Let’s Debate

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Agenda

Introduction / Contact Information
Background / Purpose
Materials
The Process
Experience
What Have We Learned Along the Way?
Student Outcomes
Role Playing
Contact Information

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SHOULD A NUCLEAR POWER PLANT BE BUILT IN RIVERWOOD?
Purpose/Background

Where did the Idea originate?
Chem Comm town meeting ➔ Real-life scenario

What did we want our students to get out of this activity?
Cumulative Project ➔ Collaborative Groups
NGSS/STEM ➔ Real-Life Situation
Student choices ➔ Cross-curricula

Students to work harder than us; they needed to be the driving force
Materials

- Meeting Space
- Seating for 65/70 students
- Computer access for research
- Projector/computer
- Podium
The Process

Part 1: Research

- Teachers presents the project and issue
- Students choose their interest group (2-4 members)
- Students create bio and credentials within group
- Discussed progress with students each day
The Process

● Part 2: Presentation
  ○ Student lead NRC board created the agenda and managed meeting
  ○ Students presented and asked questions of other groups
  ○ Rebuttals
  ○ Board Deliberated and Presented their Ruling
The Process

● Part 3: Debriefing
  ○ Students wrote letter to CNN regarding the outcome of the hearing, based on their character role.
  ○ Students completed Teacher-created survey
  ○ Students graded themselves and their peers
What Did the Experience Produce?

- Positive attitude toward the project and the class
- Higher order thinking / questioning skills
- Group involvement
- Students were self-monitoring
- Students ran the meeting
- Empowering to students
- Addressed fears of talking in public
- Automatically differentiated
- Gave introverts a chance to shine
What Did We Learn Along the Way??

- Schedule a big chunk of time (2 1/2 weeks)

- Schedule during exam time (move final exam up)

- Be forceful with (This is a cumulative project)

  “if you don’t do this project, you will not pass the class”
What Did We Learn Along the Way?

Create "Information Center"

Calendar
Agendas
Rules of Order
Participant Roles
Nuclear Power Plant Hearing Information

Nuclear Power Project:
Schedule

- Research
  Mon, Jan 8 - Tues, Jan 16

- Presentation
  Wed, Jan 17 - Mon Jan 22
  "Powerpoint and Written packet due Wed at beginning of the hour"

- Rebuttal
  Tues, Jan 23

- Board Decision
  Tues, Jan 23

- Follow up letter to CNN / Survey
  DUE end of hour, final exam day
Rules of order 5th Hour

1. Keep within your timeframe
2. Don't be hostile
3. Use appropriate language
4. No goofing off
5. Pay attention at all times
6. Ask relevant questions
7. Be prepared

Consequences will be enforced
If necessary

8. No phones.
Agenda: Nuclear Regulatory Commission Hearing

Regarding Approval of Construction and Operations License For
Atomic Energy Inc.
at Riverwood, WV, USA

Time Template: Introduction- 2 minutes
Presentation- 8 minutes  (Maximum Time Per Group - 15 min)
Questions- 5 minutes

Wednesday 17, 2018

- Introduction: 10:33am - 10:36am
  - Atomic Safety Licensing Board (ASLB) Panel of NRC
  - Representative of Atomic, Inc.
  - Local Electric Utility

Thursday 18, 2018

- Introduction: 10:33am - 10:36am
  - Aquatic Biologist / Environmentalist opposed
  - US EPA Representative
  - Nuclear Scientist

Friday 19, 2018

- Introduction: 10:33am - 10:36am
  - Coal Miner
  - Mayor and City Council Member
  - Climate Change Activist / Environmentalist In Favor

Monday 22, 2018

- Introduction: 10:33am - 10:35am
  - Public Health Commission
  - Parents
  - Coal Fired Plant Operators

Tuesday 23, 2018

- Introduction: 10:33am - 10:35am
  - Financial Institution

- Rebuttal
- Board Decision
What Did We Learn Along the Way??

- ppts NOT Posters
- Grading during presentations, list vs checklist
- Improve your rubric continually
- Teach how to make a PPT
- Include directions on expected Powerpoint format
What Did We Learn Along the Way??

- Decorative Posters
- Student Dress in Character
- Staging the Room
- Practice Sitting in Seats
- Podium / Gavel
Most Important Lessons Learned:

- Check-in with EVERY group EVERY DAY

- If students are not participating fully, THROW THEM OUT!!
Student Outcomes

1. Engagement
2. Attendance
3. Collaboration
4. Excitement about science
5. Engaged by other interests
6. Addressed variety of learning styles
7. Average student became a shining star
8. Empowered to make own decisions
9. Students are proposing new topics for next time
Role Playing Activity

In your packets, turn to your interest group section

5 minutes to gather thoughts
Make your poster

1 person will report out
   Present:
   1) Position - in favor or opposed
   2) Top three reasons
Sources:

*Chemistry in the Community, 4th Edition, 1999, American Chemical Society*

Nuclear Regulatory Commission  [www.nrc.gov](http://www.nrc.gov)

