

# Engaged Learning Project Template

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Engaged Learning Project

**Title of Project: Energy for the Future**

**Subject(s): Environmental Science**

**Grade Level(s): 9**

**Abstract:**

Students will be working with a local power company (SumterEMC) on a solar power initiative called Sun Power for Schools. Student groups will begin by researching the advantages and disadvantages of different types of energy sources: hydropower, wind, biomass, nuclear and solar power. Based on their background research, student groups will submit five questions about any type of energy source (though with the focus primarily on solar power) and as a class narrow the questions for a Skype interview with our liaison at SumterEMC. Based on the Skype session, students may choose to continue with the solar energy project or may choose a different type of energy to study. If a group chooses solar, the group will then collect data from three different locations in Georgia that have the solar panels and have data available on the Solar Power for Schools website. If students choose a different type of energy source to study, they will make contact with our liaison at SumterEMC or GA Power. These groups of students will be working more directly with the employees since much of this data is password protected. Students will then take their research and collected data and prepare a presentation for community members (as most do not know anything about the school solar initiative). Lastly, individual students will write a persuasive letter (or email) to their state representative or a green energy lobby group to persuade them to view their video and to support their particular energy source. The overall goal of this task is to have the students discover energy alternatives that are already in use in our community and to educate others about the advantages and disadvantages of future energy sources.

**Learner Description/Context:**

Lee County High School Ninth Grade Campus is located in Leesburg, Georgia. This particular school is one of nine (including Pre-K and the Transitional Learning Center) within the Lee County system and serves only ninth grade students. These schools serve all of Lee County, which according to the Census Bureau Quick Facts 2010<sup>1</sup> had a population of 28,298 and a median household income of \$59,811. This income is higher than the state average and only 8.2% of the population lives at or below the poverty level<sup>1</sup>. For the 2013 – 2014 year, Lee County High School 9<sup>th</sup> Grade Campus serves approximately 490 students. I teach approximately 158 of these students. Of the student population, 70 % are White, 22 % are Black, 3 % are Hispanic, and 3 % are Asian. My classes reflect these percentages. In my classroom, where this project will be implemented, we have 10 student computers, a teacher computer connected to a projector, and a classroom iPad. We also incorporate a BYOT program so many students have personal devices that they bring to class which can be used to collect data for this project. In addition, there are two iPads available in the media center that can be used in the classroom for various purposes. This mostly rural community is largely unaware of the pursuit of new technologies for energy generation that are actually being implemented in our particular area but have the technology available to view student projects made to educate them on this topic.

**Time Frame:**

**Background Research (3 – 5 class periods):** Students will first be placed into mixed-level groups (groups with varying ability levels) of 3 - 4 students. Students will begin by researching the advantages and disadvantages of different types of energy sources: hydropower, wind, biomass, nuclear and solar power. Students will be using a Google Doc shared with them to enter the information so that the teacher can track individual participation in the research. After research, each group will develop five questions and submit them on Edmodo. Two of the five questions must be related to solar power generation. The classes will then be polled to vote for their favorites and will present these questions for Mr. Greg Crowder, our contact at SumterEMC via Skype.

**Skype Session (1 class period):** Students will participate in a Skype session with Mr. Crowder.

**Group Discussion (1 class period):** Students will spend one day in discussions about whether or not they would prefer to continue to research solar power or use the available contacts to use for data purposes (data needed is password protected but limited data will be made available for learning purposes).

**Data Collection (5 class periods):** Data collection from the SunPower for Schools website will be collected at the beginning of class for a period of 5 days (during the days of research and presentation preparation) and entered into an Excel

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<sup>1</sup> "Lee County QuickFacts from the US Census Bureau." State and County QuickFacts. Web. 15 Oct. 2013.  
<http://quickfacts.census.gov/qfd/states/13/13177.html>.

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spreadsheet template which will be shared on Google Docs. Student groups who chose other energy sources may use this same time to confer with their contacts and collect data in this manner.

**Presentation Development** (3 class periods) – After research is complete, students will prepare a presentation on PowToon (an online presentation tool that is similar to PowerPoint but is used to generate videos of presentations). Students will present their research on their chosen energy sources' advantages and disadvantages and if pursuing the solar power initiative, more information about the SunPower for Schools initiative in our community. Student groups who chose other energy sources will provide more information on what our local power companies are doing to support these new technologies. Students will also prepare charts using their Excel spreadsheets, showing the actual data of the power generated from various locations in the state as part of the support for their energy source.

**Project Submission and Class Voting** (1 class period) – Students will submit their videos on the class website.

**Representative/Lobby Group Identification and Letter Writing (2 class periods in all covered subject areas):** Student groups will search for groups in the state of Georgia or the representatives for our district and discover contact information (all available on the web). Individual students will then prepare a persuasive letter giving the reader background information on who they are, what kind of project they are doing, some of the results they found, and recommend the reader view their video on the class website. Students will work in their Civics and Literature classes on this same assignment. This assignment must be completed individually since student groups will not overlap in other classes. Students will prepare their letters in Google Docs and share with teachers in each subject area. Students will receive support in letter writing and lobbyists from the teachers in these subject areas.

