

America's Infrastructure: Miller Center National Discussion and Debate Series

Background, Activities and Critical Analysis
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Subject(s)

Civics, Economics, Social Studies, Science

Estimated Time

Variable

Grade Level

Grades 7-12

Objective

Students will:

1. Define infrastructure
2. Debate the potential effect of increased infrastructure spending
3. Research current infrastructure challenges and proposed solutions
4. Design a sustainable infrastructure plan for their community

Overview

This lesson introduces students to the topic of infrastructure in preparation for the Miller Center debate. Students will define infrastructure, view a PBS report on infrastructure, research infrastructure challenges and proposed solutions including sustainable infrastructure proposals, and debate the effectiveness of using increased infrastructure spending to stimulate the economy. Several lesson activities can stand alone as introductions to the topic of infrastructure or the lesson can be used in its entirety.

Procedure

1. Ask students to define infrastructure. Write the class definition on the board. Infrastructure, the basic organizational structures needed for the successful operation of society, includes roads, public transit, bridges, railroads, water and sewer systems, levees, power grids, telecommunications and ports.

2. Post the following quote from President Barack Obama:

"To build an economy that can lead this future, we will begin to rebuild America. Yes, we'll put people to work repairing crumbling roads, bridges, and schools by eliminating the backlog of well-planned, worthy and needed infrastructure projects. But we'll also do more to retrofit America for a global economy. That means updating the way we get our electricity by starting to build a new smart grid that will save us money, protect our power sources from blackout or attack, and deliver clean, alternative forms of energy to every corner of our nation. It means expanding broadband lines across America, so that a

small business in a rural town can connect and compete with their counterparts anywhere in the world. And it means investing in the science, research, and technology that will lead to new medical breakthroughs, new discoveries, and entire new industries."

(<http://www.whitehouse.gov/agenda/economy/>)

3. Ask students to summarize President Obama's plan for the economy as quoted above. Explain that President Obama and some economists believe that funding "shovel-ready" infrastructure projects will revitalize America's struggling economy. Ask students whether they agree that spending on infrastructure will revitalize the economy. Why or why not? Should spending on infrastructure be a national priority? Why or why not? (Students will have the opportunity to consider these questions again towards the end of class).

4. Listen to Ray Suarez introduce the [PBS NewsHour Series on Infrastructure](#) (5 min.). Then, answer the following discussion questions as a class.

- a. What current infrastructure problems does Suarez mention in this interview?
- b. Why does Suarez say that cities and states put off repairing infrastructure?
- c. Who do you think should pay for infrastructure, especially in times of economic recession?
- d. Currently, what is the primary source of revenue for infrastructure spending? Why is the revenue decreasing?
- e. What problems arise when towns continue to delay repairing infrastructure?
- f. Why does Suarez think that infrastructure should be debated just as much as "the military and schools and the price of gas"? Do you agree? Explain.

5. Arrange students in small groups and assign each group one of the following areas to research on the [PBS Blueprint America website](#): Commuting & Transit, Growth & Development, Bridges & Roads, Water, Power & Energy, or Shipping & Cargo.

Distribute [Handout 1](#). When all groups are finished researching, ask group representatives to share their research with the class.

6. Watch the PBS report "[Infrastructure Spending May Be Key to Boosting Economy](#)" (8 minutes). Discuss the following questions as a class:

- a. When was the last major federal spending on infrastructure? What was the result of that spending?
- b. What is the current state of the Pulaski Skyway? How much does just painting the bridge cost?
- c. What concerns economist Ed Yardeni about increased government spending on "shovel-ready" projects?
- d. What is a "shovel-ready" project? What are some of the "shovel-ready" projects mentioned in this segment? Yardeni is concerned that in today's service economy there aren't enough "shovel-ready" workers to complete the infrastructure projects. Do you agree? Explain.
- e. Do you agree that spending money to improve infrastructure is the way

out of the current economic rut? Why or why not? Use examples from the report to support your answer.

