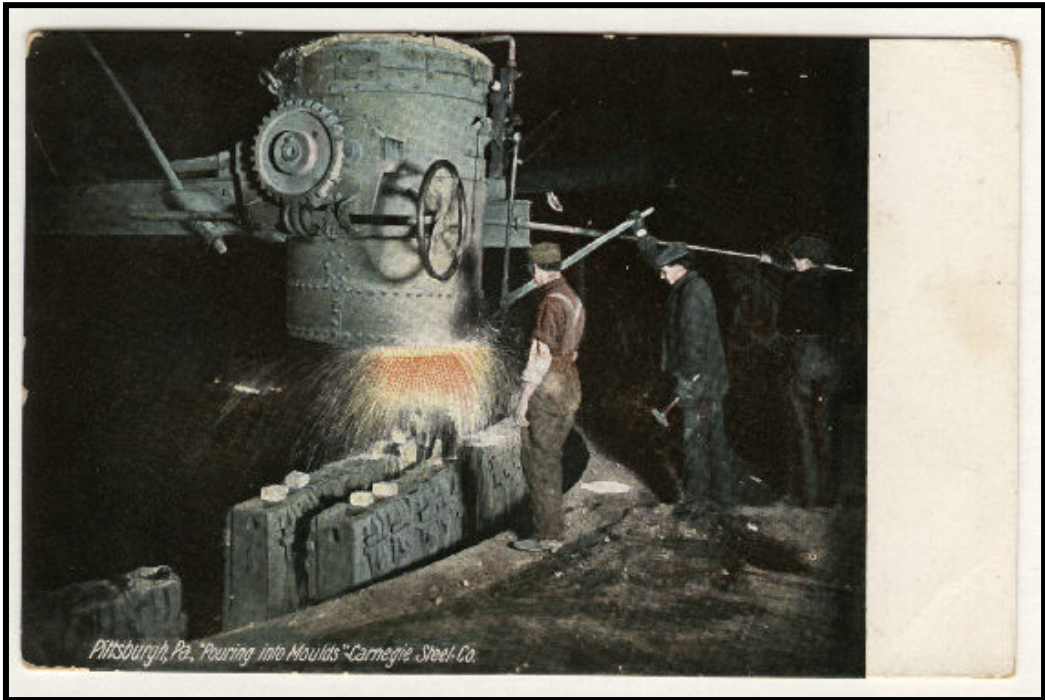


Steel Empire Game





STEEL EMPIRE GAME: 1866-1910

National Standard for History: United States History Standards, Era 6 The Development of the Industrial United States (1870-1900), Standard 1A, the student understands the connections among industrialization, the advent of the modern corporation, and material well-being.

Written by:

Herschel M. Sarnoff

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hsarnoff@gmail.com

STEEL EMPIRE: 1866-1910

This activity is an abstract simulation based on the methods used by men such as Andrew Carnegie in creating giant vertical consolidations of business in the period 1866-1910

OBJECTIVES:

1. Students will become familiar with how giant industrial corporations were formed between 1866-1910.
2. Students will participate in an activity that involves the business cycle.
3. Students will gain an insight into the industrial growth of the United States.
4. Students will participate in a fun activity while learning historical facts.

LEARNING THE GAME:

1. Take out and inspect the following playing aids.
 - a) TEAM RECORD SHEET
 - b) BUSINESS CARDS/BUSINESS DISPLAY
 - c) VERTICAL CONSOLIDATION CHART
 - d) TEACHERS CONFIDENTIAL SHEET, BUSINESS CYCLE CHART
(For teacher's eyes only).
 - e) OPTIONAL RULES
2. Read the GAME SUMMARY, referring to #1, a-e as necessary.
3. Read the GAME RULES SECTION and PRE GAME SECTION. As you read, play through one or more game turns to familiarize yourself with the game mechanics.
4. When introducing the game to a class follow steps 1, 2, and 3 above.

GAME SUMMARY: (See GAME RULES SECTION below for details)

The goal of the simulation is to acquire a complete vertical consolidation in the steel industry as Andrew Carnegie did around the turn of the century. Teams accomplish this by purchasing all 16 of the businesses listed on the VERTICAL CONSOLIDATION CHART. Each team starts with one business, a MILL. The first team to acquire all the businesses is declared the winner.

