The Election Cycle

Suggested Grade and Mastery Level

High School – all levels
Middle School – apprentice, master, grandmaster

Suggested Time

Duration of the game

Project Background

This project gives SMG teams the opportunity to become "Market Detectives" by investigating stock prices to see if they follow particular patterns or cycles. Students will examine stock prices to see if they have generally followed a presidential election cycle over the years. They will determine if the most recent presidential term conforms to any historical pattern they find. Students extend their knowledge to business cycles by determining whether the stock market has followed these economic fluctuations. They discover that different categories of stocks have often behaved differently during these economic fluctuations.

Teacher Background

"Everyone talks about the weather, but nobody does anything about it." Perhaps that's because the weather follows a cycle – a sequence of events that repeats itself over a period of time. Warm seasons gives way to cold ones, rainy days replace sunny ones, and so on. Cycles are all around us – even in the stock market. One of them is the 4-year presidential election cycle, which is revealed by an historical relationship between stock prices and presidential terms. In past years, the stock market has generally lagged during the first two years of presidents' terms but has then increased rapidly in the last two, especially during the third, or pre-election, year. There are various hypotheses for this phenomenon, one being that presidents tend to implement any belt-tightening policies during the early years of their terms but then unleash whatever economic stimulus they can during the final years preceding an election. There is no generally accepted explanation for the cycle, however, and some websites even state its existence has been discredited. As detectives, however, students can investigate and form their own conclusions.

Additional sources relating to the presidential election cycle are available at:

http://www.alphaim.net/presidential_election_cycle.pdf
http://seekingalpha.com/article/81469-the-presidential-election-cycle-theory-is-it-accurate
http://www.bloggingstocks.com/2008/05/12/the-presidential-election-cycle-a-market-history/
http://www.econ.cuhk.edu.hk/dept/seminar/06-07/2nd-term/Presidential_Election_Cycle.pdf

Vocabulary

Business Cycle – A pattern of repeated fluctuations over time, in which the economy expands, peaks, contracts, and then reaches a trough or bottom from which a new expansion begins. Business cycles are fluctuations of the economy around its long-term growth path.
Cycle – A sequence of events that repeats itself over a period of time
Dow Jones Industrial Average (Dow) – A popular index of stock prices consisting of 30 large well-known companies in major sectors of the economy.

Economic Fluctuation – Expansion or contraction of the economy around its long-term growth path. Repeated expansions and contractions over time are known as the business cycle.
Election Cycle – The historical relationship between stock prices and presidential terms.

Performance Objectives

Students will be able to:

- Define and demonstrate understanding of the following terms: cycles, presidential election cycle, and Dow Jones Industrial Average.
- Use a table of data to construct a graph.
- Explain the 4-year presidential election cycle by referring to the performance of the Dow Jones Industrial Average.
- Interpret the meaning of a chart depicting the performance of the Dow Jones Industrial Average during presidential terms.

Subject Area

History, Economics, Business, Social Studies, Math, English/Language Arts

Materials

- Registered teams with The Stock Market Game
- Computers with Internet Access
- Activity sheets

Springboard Activity

Write the word *bicycle* on the chalkboard and ask students to suggest explanations for its derivation. Be sure they understand that the first syllable, *bi*, means two, and the second, *cycle*, means circle or wheel. Ask students to think of similar words, such as tricycle and motorcycle.

Write the word *circle* on the chalkboard and explain that the word cycle refers to something, like a wheel, that has a repeating motion or pattern that goes in a circle. Draw a circle on the chalkboard and write the four seasons as below to illustrate the cycle of seasons. Point out how the cycle demonstrates a pattern that repeats itself.

Write the following definition of a cycle on the chalkboard:

Cycle: a sequence of events that repeats itself over a period of time

For additional information about the etymology of the words bicycle and cycle, check the following websites:

http://www.merriam-webster.com/dictionary
http://www.etymonline.com/index.php?term=bicycle

Activities

Activity 1: Presidential Terms

Explain that the teams are going to become "Market Detectives" or historians in charge of finding out whether there is a relationship or cycle relating to the last 17 presidential elections.

The first step is to identify the names of the presidents during these 17 terms. Have teams complete Activity Sheet 1. Ask the teams to compare their answers to be sure they have filled in the blanks with the correct names.