**Class Voting (1 class period)** - Students will spend one class period viewing other groups' submissions and will then vote (on Edmodo) on the submission that will represent their class. Each class winner will have their presentation submitted to the school website and will also be sent to Mr. Crowder. Students will also view teacher selected persuasive letters and will vote for one letter to be mailed to represent the class.

### Standards Assessed:

**SCSh3.** Students will identify and investigate problems scientifically.

d. Graphically compare and analyze data points and/or summary statistics.

e. Develop reasonable conclusions based on data collected.

f. Evaluate whether conclusions are reasonable by reviewing the process and checking against other available information.

**SCSh4.** Students use tools and instruments for observing, measuring, and manipulating scientific equipment and materials.

a. Develop and use systematic procedures for recording and organizing information.

b. Use technology to produce tables and graphs.

**SCSh6.** Students will communicate scientific investigations and information clearly.

b. Write clear, coherent accounts of current scientific issues, including possible alternative interpretations of the data

d. Participate in group discussions of scientific investigation and current scientific issues.

**SEV4.** Students will understand and describe availability, allocation and conservation of energy and other resources

a. Differentiate between renewable and nonrenewable resources including how different resources are produced, rates of use, renewal rates, and limitations of sources. Distinguish between natural and produced resources.

b. Describe how technology is increasing the efficiency of utilization and accessibility of resources.

e. Describe the commonly used fuels (e.g. fossil fuels, nuclear fuels, etc.) and some alternative fuels (e.g. wind, solar, ethanol, etc.) including the required technology, availability, pollution problems and implementation problems. Recognize the origin of fossil fuels and the problems associated with our dependence on this energy source.

f. Describe the need for informed decision making of resource utilization. (i.e. energy and water usage allocation, conservation, food and land, and long-term depletion)

### **NETS-S**

**1. Creativity and Innovation** Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

b. Create original works as a means of personal or group expression

**2. Communication and Collaboration** Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media

d. Contribute to project teams to produce original works or solves problems

**3. Research and Information Fluency** Students apply digital tools to gather, evaluate, and use information.

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d. Process data and report results

**4. Critical Thinking, Problem Solving, and Decision Making** Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

a. Identify and define authentic problems and significant questions for investigation

b. Plan and manage activities to develop a solution or complete a project

**5. Digital Citizenship** Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

a. Advocate and practice safe, legal, and responsible use of information and technology

b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity

### Learner Objectives:

Students will be able to explain and discuss the advantages and disadvantages of renewable energy sources to an extended audience. In addition, students will be able to collect authentic data of energy output of solar power (or gather data through community partners) throughout the state and generate understandable explanations and graphics from the data collected. These objectives will be measured with a rubric broken down for different parts of the project: background research, data collection and graphs, presentation, and group participation.

As a way to make connections between different subject areas, students will also expand their knowledge of how government works by researching ways that bills are written in support of new energies. Students will be able to write a persuasive letter to a state representative or a green energy lobbyist and convince them that the energy source they have been researching is worth their support. Students will be graded on identifying a correct representative or legitimate energy group from their research in their Civics classes and will be graded on their persuasive letter writing in their Literature classes.

### The “hook” or Introduction:

The Zone of Uncertainty: Students will watch the first 1:40 of the following video, which discusses population changes and the ever increasing demands on energy.

<http://www.youtube.com/watch?v=y1anKyI-JCs>

Students will then participate in a short pinwheel discussion about what they already know about future energy sources.

### Process: (\*Note: Some processes may overlap)

**Background of need of alternative energy** – 2 days; Students will receive guided notes on fossil fuel sources for energy generation and will calculate the approximate time fossil fuels will run out based on current use. In this part of the project, the teacher will be guiding the learning.

**Introduction of project** – 1 day in classroom; teacher will give the hook and discuss the background research students will be doing, what the project will entail, including how to search the SunPower website for data, how to enter the data on the spreadsheet, and how groups who choose different types of energy sources will obtain their data.

**Background research** – 2 – 3 days in media center; students may use computers, iPads, or personal technology for background research with the aid of the teacher and the media specialist. Students will be researching the advantages and disadvantages of different types of renewable energy sources: hydropower, wind, biomass, nuclear and solar power. Students will be using a Google Doc to enter the information so that the teacher can track individual participation in the research.

**Submission of group questions on Edmodo** – 1 day in classroom; groups will work one class period going through their research and will develop three to five questions to be submitted on Edmodo for consideration to Skype session with teacher aiding as necessary to further group discussions. Two of the five questions must be related to solar power generation. The classes will then be polled to vote for their favorites and will present these questions for Mr. Greg Crowder, our contact at SumterEMC via Skype. In this stage, students are participants and beginning to take control of their learning by generating their own questions.