The game is played by years. Each year from 1866 to 1910 is considered as one turn. Individual businesses are purchased by each team, one per year, using the prices listed on the BUSINESS DISPLAY and recorded on each team's VERTICAL CONSOLIDATION CHART. Teams may only purchase businesses if they have sufficient money in COLUMN E on their TEAM RECORD SHEET. The purchase price and profit for each business is found on the BUSINESS CARDS/BUSINESS DISPLAY. The price and profit for each business will change according To the BUSINESS CYCLE CHART, letters A through E. The BUSINESS CYCLE LETTER(S) are found on TEACHERS CONFIDENTIAL SHEET. The letters represent different phases of the business cycle:

- A=boom, high prices and high profits
- B=upturn, prices and profits on the rise
- C=normal times, static prices and profits
- D=downturn or recession, prices and profits decline
- E=depression, prices and profits decline to their lowest levels

The TEACHERS CONFIDENTIAL SHEET is not to be seen by any players. Teams may only purchase one business per year. Teams do not have to purchase a business indeed; they may not be able to purchase one. The game is played until one team has purchased all 16 businesses.

PRE GAME SECTION:

- A. Duplicate the following pages in the quantities indicated:
 - 1. TEAM RECORD SHEET 20-30 copies
 - 2. BUSINESS CARDS/BUSINESS DISPLAY 20 copies
 - 3. VERTICAL CONSOLIDATION CHART 10 copies
- B. 10 of the BUSINESS CARDS/BUSINESS DISPLAY sheets must be cut into sections.
 - 1. Cut ten sheets along the lines.
 - 2. Sort the cards by categories (business types) and store in labeled envelopes
- C. Each team should be provided with a manila, clasp-type folder and an envelope to hold their game materials.
- D. Divide the class into teams. Each team should have from 2 to 6 members. Different game recording tasks may be divided up between team members. Teams sit together during play. The more teams, the longer it will take to play.

GAME RULES SECTION:

Read the following to the class:

The class will be taking part in a simulation game that will demonstrate how large industrial corporations were formed in the late 19th and early 20th centuries. The class will be divided into teams competing against each other to see which one can first form a multi-million dollar vertical consolidation in the steel industry. Your team will accomplish this by buying 16 different types of businesses.

The game is abstractly based on the methods and procedures used by Andrew Carnegie. Then, as today, the business cycle operated. The prices and profits will change as the historical business cycle moves between boom and depression. The first team to acquire all 16 businesses is the winner.

HOW TO PLAY:

- A. Each team should have the following aids at the start of the game.
 - 1. a manila folder and envelope

2. one MILL BUSINESS CARD (see PRE-GAME SECTION B)
3. TEAM RECORD SHEET(S)
4. one BUSINESS CARDS/BUSINESS DISPLAY Sheet
5. one VERTICAL CONSOLIDATION CHART

B. Teams should be seated together.

C. Teams now fill in the details on their TEAM RECORD SHEET.

1. Teams should make up a name for themselves.
2. The team name is written in the proper space on the TEAM RECORD SHEETS.
3. The first year is 1866, which is written under COLUMN A on the first line.
4. All teams start with \$10,000, written as 10 to simplify play. Write 10 under COLUMN B, MONEY AT START, to the right of 1866.
5. The letter for COLUMN C, BUSINESS CYCLE LETTER, is given to the class by the teacher. The BUSINESS CYCLE LETTER for each year is found on the TEACHERS CONFIDENTIAL SHEET. Teams write the letter in the proper space

D. How to figure PROFIT FROM BUSINESSES, COLUMN D.

1. Team use the values indicated in BUSINESS CARDS/BUSINESS DISPLAY sheet.
2. Profit is derived only from BUSINESSES that a team purchased or started the game with.
3. The profit for each business is found first by finding the correct BUSINESS CYCLE LETTER itself. The number under the letter is the profit that business brings in for that year. For example, 1866 is a "B" year. The profit for a MILL in 1866 would be 15 (\$15,000).
4. Each team totals the profits (if any) from each of their BUSINESS CARDS and writes that total under COLUMN D, PROFITS FROM BUSINESSES.

E. For COLUMN E add the numbers in COLUMN B and D and write in the proper space under COLUMN E.

F. To purchase new BUSINESSES follow the procedure below:

1. New BUSINESSES are purchased using the BUSINESS DISPLAY SHEET and TEAM RECORD SHEET.
2. The purchase price of a BUSINESS depends on the BUSINESS CYCLE LETTER for the current year. BUSINESSES have three possible prices; first, an "A" and "B" price, second, a "C" price, third, a "D" and "E" price. The price a team will pay for a business will depend on the current year's BUSINESS CYCLE LETTER. These prices are found on each of the BUSINESSES under the PRICE GRID on both the individual BUSINESS CARDS and on the BUSINESS CARDS/BUSINESS DISPLAY sheet.
3. Before a team may purchase a new BUSINESS, they must have enough money under COLUMN E on their team's TEAM RECORD SHEET.