Activity 2: Does the Dow Ride a Cycle?

Have students carefully read the introduction to Activity Sheet 2 and answer any of their questions. Then have teams complete Activity Sheet 2. Have the teams share and compare their graphs and answers to the two questions.

Activity 3: The Dow Now

This activity offers an opportunity for teams to compare the Dow's performance during the recent 4-year presidential term to its general pattern or cycle since 1941. If you want students to update the table's data to the most recent month available, visit the Yahoo! Finance website before class and calculate the missing data according to the directions in the activity. Before the teams begin the activity in class, review with them the instructions for updating the table.

Have teams complete Activity Sheet 3 and then ask them to share their charts and answers in class.

Assessment

Display the following question:

How would you invest in the first year of a new presidency?

Ask your students to use the Dow graphs they plotted in Activities 2 and 3 to draw conclusions about what strategies they would employ investing during the first term of a new presidency.

To further assist your students display the following companies currently comprise the Dow Jones Industrial Average:

3M Company	Hewlett-Packard Company
Alcoa Incorporated	Home Depot Incorporated
American Express Company	Intel Corporation
American International Group Inc.	International Business Machines
AT&T Incorporated	Johnson & Johnson
Bank of America Corporation	J.P. Morgan Chase & Company
Boeing Company	McDonald's Corporation
Caterpillar Incorporated	Merck & Company, Incorporated

Chevron Corporation
Citigroup Incorporated
Coca-Cola Company
Dupont
Exxon Mobil Corporation
General Electric Company
General Motors Corporation
Microsoft Corporation
Pfizer Incorporated
Procter & Gamble Company
United Technologies Corporation
Verizon Communications Inc.
Wal-Mart Stores Incorporated
Walt Disney Company

Ask your students how many already have shares of these companies in their portfolios? How will the first term of a new presidency affect their decision to buy, sell, or hold the companies they currently own?

If they do not already have shares of the companies that comprise the Dow Jones Industrial Average, how will the first term of a new presidency affect their decision to buy one or more of these companies?

Instruct your students to write an essay using the data available to present their investment strategy and the impact the first year of a new presidency will have on it.

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Activity 1: Presidential Terms

Use a source, such as The Internet Public Library (http://www.ipl.org/div/potus/), to identify the names of the presidents and the dates of their 4-year terms beginning in 1941 and ending in 2008. There are 17 presidential terms during this period. Write the presidents' names and the years of their terms in the table below. The death of a president in 1945 and 1963 and the resignation of another in 1974 require the names of two presidents during the 4-year terms in which these events occurred.

	President's Name	4-Year Term
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		

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Activity 1: Answer Key

	President's Name	4-Year Term
1.	Franklin Delano Roosevelt	1941-1944
2.	Franklin Delano Roosevelt & Harry S. Truman	1945-1948
3.	Harry S. Truman	1949-1952
4.	Dwight David Eisenhower	1953-1956
5.	Dwight David Eisenhower	1957-1960
6.	John Fitzgerald Kennedy & Lyndon Baines Johnson	1961-1964
7.	Lyndon Baines Johnson	1965-1968
8.	Richard Milhous Nixon	1969-1972
9.	Richard Milhous Nixon & Gerald Rudolph Ford	1973-1976
10.	James Earl Carter Jr.	1977-1980
11.	Ronald Wilson Reagan	1981-1984
12.	Ronald Wilson Reagan	1985-1988
13.	George Herbert Walker Bush	1989-1992
14.	William Jefferson Clinton	1993-1996
15.	William Jefferson Clinton	1997-2000
16.	George Walker Bush	2001-2004
17.	George Walker Bush	2005-2008

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Activity Sheet 2: Does the Dow Ride a Cycle?

Since 1941 there have been 17 presidential terms of 4 years each. Each term has a first year, second year, third year, and fourth (election) year. Suppose you wanted to know how the Dow Jones Industrial Average (Dow) performed, on average, during each of these four years for all 17 terms. For example, did it usually average a higher percentage during the first year of the presidents' terms than it did during the second, third, or election year? You can find the answer by using the table below. The table shows the Dow's cumulative monthly growth during the average presidential term since 1941. The last entry of 30% for December of the election year is an illustration. It means the Dow was 30% higher at the end of the average presidential term than it was at the beginning. (See the explanation at the bottom of the table.)

