Overview

• Science Education Policy
  – Brief history
  – Current policy context
  – How you may be affected by changes

• Policy as Engagement
  – “Hot” topics spark discussion
  – Many policies, multiple modes
  – How you can leverage policy for learning
“Those who cannot remember the past …”

- Ind. Revolution: public schools add science
- By 1930’s, biology is first-year course in HS
- Sputnik spurs Woods Hole, NSF ramp-up
- Project 2061 emphasizes science literacy
The Next Generation Science Standards

• Developed to close achievement gap, prevent lost market competitiveness
• Three dimensions
• Seventeen states and DC have adopted
NGSS: Its Effects on You

• New lessons
  – Yes, more lesson plans, but . . .
  – Authority to make desired changes

• Extra support for students who are struggling
  – Careful attention to graduation rates

• More training
  – Evidence on effectiveness of PD is mixed
The Need for More Science Teachers

- Each year, about 1/3 of schools with openings struggle to fill science positions.

- 2011: President Obama launched 100k-in-10
But Is It an Input Problem?

• More science teachers are trained each year than growing population and retirements would demand

• Turnover is comparable to other teaching positions but supply in science has no buffer

• Few system-wide retention initiatives
  – Lack of content-specific PD linked to attrition
Using Policy in the Classroom

• Policy matters can be very engaging.
• Many modes
  – Advocacy
  – Debate
• Motivate good research
• Meet CCSS and NGSS expectations
• Practice Claim-Evidence-Reasoning thinking
Some Topics for Debate

• Do we need Bruce?
• Should scientists be held liable for “failed” predictions?
• And then the more obvious . . .
  – Marcellus shale drilling
  – Carbon taxes
In Closing

• We’ve all felt the effects of policy on science education.

• We can use policy discussions to foster learning of science content and practices.
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