<table>
<thead>
<tr>
<th>Lesson Plan Title: Energy Issues</th>
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<tbody>
<tr>
<td><strong>Teacher Name:</strong> Mr. Brian Meyer</td>
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<tr>
<td><strong>Subject:</strong> Natural Resources and Ecology</td>
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## Problem statement, Standards, Data and Technology

### Asking questions and defining problems
Establish driving question for the lesson plan or define problem students will be solving.

Attach any documents used to establish the driving question or define the problem.

What Current Environmental Issue relating to Energy is affecting the way you live?

### Incorporating Next Generation Science Standards, Common Core, or State Standards
State the standards that will be covered during this lesson plan. Include all standards which may apply (NGSS, Common Core, or State Standards).

N.R.1.3 Research and debate one or more current issues related to the conservation or preservation of natural resources

### Obtaining and evaluating information
How will students be obtaining and/or collecting the information?

The topic/issue is to be obtained from a hard copy or online source of newspaper or magazine.

It has to have been published / printed in the past six months.

The article can not be a personal blog. It has to be based on scientific reasoning.

### Analyzing and interpreting data
How will students be analyzing and interpreting the collected data?

Student will be reading and reviewing multiple articles in order to select an issue which affects their lives.

See attachment at end for specific items to be recorded as necessary documentation for each student to be evaluated.
| **Use of technology and software**  
Indicate the type of technology and software students will be using in order to implement this lesson plan. | Students will be using the internet to find magazines, newspapers or other periodicals in which to select their personal topic. Hard copy may also be used. |
| --- | --- |

**Collaboration, critical thinking and communication**

| **Collaboration**  
Indicate how students will be collaborating during the implementation of the lesson plan | Students will be corresponding with the teacher during the selection as well as later in teams of 4 then divided into teams of 2 of an action team. The 2 person teams will be selecting a team name, one based on an activist and the other on a lobbyist. Students will collect data in order to substantiate their viewpoint. See attachment for details and break down of requirements. |
| --- | --- |

| **Critical Thinking**  
How will the students evaluate the question or defined problem to reach an objective conclusion? How will the students be using the learned content and collected data to be able to critically think about the established question and/or problem on this lesson plan? | Students will research or locate articles of interest and evaluate an issue which affect them personally. After assigned to groups of 4, students will research a topic selected from the ones previously submitted by the students for further research leading to a debate. |
| --- | --- |

| **Communication**  
How will the students communicate their findings and conclusion regarding the established question and/or problem? | Write at least 3 sentences in their own words summarizing the issue. The article is not to be cut and pasted. The sentences are to include scientific statements supporting the authors viewpoint. |
| --- | --- |

**References**
### Teacher’s References
Include all references used to develop and implement this lesson plan.

http://www.energy.com  
http://www.regulations.gov  
http://www.robertsrulesoforder.com

### Student’s References
Include all references students will need to complete this lesson plan.

Students must complete research of the resources needed to complete the project. Are to write sites where supporting information is obtained from. Inspire.IN.gov

### Assessment Plan
How will the students be assessed during and/or at the end of the lesson plan?

Students will be assessed using formative and summative assessment. Students will initially be assessed for the personal article and supporting documentation required. See ending document. Student will also be assessed for the assigned topic to be debated and supporting information. The debate will also be graded for individual and team involvement.
## Resources and Costs

<table>
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<tr>
<th><strong>Resources Needed</strong></th>
<th><strong>Access to internet or hard copy of newspapers or magazines</strong></th>
<th><strong>2 podiums for debate, smart phone for alarm for times during debate.</strong></th>
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<tbody>
<tr>
<td>List all the resources needed (equipment, facilities, materials or any other resources).</td>
<td></td>
<td>Access to visual equipment for students to use power point in debate if necessary.</td>
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<tr>
<td><strong>Costs</strong></td>
<td><strong>Possible cost of newspaper or magazine if can not be obtained on line. $1 to $4.</strong></td>
<td></td>
</tr>
<tr>
<td>List the estimated cost of implementing this lesson plan.</td>
<td>Include all costs related to equipment, materials and any resource critical to the implementation of the lesson plan.</td>
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**Implementation Plan**

**Implementation Plan Timeline**
Establish the timeline to implement the lesson plan.
Provide an estimate of time and days in order to complete the lesson plan.

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<th>PROJECT CALENDAR</th>
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<tr>
<td><strong>Project: Energy Issues</strong></td>
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<td><strong>MONDAY</strong></td>
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| Project roll out, access library for periodicals Select environmental issue, Document preliminary information Knows and Need | Assign groups from general student interest by engaging students into discussion of what interests them. Additional research on group topics. | Assign debate teams of 2 students Activist/Lobbyist Students prepare evidence supporting | Debates | Debates  
Final Review and discussion on Continued Student Engagement with issues of interest to them. |
How can students have a voice in society and evoke change?

Student submissions for evaluation

Individual
- Article Title or Media Headline
- Article Author or Writers Name
- Name of Publication (magazine/newspaper)
- Date of Publication

Write at least 3 sentences in your own words summarizing how the environmental issue affects you personally. Not to be copied and cut and pasted. The sentences are to include scientific supporting statements supporting the author’s viewpoint.

Provide your personal viewpoint in 4 sentences of how you feel about the article and why you chose it and how it affects you.

Is it local, regional or a global issue? 2 sentences explain reasoning.

Group issue Each student is to write 4 supporting statements to the issue and 4 statements why they feel the current plan of action is wrong or incomplete. Participation as a debate team member will be evaluated as well.

Debate team Each team will provide an outline of 6 reasons supporting their viewpoint on day 3 in order to prepare for the debate. Each team of 2 students will have 5 minutes for presenting their viewpoint and 2 minutes for a rebuttal and summary. Each team member will have an opportunity to present verbally and visually their viewpoints.

Presentations are to be based on scientific information with consideration of social, economic and political cause and effects.

The ACES concept will be used in assisting with debate support.

A Answer question with introduction of their view point
C Cite supporting evidence
E Explain reasoning
S Summarize in rebuttal

A summary by the teacher after the last student debate shall be done to consider any ongoing action by the students.