Use the graph on the next page to plot each of the table's 48 points. Connect the points to form a line.

Cumulative Change in the Dow During the Average Presidential Term
1941 - 2008

	Month	Change		Month	Change		Month	Change		Month	Change
First Presidential Year	Jan.	1%	First Presidential Year	Jan.	3%	Third Presidential Year	Jan.	12%	Election Year	Jan.	24%
	Feb.	0%		Feb.	3%		Feb.	13%		Feb.	24%
	March	-1%		March	4%		March	16%		March	25%
	April	1%		April	5%		April	19%		April	26%
	May	2%		May	5%		May	19%		May	26%
	June	1%		June	3%		June	21%		June	27%
	July	3%		July	4%		July	22%		July	26%
	Aug.	1%		Aug.	3%		Aug.	23%		Aug.	27%
	Sept,	1%		Sept,	1%		Sept,	23%		Sept,	27%
	Oct,	1%		Oct,	4%		Oct,	21%		Oct,	27%
	Nov,	2%		Nov,	7%		Nov,	21%		Nov,	29%
	Dec,	3%		Dec,	8%		Dec,	24%		Dec,	30%

The first entry of 1% at the top left of the table is calculated by averaging the monthly percentage changes of the Dow during all Januaries of the first years of all 17 presidential terms. The second entry of 0% was calculated by averaging the monthly percentage change in the Dow for all Februaries of the first years of all presidential terms. This average (-1%) was then added to the 1% average of January to obtain the cumulative change in the Dow of 0% (1% - 1% = 0%). The same procedure was used to calculate the cumulative changes for all successive entries.
Source: Dow Jones Indexes, http://www.djindexes.com/mdsidx/index.cfm?event=showavgIndexData.

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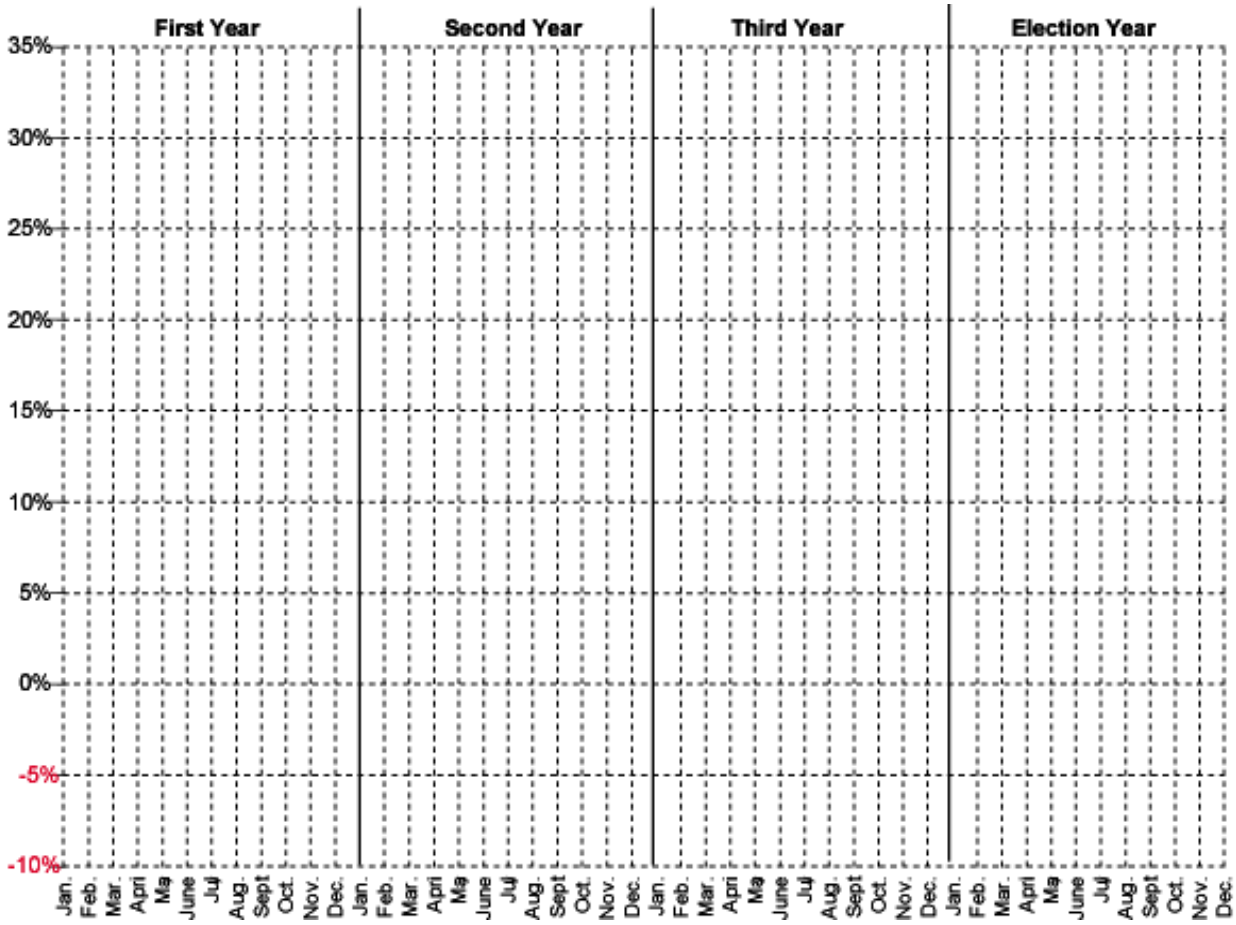