For example, in 1866 all teams will have 25 (\$25,000) in COLUMN E. They would be able to buy, for example, an IRON ORE BUSINESS, costing 15, a

COAL MINE< costing 15 or any other BUSINESS costing less than 25. They would not be able to buy a COKE OVEN for the purchase price is 30.

4. The purchase of a new BUSINESS is recorded on the VERTICAL CONSOLIDATION CHART by writing the year the BUSINESS was purchased to the right of the BUSINESS. 1865 is already printed on the chart to the right of MILL.
 5. The purchase price of a new BUSINESS is written with a minus sign under COLUMN F, EXPENDITURES FOR NEW BUSINESSES on the TEAM RECORD SHEET.
- G. To arrive at the FINAL TOTAL, COLUMN G, subtract the number in COLUMN F from the number in COLUMN E. Write the result in both COLUMN G of the current year and in COLUMN B, MONEY AT START, on the next year's line.
- H. After all teams have completed the above steps the teacher checks each team's RECORD SHEET and gives each team the BUSINESS CARD (if any) they purchased.
- I. One year/turn is now completed. Repeat the above steps for each year until one team has purchased all 16 BUSINESSES and is declared the winner.

OPTIONAL RULES

The following rules may be added to the game at the teacher's discretion. It is suggested that OPTIONAL RULE #1 be added to the game to increase the historical accuracy.

OPTIONAL RULE #1

The rule reflects the loss of income during bad economic times.

1. Each time there is a "D" BUSINESS CYCLE LETTER all teams must give up 5 (\$5,000) or one of their BUSINESS CARDS.
2. Each time there is an "E" BUSINESS CYCLE LETTER all teams must give up 10 (\$10,000) or two of their BUSINESS CARDS.
3. The loss of money is recorded in COLUMN F with a minus sign. This money will be deducted from the FINAL TOTAL.
4. The teacher collects the BUSINESS CARDS from the teams that are giving them up. Teams must cross out the BUSINESS (ES) given up on their VERTICAL CONSOLIDATION CHART. The BUSINESS (ES) GIVEN UP must be purchased again later in the game to fulfill the victory conditions.

OPTIONAL RULE #2- BORROWING MONEY

1. If a team is in need of money TO STAY IN THE GAME, the teacher may loan it to them.
2. The loan must be paid back at the first opportunity.
3. An interest charge of 10% is added and must be paid when the money is repaid. Deduct the interest and loan payment from the team's FINAL TOTAL in COLUMN G.
4. Teams may not borrow money to make new BUSINESS purchases. This rule should be used only to keep teams in the game.

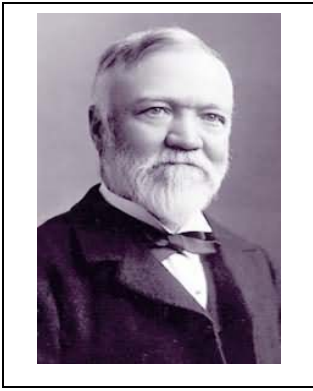
OPTIONAL RULE #3: STRIKES

The effects of strikes may be simulated using this rule.

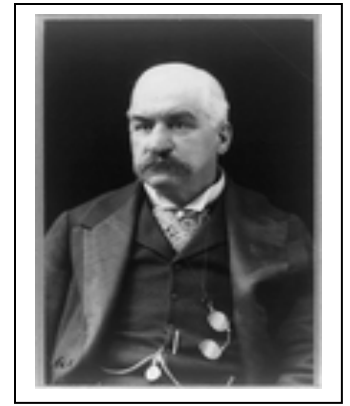
1. At the beginning of each year, each team must roll one die and consult the STRIKE TABLE. If the result is 2, 3, 4, 5, or 6 nothing further takes place. If the die roll is 1, the team must roll one die again and consult the STRIKE RESULT TABLE. All losses from the second table are immediately deducted from the team's total in COLUMN B, Money at Start. (If no die is available write the numbers 1, 2, 3, 4, 5, and 6 on pieces of paper and have students, pick one from a cup or envelope.)
2. The year 1892 is an automatic strike year so there are no die rolls. All teams lose \$20,000 (20). This simulates the bloody strike and lockout at the Carnegie Steel Company's Homestead plant.

