Tools for Teaching with FRED

Everything Including the Kitchen Sink— Progressive Reforms and Economic Wealth in the 1920s

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AP U.S. History Curriculum Alignment (see page 14)

Lesson Description

Students learn that economic forces have an impact beyond the financial world. First, they learn that Progressive Era public health reforms inspired a commercial response to the growing demand for sanitation through the rapid increase in bathroom-fixture production. Students then use FRED®, economic data from Federal Reserve Bank of St. Louis, to analyze how bathroom-fixture production changed throughout the 1920s. They examine primary documents—1920s advertising—to see how companies fused the Progressive Era with the new consumer culture. Finally, students complete the lesson by responding to AP U.S. History-style short-answer questions.

Grade Level

10-12

Economic Concepts

Area graph

Consumer goods

Consumerism

Percent change

Percent change from a year ago

Recession

Stacking

econlowdown



Objectives

Students will

- identify factors affecting bathroom-fixture production after WWI,
- describe the economic impact those factors had in the 1920s,
- use FRED to analyze and manipulate primary economic data to develop an historical argument,
- examine primary advertising documents to show how economic phenomenon affected popular culture and attitudes about women, and
- develop AP test-taking skills by writing responses to AP short-answer questions.

Time Required

Approximately two 50-minute class periods

Materials

- Online access for the class to view the FRED® graph at https://fred.stlouisfed.org/graph/?g=2bdX
- "Flush Toilets and the Invention of the Nineteenth-Century Bathroom" in The Enduring Vision (Fifth Edition) by Paul S. Boyer at http://college.cengage.com/ history/us/boyer/enduring_vision/5e/students/techcult/ch18.html
- Visuals 1, 2, and 3
- Handout 1, one copy for each student
- 10 FRED Activities in 10 Minutes (optional) at https://federalreserveeducation.org/resources/economics/gdp/10-fred-graph-activities-in-10-minutes

Preparation

Assign for reading "Flush Toilets and the Invention of the Nineteenth-Century Bathroom" by Paul S. Boyer (as noted in the Materials section).

Procedure

1. Introduce the lesson by saying there are a number of ways to measure the economic prosperity of the 1920s. Explain that the purpose of this lesson is not only to illustrate how production increased during the decade but also how it affected the lives of average American consumers. Something as simple as bathroom fixtures—how they're produced, advertised, and used—can say a lot about the state of the country.



2. Discuss the following questions based on reading "Flush Toilets & the Invention of the Nineteenth-Century Bathroom" by Paul S. Boyer.

Secondary Source Interpretation Questions

- What factors provided the momentum to encourage Americans to adopt indoor plumbing in the early-twentieth century? (Disease prevention, medical science discovering root causes of diseases, new laws, and advertising)
- What examples of government reforms pushed by Progressives encouraged private home owners to install indoor plumbing? (Passage of new metropolitan health laws and creation of state boards of health)
- In order to have household indoor plumbing, what reforms had to be made at the municipal level first? (*Municipal water and sewage systems*)
- What social, economic, or other incentives were there for a homeowner to install
 an indoor bathroom? (Economic: increased home value; social: increased social
 status and practicality—comfort, safety, ease of use)
- 3. Display Visuals 1, 2, and 3, Standard Plumbing advertisements, one at a time for students to review and then discuss the following:

Advertising Interpretation Questions

- What strategies were employed to sell indoor plumbing to Americans in the 1920s? (Answers will vary but may include family happiness, help for women to look attractive, improved status [e.g., through the use of the tag line "a wealth of health"], and hygiene.)
- How might the tagline "Add a wealth of health to the home" be connected less to 1920s consumerism and more to the Progressive Era? (*The purchase of these products are most beneficial for the health of your family rather than for any superficial reason.*)
- 4. Display the graph at myf.red/g/6tOB (Figure 1). Note that it is from FRED®, the online economic database of the Federal Reserve Bank of St. Louis. Students with Internet access can open the graph by entering the address into their browser bar.



Figure 1



5. Explain that the graph shows total shipments (an indicator of production) of three household indoor plumbing products—bathtubs, kitchen sinks, and lavatories (toilets) between April 1917 and December 1931. The units on the *y*-axis are thousands of pieces shipped. The vertical gray bars indicate periods of **recession**—a sustained contraction in the nation's economic output. Based upon the information presented in this FRED graph, discuss the following:

Data Interpretation Questions

- Why would shipments of bathroom fixtures suddenly drop in late 1917? (WWI wartime production affected private industry's output of consumer goods.)
- What might explain the dip in shipments of bathroom fixtures annually from November to March? (Home construction and renovation slow during winter months.)
- What are practical and economic reasons bathtub shipments generally lagged behind shipments of sinks and lavatories? (Bathtubs are relatively larger and more costly than their counterparts to purchase, install, and maintain, so they were not included in some homes. Because of limited space in homes, some homeowners installed sinks and toilets only.)
- 6. Optional: If students struggle to interpret data confidently, consider having them practice with "10 FRED Activities in 10 Minutes" at https://federalreserveeducation.org/resources/economics/gdp/10-fred-graph-activities-in-10-minutes
- 7. Convert the displayed FRED graph (Figure 1) as follows:
 - Click the "EDIT GRAPH" button at the top right of the graph.
 - In the panel that opens, click the "FORMAT" tab (Figure 2A).
 - Change "Graph type" from "Line" to "Area" in the dropdown menu (Figure 2B).
 - Change "Stacking" from "None" to "Normal" in the dropdown menu (Figure 2C).