1. What does the steepness of the line measure?

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2. Does the graph show that the Dow has followed a cycle during presidential terms?

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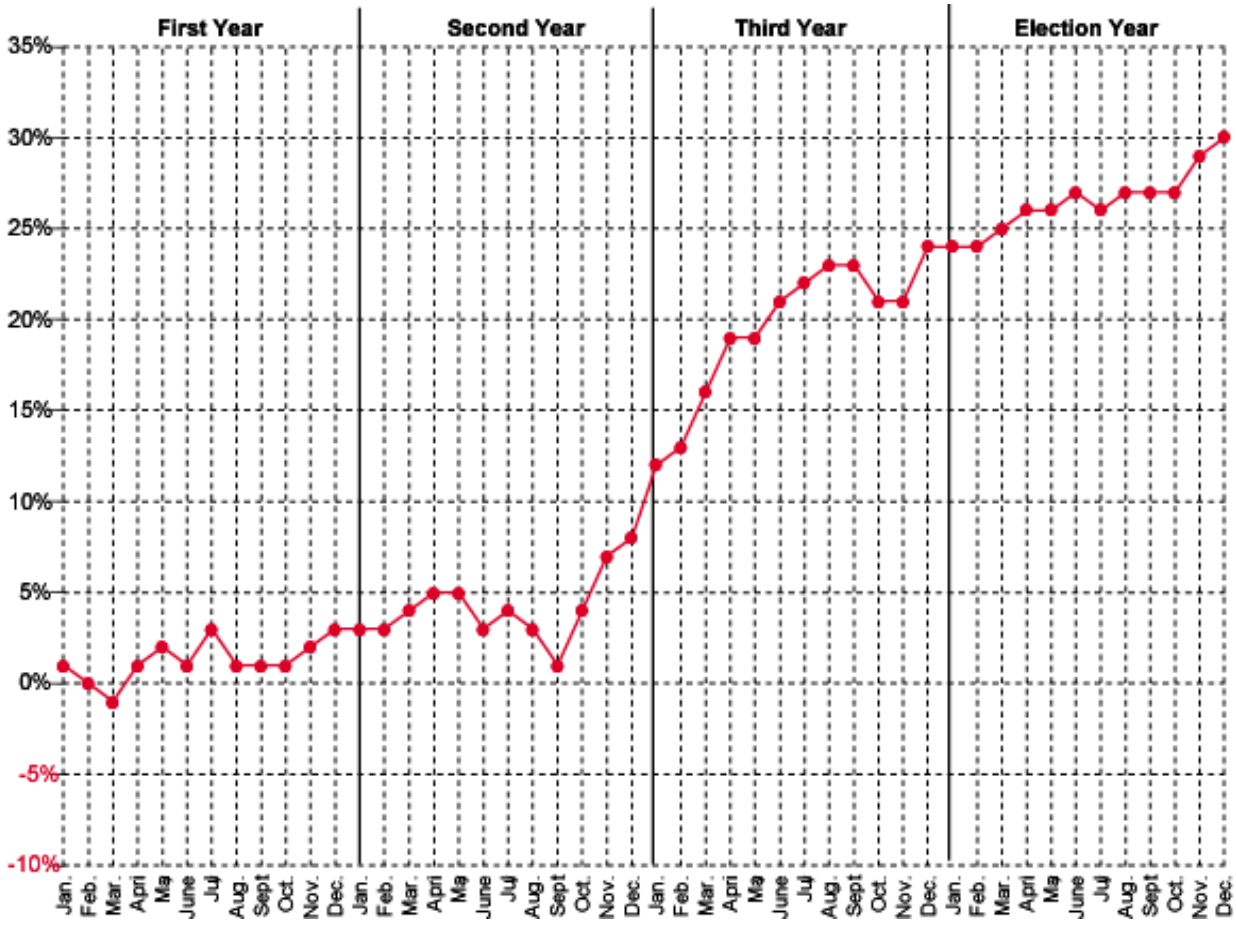
Activity Sheet 2: Answer Key