7. Divide students into small groups. Distribute Handout 2. Allow students ten to fifteen minutes to complete the Budget Committee Role Play. When all groups are finished, ask groups to share their budget plans. How much money did each group allocate for infrastructure (have groups tally the public works and transportation categories)? From what areas did they have to cut funding? What other thoughts or questions do students have?

8. As a class, brainstorm responses to the following question and record thoughts on the board: What are the infrastructure needs in your community? Ex. Crumbling schools, traffic congestion, the need for a commuter train, the need for alternative energy, etc. Ask students to grade the current state of your community's infrastructure and explain their reasoning. If you have more time, read and discuss the American Society of Civil Engineers (ASCE) Infrastructure Report Card for your state. Compare student grades with ASCE grades.

9. Divide students into the same small groups. Each group will choose one community need from the list on the board and will develop a plan to address the need. Distribute one copy of Handout 3 to each group. When all groups are finished, group representatives will present ideas to the class. If you have more time, discuss how all the groups ideas could be combined to create a long-term comprehensive sustainable infrastructure plan for your community.

10. Submit suggestions to the Miller Center website and/or to www.whitehouse.gov. Also, submit suggestions to your community's city planning commission.

Extension Activities

1. Host speaker from your community's planning commission to discuss the city's current and long-term infrastructure plans. How do the current plans differ from the student's ideal infrastructure plans? What are the challenges to achieving the city's infrastructure plans? How can students get involved?

2. Host an economist from a local university or business to discuss the pros and cons of boosting the economy through infrastructure spending.

3. Host a student debate on the Miller Center Infrastructure Resolution prior to the Miller Center debates. For ideas about organizing a student debate, refer to the IDEA website.

4. After the Miller Center debate, ask students to review the debate. What points did the debaters make that the students had not considered? What points in the debate did they find to be the most compelling or convincing and why? What points would students like to research further?

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Handout One: Overview of Infrastructure Issues – Challenges and Solutions

Directions: Research your group's assigned topic (Community & Transit, Growth & Development, Bridges & Roads, Water, Power & Energy, or Shipping & Cargo) on the PBS Blueprint America website. Assign each group member to answer one of the articles and then summarize the article for the group. As a group, arrange the information you gathered under the following headings. Elect a group representative to report on your issue to the class.

Overview of Issue:

Current Challenges:

Possible Solutions:

Notable Quotes and Interesting Facts:

Thoughts and Questions:

Handout Two: Infrastructure Spending Role Play

Directions: Read the following scenario and complete the questions as a group.

Scenario:

You are on the Municipal Budgetary Committee and must determine the most effective way to allocate your \$50 million dollar annual budget. Discuss how much money to spend in each of the following categories, and be prepared to defend your choice! How might cutting spending in one area affect the success of another program area? Consider the particular needs in your community as you complete this exercise.

Budget Categories:

Administrative (Government Salaries) –

City Maintenance (Landscaping, Tree Trimming) –

Community Services (Parks & Recreation, Library) –

Development Services (City Planning, Building Inspection) –

Health and Social Services –

Public Safety (Fire & Police) -

Public Works (Water & Sewer Systems) –

Schools (K-12 & Universities) -

Transportation (Roads & Bridges) -

Handout Three: Community Infrastructure Proposal

Directions:

Explain the infrastructure problem in your community using as much detail as possible. Then, brainstorm possible causes contributing to the problem. Finally, develop a list of possible solutions to the problem, taking into consideration cost and sustainability. Elect a group representative to share the group's ideas with the class.

Problem:

Ex. Area highways are congested during peak traffic times, extending average commute times to one hour each way.

Cause(s):

Ex. Population in outlying suburbs continues to rise, contributing to long commutes on area highways as people drive increasing distances for work, goods, and services.