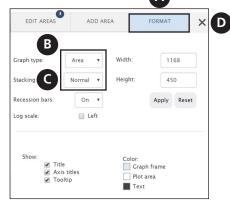


Figure 2

- Click the "X" at the top right of the panel to close it (Figure 2D).
- 8. Discuss the following:
 - How has the visual display of the information changed (Figure 3)? (Quantities are accumulated ["stacked"] by shading the areas under the values.)
 - Does this visual change make it easier or more difficult to formulate conclusions? (Answers will vary.)



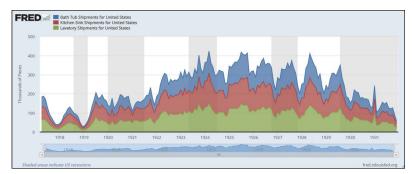


Figure 3

- 9. Revise the graph again as follows:
 - Click the "EDIT GRAPH" button at the top right of the graph.
 - Click the "FORMAT" tab.
 - At "Graph type," change to "Line" from the drop-down menu.
 - At "Stacking," change to "None" from the drop-down menu.

You will now manipulate the units for all three data series:

- Click "EDIT LINES" and select "EDIT LINE 1" (Figure 4A).
- Change "Units" from "Thousands of Pieces" to "Change from Year Ago, Thousands of Pieces" in the drop-down menu (Figure 4B).



Figure 4

- Click the "Copy to all" button (Figure 4C) to change the units for all three data series.
- Close the panel.
- 10. Invite the students to examine the modified graph (Figure 5), compare it with the stacked graph (Figure 3), and then discuss the following:
 - How do the graphs differ? (The line graph [Figure 5] starts in 1918, while the stacked graph [Figure 3] starts in 1917. Also, the line graph uses negative numbers on its vertical axis to show declines when compared with the same month from the prior year. The stacked graph also shows declines, but the totals are always positive.)
 - How has the manipulation of units changed how you might interpret the data? (Stacking may make it easier to see how the quantities of the three items tend to rise and fall together; stacking also reveals peak months for combined totals in 1924 and 1925. Figure 5 shows how the changes in the quantities of the goods rise and fall together by comparing the totals to those from 12 months prior.)



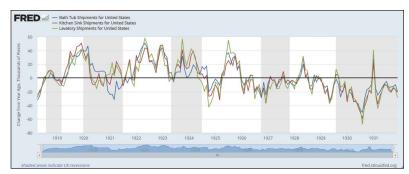


Figure 5

Close the panel.

- 11. Modify the units for all three data sets one more time as follows:
 - Click the "EDIT GRAPH" button and then select the "EDIT LINES" tab (Figure 6A) and "EDIT LINE 1" (Figure 6B)
 - Change "Units" to "Percent Change from Year Ago" in the drop-down menu (Figure 6C).
 - Click the "Copy to all" button (Figure 6D).
 - FRED Graph

 TY | SY | 10Y | Max | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01 | 1918-04-01

Figure 6

12. Discuss the following:

• Was the bathroom fixture industry recession proof during the 1920s? Use evidence from the graphs to support your answer. (Answers will vary, but students may observe that the stacked area graph [Figure 3] shows that producers shipped increasing quantities during several recessionary months of 1920 as well as during 1923 and 1924. At the same time, the percent-change-from-a-year-ago graph [Figure 6] depicts a steep drop in the rate of shipments during the early months



of 1920 and slower growth or declines during subsequent recessions. The change in shipments from the percent-year-ago graph [Figure 5] also displays a number of negative values during recessions.)

- Which graph of the several viewed best supports the argument that bathroom fixtures had an enormous positive economic impact on the American economy in the 1920s? Why? Use evidence from the graphs to support your answer. (Answers will vary. Students might say the stacked area graph best highlights the decadelong sales growth or that the percent- change-from-a-year-ago graph downplays the high-sales totals of the 1920s.)
- 13. Distribute a copy of Handout 1: Everything Including the Kitchen Sink: Progressive Reforms and Economic Wealth in the 1920s to each student. Instruct them to complete the short-answer questions. A scoring rubric is provided.

AP Short-Answer Questions—Rubric

Guidelines (0-3 points)

Score 3 Points: Response accomplishes all three tasks set by the question.