1. What does the steepness of the line measure?
The steepness of the line indicates how fast the Dow Jones Industrial Average generally grew, on average, during each of the four years of the average presidential term.

2. Does the graph show that the Dow has followed a cycle during presidential terms?
Yes. The Dow typically grew slowest during the first two years of the presidential terms and fastest during the third year. While growth tended to slow in the final election year, it was still greater than during the first two years. The Dow generally repeats this growth pattern during the 17 presidential terms, so it generally followed a cycle during these years.

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Activity Sheet 3: The Dow Now

The Dow Jones Industrial Average has generally followed a presidential cycle since 1941. But has the Dow followed a similar cycle during the current presidential term? You can find the answer by using the table below, which shows the Dow's cumulative monthly growth since the beginning of President Bush's second term in January 2005. If the teacher assigns you the task, update the table by filling in the percentages for the latest months available. The following box explains how.

Use the following web site to obtain the *monthly* number for the Dow Jones Industrial Average. Click on "Dow" in the upper left of the web page and then click on "Historical Prices" on the web page that opens. On the next page that opens, click on "Monthly," and change the dates to include the months from June 2008 to the latest month available. Write down the monthly numbers for the Dow from June 2008 forward (or download them to an Excel spreadsheet). http://finance.yahoo.com/?u

