is to just sit and watch what happens with no input. You may scroll around the city zooming in and out as desired, but no changes, please. Record the goings on in your journals. Watch and record your activities for 15 minutes. NOTE: On the bottom

of the screen is a scroll bulletin board that informs the mayor (player) of what is happening in the game. You will want to record this in your journal for future use.

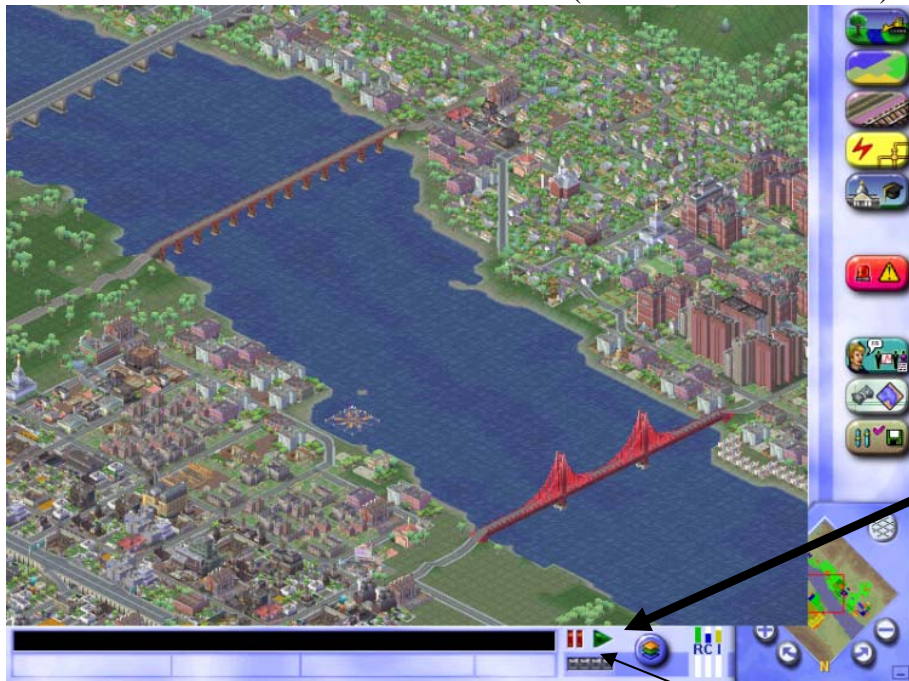
After 15 minutes you may choose one person, someone who is unfamiliar with the game, to be the mayor. This is the only person who may make any changes to the city. You must bite your tongue and not offer any assistance, even if he/she asks. Before you open the game choose the one person unfamiliar with the game to act as Mayor for the last fifteen minutes of the game.

Procedures

Game guides will not be given until the next activity, so use your best observation skills.

1. Start *Sim City 3000* and click *load city*.
2. Scroll down and choose *Riverland*.
3. The city will be in pause mode when started.
4. Click on the button with the money and record the needed information about the population, budget and dates before you begin the game.

- click the *run simulation* button (the arrow at the bottom)



Click to run program

- The button below it is the *simulation speed control*; click it to get the maximum speed.
- For the next 15 minutes (I'll assign more if we have time) you are to observe and record important information on the activity of the city. **YOU MAY NOT MAKE ANY CHANGES; THIS WILL DISQUALIFY YOUR ASSIGNMENT.** Observe what is happening with the budget, growth, utilities, health and education, and safety divisions.
- One person can click on *layer views*, to the right of the *speed control* to view the layout of electrical lines, water pipes, roads, etc. Do you see any areas that lack these utilities?
- When the 15 minutes is called, have your mayor step in to make necessary changes to the city for improvement (or to save the city). You may not help him/her. Continue to observe what is going on in the city, but also observe the behavior of your mayor.

10. When told to stop, do not save the city and exit out of Sim City.

Follow-Up

Students use the information you recorded in your journals to answer the following questions:

- What were some major problems that occurred in your city?
- How did this affect the population? Budget? Development of the city?
- How did your teammate that had to run the city by him/her feel about the activity?
- What do you feel was lacking in order to run this game effectively?

Discuss your answers with your teammates.

Extension

This part of the assignment is an individual assignment. Using the internet research a local city, its leadership and departments. Answer the following questions in your journals:

- Who is the mayor?
- What are the major departments that run the city?
- Who represents the leaders in the community (i.e. city council)?

Simulation 2: All by Myself

Description

Now that each student has at least observed the game in action it is time for each individual to give it a try, but from the beginning of the game. Each student in each group will start the game from the beginning and play for a specified amount of time.

The game works best if each student is given at least a half hour to play the game. Access to a computer lab would be helpful as all the students could play at once. The game will

begin with the same settings as in lesson one. The student will be working individually without help from others.

NOTE: You may give the students the main window sheet.

Goals and Objectives:

- The students will understand the need for planning ahead through the results of the random running of the city.
- Students will demonstrate an understanding for the multiple departments needed to run the city through their journal writings and game play.
- Students will demonstrate the basic uses of a computer (mouse, keyboard, etc) through the game play.

Scheduled Class Time

Each student in each group needs to play the game at least a half hour to find true challenges. Suggested time frame:

- Jumping-In discussion- ½ to 1 class period
- Sim City 3000 Activity-Three class periods or longer depending on the size of the class and the number of computers.
- Follow-up ½ to 1 class period

Simulation 2: All by Myself - Jump Start Questions

- What are the mayor's duties?
- Why do we have a city Council? What are their duties?
- Can you name all the departments needed to run a city?
- Who runs those departments?
- FUN ONE: Do you know how many water pipes run under our city?

