What is gross domestic product? A lesson

Lesson by

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Lesson Description

This lesson introduces students to the basic concepts of gross domestic product (GDP). Students will participate in a vocabulary sort activity to assess prior knowledge of GDP and identify the basic components of the expenditure approach to calculating GDP. Using scenarios, students will demonstrate the impact of changes to the components of GDP on an economy's output. Students will complete a strategy reading to identify concepts associated with GDP in the U.S. Bureau of Economic Analysis' (BEA) national income and product accounts quarterly report on GDP for fourth-quarter 2011.

Concepts

Gross domestic product, or GDP
Components of GDP: Expenditure approach

Objectives

Students will be able to:

- Identify the components of GDP
- Demonstrate the impact of changes in expenditures on GDP
- Explore what is and is not included in U.S. GDP
- Interpret the BEA's GDP report

Materials

- Handout 1: One copy, cut apart and taped to index cards
- Handout 2: One copy per student
- Handout 3: One copy per student
- Handout 4: One copy per student
- PowerPoint presentation on GDP
- 26 index cards for vocabulary terms and their matching definitions
- Mobi/SMART or Promethean interactive whiteboard or printed examples of the components of the expenditure approach to calculating GDP (C + I + G + (X-M) = GDP)

Preparation

Before the lesson, make one copy of Handout 1 and cut each word and each definition into strips. Tape the strips onto individual index cards. If you do not have the interactive whiteboard feature, draw or print each letter or letter set—‘**C**,’ ‘**I**,’ ‘**G**,’ ‘**X-M**,’ and ‘**= GDP**’—on individual sheets of paper, preferably cardstock, and laminate for durability.)

Procedures

1. Briefly explain to students that today they will be learning about GDP. As an introduction and a “pre-test” of sorts, check to see how quickly they can match some basic terms related to GDP to their definitions.

2. Pass out the index cards to students. Thirteen of the cards should have ONLY vocabulary words on them and the other 13 should have ONLY definitions (words and definitions appear on Handout 1). If you have an odd number of students, you should take a card. If you have more words than students, use teacher discretion to determine which words to eliminate. Pair students if the class is larger than 26 students.

3. Each student must move around the room to find the match. When students find their matches, have them isolate themselves somewhere in the room so they are removed from the pool of people searching for a match.

4. When everyone has claimed a match, start with one pair and have the word person announce the word (or write it on the board) and the other person read the definition. If the students are correct in their match, they may sit down. If they are not a match, they should remain standing. Continue this process until all matches are made, then give the remaining standing students an opportunity to re-match as many times as necessary until everyone is seated.

5. Review the words on the board and explain how they are related to GDP.

6. Pass out Handout 2 to students. As you present the PowerPoint and conduct the guided discussion of GDP, students should fill in the blanks.

7. Ask students to fill in the blanks before you reveal the answers based on your vocabulary activity. This is not designed as a direct lecture, rather as a tool to engage in a conversation with students about GDP.

8. When you finish the notes section titled “What’s NOT included in GDP,” it is time for the students to practice. Distribute copies of Handout 3.

9. The practice may be done in a variety of ways. If you have a MOBI device, SMART Board, or Promethean, turn the statements into an interactive form for the students. Students may work in teams to complete the examples or they can work individually. Allow five minutes for students to fill in their answers on Handout 3.

10. Call on individual student volunteers to share their answers and explain their reasoning. Clarify any questions about the expenditure approach to calculating GDP, how the components are defined, and the effects of changes to the components on GDP.

11. As a summary activity, give each student a copy of the most recent GDP analysis from the BEA. They can easily find this on www.bea.gov. (Depending on the overall class reading level, you may wish to condense the document down to one page, as on Handout 4. You can use Handout 4 in place of a current summary.) Ask the students to do a 3-2-1 strategy with the reading: underline 3 things they understand in the article now that they know something about GDP; circle 2 things they have questions about or are unsure about; and star 1 thing they think is important. Allow 10 minutes for this activity.

12. Have students share their findings and review the key terms related to GDP as closure.

Handout 1: Vocabulary Activity

GDP	**Currency value of all final goods and services produced within a country's borders**
Real GDP	**Currency value of all final goods and services produced within a country's borders *minus* the effects of inflation**
Inflation	**A general rise in the price level of an economy**
Consumption	**Dollar value of all goods and services purchased by households**
Investment	**Dollar value of all goods and services purchased by business for the purpose of using in their business**
Government Spending	**Dollar value of all goods and services purchased by the various agencies of the United States.**
Net Exports	**Dollar value of all goods and services produced in the United States and shipped to other countries MINUS the value of the goods and services imported from other countries**
Aggregate Demand	**The amount of goods and services ALL buyers in the economy are willing/able to buy at all the possible price levels**
Aggregate Supply	**The amount of goods and services ALL companies are willing to produce at ALL possible price levels**
GDP Per Capita	**Currency value of all final goods and services produced within a country's borders divided by the population**
Imports	**Goods and services produced in other countries, then brought to the United States in exchange for currency**
Exports	**Goods and services produced in the United States, then sent to other countries in exchange for currency**
Standard of Living	**Intangible concept that seeks to represent a country's level of economic prosperity. Correlates with GDP growth**

Handout 2: Guided Discussion

What is GDP?