STRIKE TABLE	
DIE ROLL	RESULT
one	roll on Strike Result Table
two - six	no effect




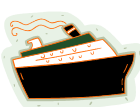












STRIKE RESULT TABLE	
DIE ROLL	RESULT (Money Lost)
one	-2
two	-4
three	-6
four	-8
five	-10
six	-12



VERTICAL CONSOLIDATION CHART



<u>RAW MATERIALS</u>	<u>YEAR WHEN BUSINESS WAS PURCHASED</u>
A. IRON ORE	
B. COAL MINE	
C. MANGANESE/LIMESTONE	
<u>TRANSPORT</u>	
A. ORE SHIPS/GREAT LAKES	
B. BARGES	
C. RAILROADS	
<u>MANUFACTURING</u>	
A. FURNACES, OLD STYLE	
B. COKE OVENS	
C. BESSEMER CONVERTERS	
D. OPEN HEARTH FURNACE	
<u>FINISHED PRODUCTS</u>	
A. STEEL RAIL FACTORY	
B. BRIDGE WORKS	
C. STEEL WORKS	
D. MILL	1865
<u>MARKETING</u>	
A. FREIGHTERS/OCEAN GOING	
B. MARKING NETWORK	

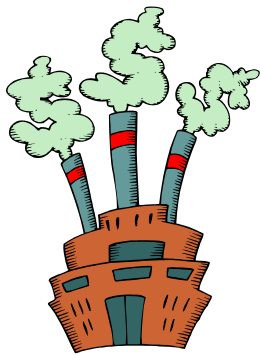
<p>BUSINESS CARD/BUSINESS DISPLAY</p>		<p><u>COAL MINE</u> <u>PRICE GRID</u>  <u>A,B / C / D,E</u> 15 / 10 / 5</p> <p><u>PROFIT GRID</u> <u>A / B / C / D / E</u> +4/ +3 / +2 / +1 / 0</p>
<p><u>MANGANESE/LIMESTONE</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 15 / 10 / 5</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +4 / +3 / +2 / +1 / 0</p>	<p><u>COKE OVENS</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 30 / 20 / 10</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +10 / +7 / +5 / +3 / 0</p>	<p><u>BARGES</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 30 / 20 / 10</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +10 / +7 / +5 / +2 / 0</p>
<p><u>FURANCES/OLD STYLE</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 30 / 20 / 10</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +10 / +7 / +5 / +2 / 0</p>	<p><u>MILL</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 75 / 50 / 25</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +20 / +15 / +10 / +5 / 0</p>	<p><u>ORE SHIPS/GREAT LAKES</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 75 / 50 / 25</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +20 / +15 / +10 / +5 / 0</p>
<p><u>FREIGHTERS/OCEAN GOING</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 150 / 100 / 50</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +40 / +30 / +20 / +10 / 0</p>	<p><u>BESSEMER CONVERTERS</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 150 / 100 / 50</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +60 / +45 / +30 / +15 / 0</p>	<p><u>OPEN HEARTH FURANCE</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 225 / 150 / 75</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +100 / +75 / +50 / +25 / 0</p>
<p><u>BRIDGE WORKS</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 300 / 200 / 100</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +80 / +60 / +40 / +20 / 0</p>	<p><u>STEEL RAIL FACTORY</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 450 / 300 / 150</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +120 / +90 / +60 / +30 / 0</p>	<p><u>RAILROADS</u> <u>PRICE GRID</u> <u>AB / C / D,E</u> 600 / 400 / 200</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +160 / +120 / +80 / +40 / 0</p>
<p><u>STEEL WORKS</u> <u>PRICE GRID</u> <u>AB / C / D,E</u> 750 / 500 / 250</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +200 / +150 / +100 / +50 / 0</p>	<p><u>MARKETING NETWORK</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 15 / 10 / 5</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +6 / +4 / +3 / +1 / 0</p>	<p><u>IRON ORE</u> <u>PRICE GRID</u> <u>A,B / C / D,E</u> 15 / 10 / 5</p> <p> <u>PROFIT GRID</u> <u>A / B / C / D / E</u> +4 / +3 / +2 / +1 / 0</p>

TEACHERS CONFIDENTIAL SHEET

BUSINESS CYCLE CHART

YEAR	CYCLE
1866	B
1867	C
1868	C
1869	C
1870	B
1871	A
1872	B
1873	D
1874	D
1875	E
1876	E
1877	E
1878	C
1879	B
1880	A
1881	B
1882	B
1883	D
1884	E
1885	E
1886	A
1887	C
1888	B

YEAR	CYCLE
1889	A
1890	C
1891	A
1892	D
1893	E
1894	D
1895	D
1896	C
1897	C
1898	B
1899	A
1900	B
1901	B
1902	B
1903	C
1904	D
1905	B
1906	B
1907	C
1908	E
1909	D
1910	C



TEAM RECORD SHEET

TEAM _____

COLUMN A YEAR	COLUMN B MONEY AT START	COLUMN C BUSINESS CYCLE LETTER	COLUMN D PROFIT FROM BUSINESSES	COLUMN E SUBTOTAL COL. B + COL. D	COLUMN F EXPENDITURES FOR NEW BUSINESSES	COLUMN G FINAL TOTAL COL. E - COL. F