The Activity

Now that you have observed the game in action it is time for each individual to give it a try, but from the beginning of the game. Each student in your group will start the game from the beginning and play for a specified amount of time. The game will begin with the same settings as in lesson one, but you will be allowed to pause the disaster buttons. You will be working individually without help from others, including the teacher or teammates. After each student is done playing the game he/she will save it for review with the team later. A menu sheet will be provided for you.

Procedures

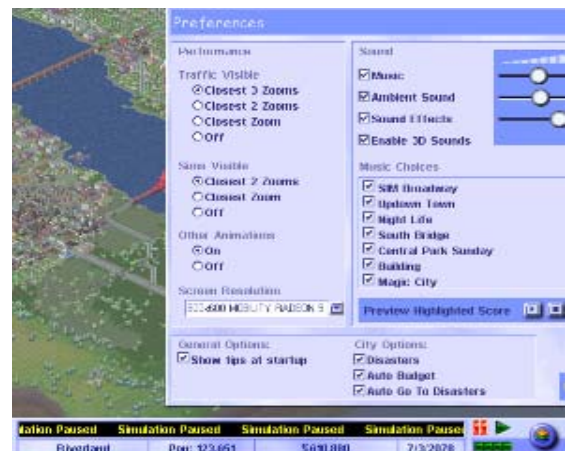
Game guides will not be given until the next activity, so use your best observation skills.

Start *Sim City 3000* and click *load city*.

Scroll down and choose *Riverland*.

The city will be in pause mode when started.

Select the Preferences option from the Change Settings and exit menu. Disable Disasters by clicking on the box. Click the check mark to close the window.



1. Record the needed information about the population, budget and dates before you begin the game.
2. At this time you may make any changes or additions to the game. You still not have a guidebook so it is up to you to try and figure it out.
3. Click the arrow button to begin the game. You may pause the game at any time to review record information and make changes.
4. When time is called save the game. You cannot discuss your gaming experience until all members have played.

Follow-Up

Sit down with your team members and answer the following question together (be sure to record your answers in your journal.):

- Were you able to play the game by yourself without any problems?
- Without disasters your city still struggled, do you know why?
- Which department was the hardest to maintain?
- How did it feel not being able to discuss this with any of your teammate?
- Do you think your city would have done better if you had help?
- They say this is an individual player game, do you agree, disagree? Explain
 - Describe one situation that would have involved more than one person or department to rectify the problem?
 - Can a city run without leadership? Explain
 - Can a city run without teamwork and collaboration? Explain

Extension

Go back to the city that was researched in activity 1. Research each department and its duties. Record (in your journal) any information that may help you in maintaining your

Sim City. Write a paper comparing and contrasting the Sim City from the city researched.

Simulation 3: Teamwork and collaboration

Introduction

The students have had a chance to get to know the city on a very limited basis; this activity will involve the entire group. The students will select a mayor and different leaders for each department. Together they will run the city. Each student will be responsible for maneuvering the game for his/her department responsibilities. The mayor will keep accurate records of the activities as well as choosing to follow through with the department head suggestions.

This activity can go on for longer than the class period. The main goal in this activity is for the students to understand how the city can be much better maintained with teamwork, organization and collaboration. At this point the teacher the students may use the manual to guide them with the game.

Goals and Objectives:

- Students will work as a team collaborating and planning strategies to help maintain their city.
- Students will use problem solving skills as they encounter different challenges in the game.
- Students will learn from each other about how to play the game and strategize while working together in cooperative groups.
- Students will actively engage in discussion and debate about concepts and strategies with the game.
- Students will demonstrate knowledge of the game through journal writings.

Classroom schedule time:

Three or more class periods should be used for this activity to allow the students to plan, strategize and maintain the city as a team.

Simulation 3 - Jump Start Questions

- Can you name other areas of work where teamwork is vital to the operation and maintenance?
- Can you think of a job that involves only one individual?
- What are the most important elements for good teamwork?
- Is team planning important? Why?

The Activity

You have had a chance to get to know the city on a very limited basis; this activity will involve the entire team. Your team needs to select a mayor and people to lead the different departments in the city (i.e. budget, transportation, electricity, water and sewage, City development) Together you will run the city. Each leader will be responsible for maneuvering the game for his/her department responsibilities. The mayor will keep accurate records of the activities as well as choosing to follow through with the department head suggestions.

An Important note: You will have the assistance of the game manual/guidebook to help you.

Procedure

1. Follow steps 1 through 3 and 5 in simulation 2. You will now have to deal with any natural disasters that may come along.
2. You are now on your own. It's up to you and your team to maintain your city. Do not fail or YOU'RE FIRED!

Follow Up

- What went well?
- What were your biggest challenges with the city?

- What were your biggest challenges working as a team?
- Are there any changes or things you would do differently next time?

Extension

Using PowerPoint, create a presentation of your city, its beginning and ending budgets, growth, disasters, challenges and successes.

Coming together is a beginning. Keeping together is progress. Working together is success....Henry Ford.

Resources

SimCity 3000

SimCity 3000 Manual found on game disk.

SimCity 3000 web site: www.sc3000.com

SimCity 3000 Strategy guide, Prima Publishing, 1999

Maxis

2121 North California Blvd., Suite 600

Walnut Creek, CA 94596

Tel: (925) 933-3630

www.maxis.com

Electronic Arts

P.O. Box 9025

Redwood City, CA 94063-9025

Attention: Customer Support

Teamwork

Teachmeteamwork.com - A great internet site of tips on teaching teamwork:

Teaching Teamwork Skills by Lori Breslow (1998): found at:

<http://web.mit.edu/tll/published/teamwork1.htm>. This site is also a great resource site or

teachers, student, and administrators offering services and programs to improve the quality of teaching and learning.

Tribes by Jeanne Gibbs (1994ed.) Center Source Publication, Santa Rosa, CA ISBN 0-7725-2118-2

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