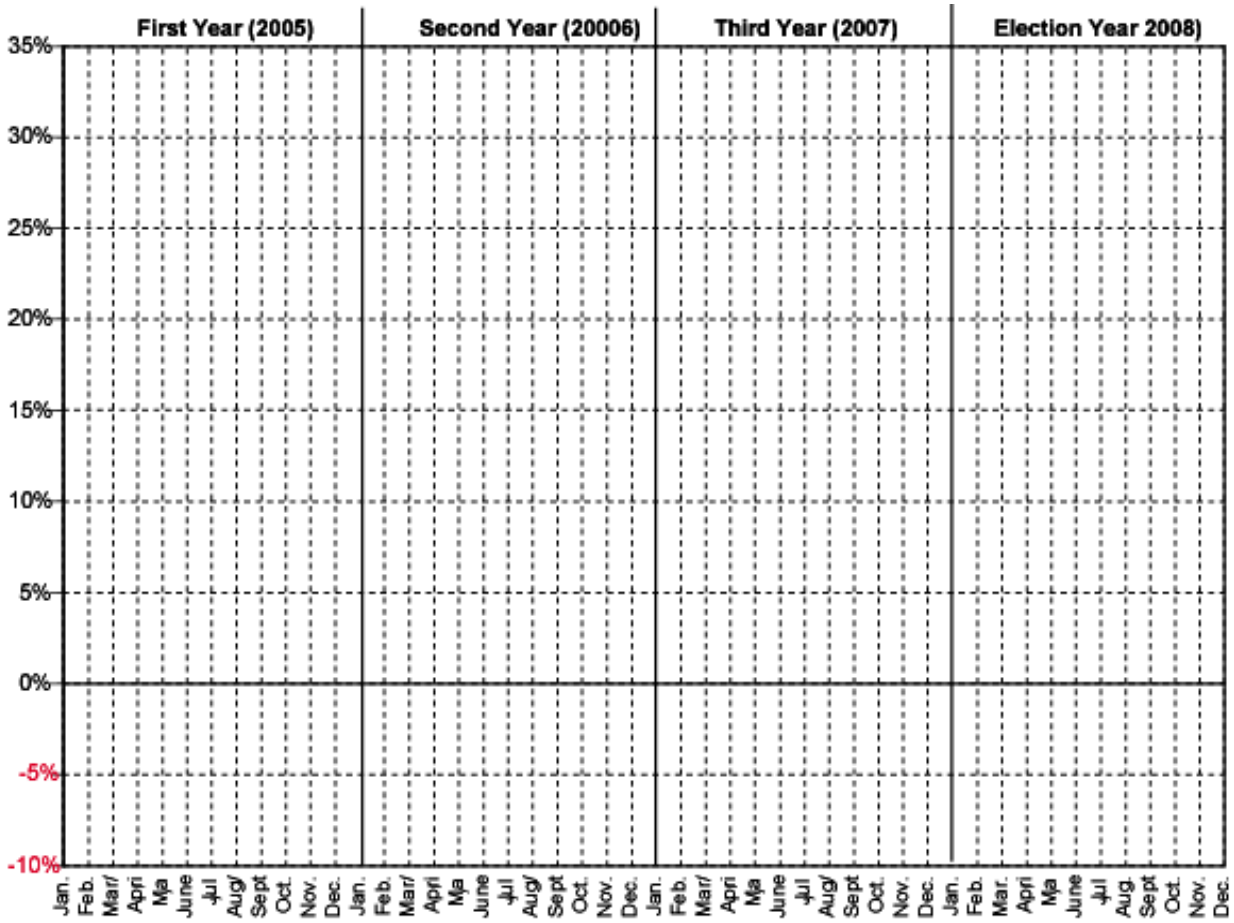
When you have the monthly date for June and some or all of the missing months, calculate the percentage change in the Dow for each month. Add the monthly percentage change for August to the cumulative percentage change of 7.2% shown in the table and insert that sum in the blank for August. This number is the cumulative percentage change since the beginning of the presidential term in January 2005. Follow this procedure for the remaining months for which you have data.

Cumulative Change in the Dow During the Recent Presidential Term
2005 – 2008

	Month	Change		Month	Change		Month	Change		Month	Change
First Presidential Year	Jan.	-2.7%	**First Presidential Year**	Jan.	1.1%	**Third Presidential Year**	Jan.	16.3%	**Election Year**	Jan.	17.1%
	Feb.	-0.1%		Feb.	2.3%		Feb.	13.5%		Feb.	14.1%
	March	-2.5%		March	3.4%		March	14.2%		March	14.1%
	April	-5.5%		April	5.7%		April	19.9%		April	18.6%
	May	-2.8%		May	3.9%		May	24.3%		May	17.2%
	June	-4.6%		June	3.8%		June	22.6%		June	7.0%
	July	-1.1%		July	4.1%		July	21.2%		July	7.2%
	Aug.	-2.6%		Aug.	5.8%		Aug.	22.3%		Aug.	
	Sept,	-1.7%		Sept,	8.4%		Sept,	26.3%		Sept,	
	Oct,	-2.9%		Oct,	11.9%		Oct,	26.6%		Oct,	
	Nov,	0.6%		Nov,	13.1%		Nov,	22.6%		Nov,	
	Dec,	-0.3%		Dec,	15.0%		Dec,	21.8%		Dec,	