- Currency value of all ______________ goods and services produced __________________ in a given period
- Total income of a nation
- Measure of nation's economic well-being
- Measure of a nation's _______________________ from one period to the next
- Most commonly calculated via _____________________

Four components of GDP expenditures

- **Consumption**: $ amount of goods and services purchased by___________________
  - ONLY counts goods produced in the ______________
  - Examples: ____________________________________
- **Investment**: $ amount spent by business on productive resources and purchases of __________ by consumers!
  - New machines, new factories, research
  - ______________________________ also counts
- **Government**: $ amount spent _____________________provided goods and services
  - Example: ____
- **Net exports** = _________________________________

  Exports: ____

  Imports:____

GDP = _____ + _____ + _____ + _____

What's NOT included in GDP?

- ☐ Intermediate goods
- ☐ Used goods
- ☐ Underground production (black market)
- ☐ Financial transactions
- ☐ Household production
- ☐ Transfer payments

What GDP does not tell us:

- ☐ Does not measure ____________________
- ☐ Does not measure non-monetary output or transactions (e.g., barter, household activities)
- ☐ Does not take into account desirable externalities, such as _________________ ___________________________________
- ☐ Does not measure social well-being
- ☐ Correlates to standard of living but is _________________________________

Handout 3: GDP Practice

Scenario	**Component of GDP affected: C, I, G, X-M, or NC-not counted**	**Effect on GDP (increase, decrease, no change)**
1. A farmer purchases a new tractor.		
2. Businesses increase their current inventories.		
3. You spend $7 to attend a movie.		
4. Worried about consumer confidence, Ford purchases less sheet metal for cars.		
5. A retired man cashes his social security check from the government.		
6. A French company purchases a one-year membership to PartyPeople.com, a U.S.-based		
7. A person pays $450 a month to rent an apartment.		
8. Worried about a recession, people begin saving more money.		
9. The U.S. government hires 10 Chinese-language experts from China to train U.S. workers.		
10. Government closes school for the month of March.		

Handout 3: GDP Practice—Answer Key

Scenario	**Component of GDP affected: C, I, G, X-M, or NC-not counted**	**Effect on GDP (increase, decrease, no change)**
1. A farmer purchases a new tractor.	I	Increase
2. Businesses increase their current inventories.	I	Increase
3. You spend $7 to attend a movie.	C	Increase
4. Worried about consumer confidence, Ford purchases less sheet metal for cars.	NC	No change
5. A retired man cashes his social security check from the government.	NC	No change
6. A French company purchases a one-year membership to PartyPeople.com, a U.S.-based	X-M	Increase
7. A person pays $450 a month to rent an apartment.	C	Increase
8. Worried about a recession, people begin saving more money.	C	Decrease
9. The U.S. government hires 10 Chinese-language experts from China to train U.S. workers.	G	Decrease
10. Government closes school for the month of March.	G	Decrease

Handout 4: U.S. Bureau of Economic Analysis

National Income and Product Accounts

Gross Domestic Product, 4th quarter 2011 and annual 2011 (second estimate)

Real gross domestic product—the output of goods and services produced by labor and property located in the United States—increased at an annual rate of 3 percent in the fourth quarter of 2011—that is, it grew at that rate from the third quarter to the fourth quarter—according to the second, or revised, estimate that the Bureau of Economic Analysis released. In the third quarter, real GDP increased 1.8 percent…..

The increase in real GDP in the fourth quarter reflected positive contributions from private inventory investment; personal consumption expenditures, or PCE; exports; nonresidential fixed investment; and residential fixed investment that were partly offset by negative contributions from federal government spending and state and local government spending. Imports, which are a subtraction in the calculation of GDP, increased.

Final sales of computers added 0.12 percentage points to the fourth-quarter change in real GDP after adding 0.22 percentage points to the third-quarter change. Motor vehicle output added 0.43 percentage points to the fourth-quarter change in real GDP after adding 0.12 percentage points to the third-quarter change.

Real PCE increased 2.1 percent in the fourth quarter, compared with an increase of 1.7 percent in the third. Durable goods increased 15.3 percent, compared with an increase of 5.7 percent. Nondurable goods increased 0.4 percent, in contrast to a decrease of 0.5 percent. Services increased 0.7 percent, compared with an increase of 1.9 percent.

Real nonresidential fixed investment increased 2.8 percent, compared with an increase of 15.7 percent. Nonresidential structures decreased 2.6 percent, in contrast to an increase of 14.4 percent.

Equipment and software increased 4.8 percent, compared with an increase of 16.2 percent. Real residential fixed investment increased 11.5 percent, compared with an increase of 1.3 percent.

Real exports of goods and services increased 4.3 percent in the fourth quarter, compared with an increase of 4.7 percent in the third. Real imports of goods and services increased 3.8 percent, compared with an increase of 1.2 percent.

Real federal government consumption expenditures and gross investment decreased 6.9 percent in the fourth quarter, in contrast to an increase of 2.1 percent in the third. National defense decreased 12.1 percent, in contrast to an increase of 5.0 percent. Nondefense increased 4.4 percent, in contrast to a decrease of 3.8 percent. Real state and local government consumption expenditures and gross investment decreased 2.5 percent, compared with a decrease of 1.6 percent.