Proposed Solutions:

(Put a star beside sustainable suggestions)

*Ex. *Change land use laws to encourage residential urban development and discourage strip malls and subdivisions. *Provide incentives for commuters who carpool*

Infrastructure Spending May be Key to Boosting Economy

Some economists believe increasing government spending on infrastructure is the only way out of the nation's economic crisis. Paul Solman reports on how infrastructure spending may be a crucial way to resuscitate the economy.



GWEN IFILL: Now part two of the jobs story. What will that money spent on new infrastructure projects buy? And will the government get enough bang for its buck? Our economics correspondent, Paul Solman, has been looking into those questions.

PAUL SOLMAN: The pockmarked roads of New Jersey, one small argument for why America desperately needs a massive infrastructure makeover.

ROBERT FRANK, economist: One-hundred-and-twenty-dollars-a-year damage per year per vehicle.

The potholes in the roads do more damage to vehicles each year than it would cost to fix them. That's just ridiculous that we don't fix them.

PAUL SOLMAN: But the main reason economist Bob Frank think we should splurge on infrastructure is that government spending is the road to economic recovery and the only way out of the hole we're all in.

ROBERT FRANK: We're looking at an unprecedented collapse in consumer spending. The firms aren't spending.

There's nobody who wants to buy the stuff they're selling. So, what that means is that there is a huge demand shortfall that we're looking at, maybe half-a-trillion dollars, maybe even more than that.

If the government doesn't spend massively more in the next year, we're in for a terrible, terrible downturn.

PRESIDENT ELECT BARACK OBAMA: Good morning.

PAUL SOLMAN: Our incoming president would seem to agree.

BARACK OBAMA: But we need action, and action now. That's why I have asked my economic team to develop an economic recovery plan for both Wall Street and Main Street that will help save or create at least 2.5 million jobs.

PAUL SOLMAN: By splurging on, among other things, infrastructure. It last happened in the 1930s, when, among the bridges, dams, tunnels and the like, this terminal at New York's La Guardia Airport was built and adorned.

ROBERT FRANK: Spending projects had clearly positive effects on employment. Many people were employed who wouldn't have been.

And the main lesson that's come out of the '30s is that, when FDR tried to balance the budget in '36 and '37, that created another recession, and that the true end to the Great Depression was when government demand really spiked upwards from spending during World War II.

That's what we need now, is a massive infusion of government spending. To the extent it didn't work in the '30s, it was because there wasn't enough of it.

Saving money, increasing security

PAUL SOLMAN: What could be more obvious, asks Bob Frank?

The economy needs spending. The infrastructure needs fixing, like New Jersey's Pulaski Skyway, a three-and-a-half-mile elevated road connecting Newark and Jersey City built in the 1930s.

BRIAN STRIZKI, state transportation engineer, New Jersey: This bridge is the same type of bridge that collapsed, the I-35 bridge in Minneapolis.

We're currently inspecting this bridge almost on a continuous basis. State transportation engineer Brian Strizki.

PAUL SOLMAN: Is it safe to drive?

BRIAN STRIZKI: Yes, it is safe to drive up there. But that's one of the areas that really isn't bad. We have other areas that are in much more urgent need of repair. There's been many, many years of neglect.

And, unfortunately, that has caused rusting of the steel, deterioration of the concrete, deterioration of the deck and other elements. To paint it is about \$350 million.

PAUL SOLMAN: Forgive my asking, but how can painting a bridge cost \$350 million?

BRIAN STRIZKI: It's all lead-based paint that is on the structure. So, we have to encapsulate the entire structure when we remove the paint.

PAUL SOLMAN: The point is, says Strizki, New Jersey could start painting right now, same for many other projects in this state alone, says Gov. Jon Corzine.

GOV. JON CORZINE, D-N.J.: One of the most important projects of national significance, right here in New York, New Jersey, which is build a new mass transit tunnel under the Hudson River, we have got the environmental studies done.

We have got the engineering plans. All we need is the money to -- and the trigger pull on go-ahead.

Making the most of public services

PAUL SOLMAN: And it's not just transportation projects that are -- quote -- "shovel-ready," says Kris Kolluri, New Jersey's former transportation boss, now head of school development.