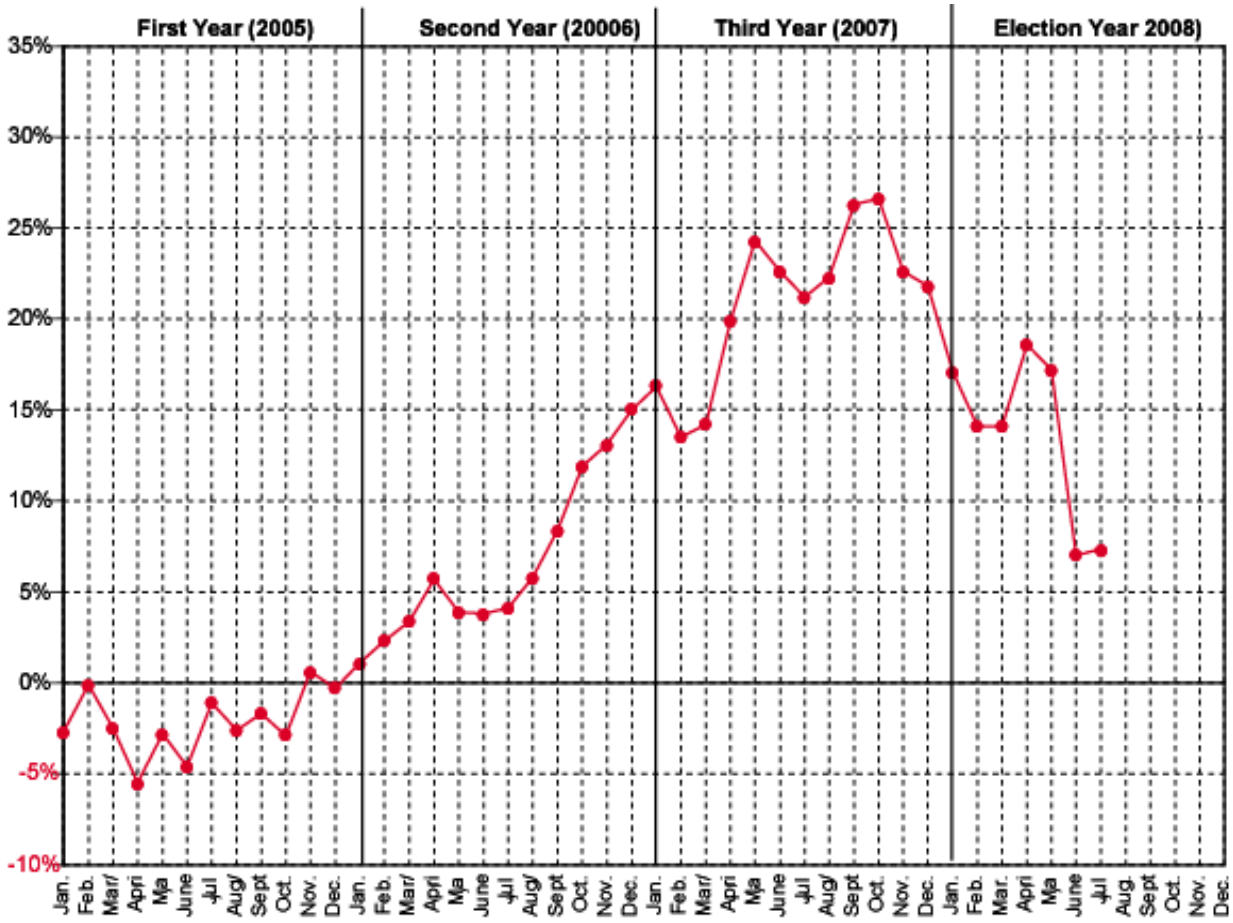
Source: Dow Jones Indexes, http://www.djindexes.com/mdsidx/index.cfm?event=showavgIndexData.

Plot each of the table's points on the graph below and connect the points to form a line.



Does the graph show that the Dow has followed a pattern during the recent presidential term that is similar to the one identified in the previous activity? If not, describe the difference and give possible reasons for it.

Activity Sheet 3: Answer Key



Does the graph show that the Dow has followed a pattern during the recent presidential term that is similar to the one identified in the previous activity? If not, describe the difference and give possible reasons for it.

While the Dow rose more strongly early in the second year, it generally followed the same cycle until the last part of 2003, when it began to fall. This decline is very different from the presidential cycle since 1941 in which the Dow rose during election years. Reasons for the recent decline include a housing-market downturn, declines in the credit market, losses of banks and other financial companies, soaring energy prices, and rising inflation.