Score 2 Points: Response accomplishes two of the tasks set by the question.

Score 1 Points: Response accomplishes one of the tasks set by the question.

Score 0: Response accomplishes none of the tasks set by the question.

Scoring Notes

- (a) Briefly explain why one of the following best explains the impact of bathroom-fixture shipments in the 1920s:
 - The result of Progressive Era reforms in the early 20th century
 - The post-World War I period of economic affluence in the United States
 - The rise of modern advertising after World War I

Provides one explanation of how Progressive Era reforms, post-WWI economic affluence, or modern advertising best explain the increase of bathroom fixture shipments in the 1920s

- **Progressive Reforms**
 - Desire to improve public health
 - The push by cities to eliminate disease and pollution through utilities development
 - Scientific discoveries of bacteria, causes of medical issues
- Post-WWI Economic Affluence
 - Rise of disposable income



- Transition of wartime economy back to peacetime
- Increase in new-home construction with modern amenities
- Modern Advertising
 - Connected hygiene with wealth
 - Proliferation of mass media (e.g., magazines and newspapers) selling consumer goods
 - Satisfied the new public desire to acquire status symbols

NOTE: Merely restating the question (e.g., advertising had a great influence on bathroom shipments, reforms influenced bathroom sales) or noting a vague generality (e.g., people had more money than in the past) does not earn a point. Students must include an explanation with the answer.

(b) Provide one example that supports your explanation in (a).

Explains one specific example that supports the assertion in part (a).

- Progressive Reforms
 - Municipal water and sewer systems
 - Porcelain bathroom fixtures with gas traps
 - Rise of cast iron indoor plumbing pipes
 - A 60 percent increase in urban dwellings with indoor plumbing
- Post-WWI Economic Affluence
 - An approximate fivefold increase in shipments of fixtures between 1920 and 1925
 - The implied long-term economic benefits of retrofitting existing structures or building new structures with indoor plumbing (bathrooms)
 - Based on analysis of the graph, that bathroom fixture shipments appear to have been relatively recession proof, although rates of growth slowed during some months
- Modern Advertising
 - Used scientific findings to sell hygiene to the public
 - Connected cleanliness with upper-class respectability
 - Illustrated modern families and women using bathroom fixtures
 - Used the phrase "a wealth of health" to promote indoor plumbing as a status symbol

NOTE: Example MUST connect back or refer to explanation in (a) in some way. Merely listing an example without providing context cannot be awarded a point. Cause and effect must be noted. Also, these scoring notes are not exhaustive of



all the examples that students may create or cite. Students may cite an example that is not in the scoring notes but still satisfies the requirements.

(c) Provide specific historical evidence that explains why *one* of the other options is less convincing than the option you selected in (a).

Explains how one of the other options provided in (a) is less convincing than the one chosen.

 As long as the student cites a specific example and explains effectively its causation into one of three categories (reforms, affluence or advertising), a point should be awarded.



Handout 1: Everything Including the Kitchen Sink—Progressive Reforms and Economic Wealth in the 1920s

AP SHORT-ANSWER QUESTIONS

Directions: Answer (a), (b), and (c).

- (a) Briefly explain why *one* of the following best explains the impact of bathroom fixture shipments in the 1920s:
 - The result of Progressive Era reforms in the early 20th century
 - The post-World War I period of economic affluence in the United States
 - The rise of modern advertising after World War I
- (b) Provide *one* example that supports your explanation in (a).
- (c) Provide specific historical evidence that explains why *one* of the other options is less convincing than the option you selected in (a).



Visual 1: Standard Plumbing Advertisement 1



Image reproduced with permission of American Standard Brands.



Visual 2: Standard Plumbing Advertisement 2



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Visual 3: Standard Plumbing Advertisement 3



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AP U.S. History Curriculum Alignment

Work, Exchange, and Technology

WXT-3.0 Analyze how technological innovation has affected economic development and society.

Culture and Society

CUL-2.0 Explain how artistic, philosophical, and scientific ideas have developed and shaped society and institutions.

Period 1890-1945

- **Key Concept 7.1:** Growth expanded opportunity, while economic instability led to new efforts to reform U.S. society and its economic system.
 - I. The United States continued its transition from a rural, agricultural economy to an urban, industrial economy led by large companies.
 - A) New technologies and manufacturing techniques helped focus the U.S. economy on the production of consumer goods, contributing to improved standards of living, greater personal mobility, and better communications systems.
- **Key Concept 7.2:** Innovations in communications and technology contributed to the growth of mass culture, while significant changes occurred in internal and international migration patterns
 - Popular culture grew in influence in U.S. society, even as debates increased over the effects of culture on public values, morals, and American national identity.
 - A) New forms of mass media, such as radio and cinema, contributed to the spread of national culture as well as greater awareness of regional cultures.