

**Lesson Plan Title:**  
**Video Games – The First Generation****Overview:**

Today a 10 billion dollar industry, video games (not including console revenues) challenge the movie and music businesses in size. Some of the world's most complex microchips are designed specifically to power video game machines such as the Sony Play Station and Nintendo Wii. Students will learn about the first generation of video games, which were introduced as commercial products in the early 1970s.

**Objective:**

To help students learn about the importance of microchips in everyday life through the video game, one of the most popular forms of youth entertainment.

**Vocabulary Words and Key Phrases**

Large Scale Integration (LSI)  
Microchip  
Microprocessor  
Oscilloscope  
Read-Only-Memory  
Software

**Website References:**

The online exhibition *The Silicon Engine: A Timeline of Semiconductors in Computers* will provide a wealth of resources and information. See the *Timeline*, *People*, *Companies*, and *Glossary* sections at:  
<http://www.computerhistory.org/semiconductor/>

Specifically for this assignment see the Cell processor chip photo at:  
<http://www.computerhistory.org/semiconductor/timeline/1974-Scaling.html>

The subject matter of the lesson plan will inspire students to expand their research on the Web. Additional suggested website links are provided below:

Online Exhibition *The Video Game Revolution*,  
[http://www.pbs.org/kcts/videogamerevolution/history/timeline\\_flash.html](http://www.pbs.org/kcts/videogamerevolution/history/timeline_flash.html)

**Teaching Strategy/Procedure:**

1. Students will research the first video games and describe the technical advancements that made them possible. Have students create together a visual, illustrated timeline of the first generation of games.

**For Further Study:**

Have students research how later video games such as Nintendo and Play Station benefit from Atari's early games.

**Materials:**

Access the website references listed above, together with the following:

***Brief Timeline of the First Generation of Video Games*****1952 – First computer-based game**

A.S. Douglas created the first documented computer game, *Noughts and Crosses* (a version of tic-tac-toe), as part of his doctoral thesis at Cambridge University, England.

**1958 – First screen electronic Game is invented**

At the Brookhaven National Laboratory, nuclear physicist William Higinbotham created an electronic tennis game that was played on the screen of an oscilloscope. He built it for the annual visitor's day, because he believed it "might liven up the place to have a game that people could play and would convey the message that our scientific endeavors have relevance for society."

**1962 – Spacewar! is produced**

Spacewar! was co-developed by computer programmer Steve Russell at MIT. Frequently cited as the first computer game Spacewar! was unquestionably the first to gain widespread recognition, and is recognized as the first of the "shoot-'em' up" genre.

**1972 - Atari, Inc. is founded**

Atari, Inc. was founded by Nolan Bushnell and Ted Dabney to develop electronic games inspired by Spacewar!. Al Alcorn, one of Atari's first employees, was the engineer who constructed the highly successful arcade game Pong that was first installed in Andy Capp's Tavern in Sunnyvale.

**1972 - First video game console is commercially released**

Magnavox Odyssey was the first video game console that could be played in the home. It was designed by Ralph Baer and came with twelve games.

**1976 – Fairchild “Channel F”**

The Fairchild Video Entertainment System (VES), later renamed Channel F, was one of the first game systems to use plug-in Read-Only-Memory cartridges to offer a wide variety of games.