KRIS KOLLURI, executive officer, New Jersey Schools Development Authority: In New Jersey alone, the aggregate cost of fixing schools is close to \$25 billion.

This school, it's a 110-old structure, which has water infiltration problems. There's bathrooms only in the basement. The cafeteria and the gymnasium are -- are the same location.

PAUL SOLMAN: Closets as classrooms, the library carved out of the auditorium.

WOMAN: This here is our faculty bathroom.

KRIS KOLLURI: So, by every objective measure, this is not a -- an appropriate or safe or healthy environment for our kids to be learning.

PAUL SOLMAN: PS-20 is one of 155 Jersey schools more than 100 years old. This one is slated to be replaced, just as soon as they clean up the new site, laced with chromium toxic waste, another shovel-ready project.

A few miles away, however, on the pitted sidewalks of New York, economist Ed Yardeni.

ED YARDENI, economist: Do we know that there is a whole list of shovel-ready projects? We're going to take the word of a lot of state governments that are saying, if you want the money, you got to have something that's shovel-ready.

You don't think they are going to come up with a lot of projects that suddenly, out of nowhere, are ready to go?

We're going to build a lot of make-work projects that nobody really needs, a lot of roads and bridges to nowhere.

PAUL SOLMAN: Moreover, says Yardeni, with the wastefulness comes corruption. Plus, unions will fight to keep non-union members out. Nearby construction worker Mike Driscoll.

MIKE DRISCOLL, construction worker: You can't just walk in off the street and do something to get something done. You actually have to go through the unions.

PAUL SOLMAN: And...

MIKE DRISCOLL: And everything is done through the unions, in terms of -- politically, in terms of wages, in terms of skilled labor, being able to be qualified to be able to do the work.

PAUL SOLMAN: Besides, says Yardeni:

ED YARDENI: This is not the 1930s, where you had a lot of able-bodied men who were unemployed, and you could send to the Hoover Dam, and -- and build the thing.

Here, we have got a lot of people in the services academy that, they're not shovel-ready.

GOV. JON CORZINE: I don't buy that argument. It's true that somebody coming out of Wall Street probably isn't going to transfer to the long end of a shovel.

On the other hand, it strikes me that there are -- with two-thirds reduction in the amount of homebuilding going on in the country, there are a lot of people available for these jobs.

Increasing job efficiency

PAUL SOLMAN: A lot of people for a lot of jobs and a lot more efficiency.

GOV. JON CORZINE: Each billion dollars that we spend probably creates a conservative number of 20,000. And second thing it does, it creates a much more efficient economy and quality of life for our public.

PAUL SOLMAN: In the end, says Corzine, infrastructure spending just makes sense, as it did in the '30s with FDR's Works Progress Administration, the WPA.

GOV. JON CORZINE: George Washington Bridge, the Lincoln Tunnel, the Golden Gate Bridge, the Hoover Dam, the TVA. Things that are still paying dividends for society were built in that era. And they created jobs.

They changed the psychology. They didn't end all of the Depression, but we went from 25 percent unemployment down to 12 percent. And we were prepared and better served because of those investments made. We ought to be doing that now.

PAUL SOLMAN: Isn't this socialism? I mean, it reminds me of this mural, you know, where the noble worker will get everything done under the management of government.

ROBERT FRANK: These are unusual circumstances. So, getting extra spending into the system really is the imperative right now. It's got to come from government, at rare moments like this.

PAUL SOLMAN: Isn't there a problem in the long run if government borrows the money, say, or prints the money to do all of this?

ROBERT FRANK: If the alternative is to have people sitting idle, then we're better off in the long run, even if we borrow every nickel to hire the people to do the work.

PAUL SOLMAN: But to Bob Frank, and most economists these days, we can worry about the long run tomorrow. Right now, we have got to get out of the rut, even if a national infrastructure program might be a sometimes bumpy ride.