**Poll the class** – 1 day in the classroom; students will individually vote on questions for Mr. Crowder via Edmodo or Poll Everywhere

**Skype Session** – 1 day in the classroom; Student groups will choose 1 group representative to present a chosen question to Mr. Crowder, all students will take notes on the responses

**Location/Energy Source selection** – 1 day in the classroom (can be done after the Skype session); Student groups will peruse the SunPower website and choose the locations for data collection –**or-** choose another type of energy source and draft an email to their contact, Mr. Crowder or Mr. Jay Smith, who will be happy to assist groups with analysis on other types of energy sources with data, but this will include more contact via email since this data is password protected. At this point, students are given the power. They are given the resources they need and from this point, the teacher will be learning alongside the students.

**Data Collection** –5 days in class (beginning of class only); Data collection from the SunPower for Schools website will be collected at the beginning of class for a period of 5 days (during the days of presentation preparation) and entered into an

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Excel spreadsheet template which will be shared on Google Docs. Student groups who chose other energy sources may use this same time to confer with their contacts and gather data. The teacher will aide search and data input in a very limited manner.

**Presentation Development** – 3 days in classroom, 1 week total work time; Students will work in the media center to generate their PowToon presentations, which will include: A) Solar: their research on solar energy’s advantages, disadvantages and more information about the SunPower for Schools initiative in our community, and their data or B) Other sources: research on the advantages and disadvantages of their chosen energy source, what our local power companies are doing to support this new technology and their data. Students will prepare charts using their Excel spreadsheets, showing the actual data of the power generated from various locations in the state as part of the support for the initiative. Students must complete any lacking information on their own time. Teacher will be available for help in person during presentation development and students may also submit questions after school on Edmodo.

**Project Submission** - 1 class period; Students will submit their videos on the class website.

**Representative/Lobby Group Identification and Letter Writing** - 2 class periods in all covered subject areas: Student groups will search for groups in the state of Georgia or the representatives for our district and discover contact information (all available on the web). Individual students will then prepare a persuasive letter giving the reader background information on who they are, what kind of project they are doing, some of the results they found, and recommend the reader view their video on the class website. Students will work in their Civics and Literature classes on this same assignment. This assignment must be completed individually since student groups will not overlap in other classes. Students will prepare their letters in Google Docs and share with teachers in each subject area. Students will receive support in letter writing and lobbyists from the teachers in these subject areas.

**Class Voting (1 class period)** - Students will spend one class period viewing other groups’ submissions and will then vote (on Edmodo) on the submission that will represent their class. Each class winner will have their presentation submitted to the school website and will also be sent to Mr. Crowder. Students will also see teacher selected persuasive letters and will vote for one letter to be mailed to represent the class.

**Community View** – 1 week; Each class winner will have their presentation submitted to the school website and will also be sent to Mr. Crowder. The community newspaper will also be notified of the status of the presentations and letters and will put a short article in the weekly paper (our local paper is very supportive of our schools and likes to include articles about things going on in the classroom).

### **Product:**

The final product produced will be a presentation that can be viewed by various people in the community and a persuasive letter written to a state representative or lobby group.

*Presentation:* The difference between this presentation and a PowerPoint is that this presentation by creation will be permanently available (as part of the creation makes it available on YouTube). The intended audience of the presentation is different – students are accustomed to presenting to their peers and teachers but knowing the intention of the project is to make their community aware of technology and energy sources available and that community members, including the project director (Mr. Greg Crowder), will see the presentations. The video will be assessed with a rubric.

*Persuasive letter:* Students will be using Google Docs to generate a persuasive letter. Students will share their letter with all of teachers of the following subjects (Environmental Science, Civics, Literature) to be graded by those teachers with a rubric. Groups of teachers will select the three best letters from each environmental science class and students will vote for the best letters on Edmodo.

### **Technology Use:**

Students will have to first be familiar with how to locate, filter and analyze web resources on alternative energy. I will give them some good websites to start with but they must also look for their own and determine whether the sources are credible. Students will have to have working knowledge of Google Docs to enter their research on their group’s document and later to create and submit their persuasive letters. Students will have to have a limited knowledge of Skype to communicate with our community partner (my computer will be the host computer so they will not be setting it up themselves). Students will also have to log in to the SunPower for Schools website with their login and be able to pull the data on their phones, tablets, or class computers. Students who choose other energy sources will need to be able to use their Google mail accounts to confer with their contacts. Students will need to have a working knowledge of Microsoft Excel to input their data and create graphs (we have done this already a number of times so this will not be a new concept for them). Students will also need to have a working knowledge of PowToon (which they have also used in another project). Students will have to know how to submit their videos to the class website. Finally, students will need to know how to use Edmodo to submit questions and participate in polls.

### **References and Supporting Materials:**

*See attached for the following:*

Advantages and Disadvantages of Renewable Energy Sources (graphic organizer to be used in Google Docs)

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Advantages and Disadvantages of Renewable Energy Sources (rubric)  
Group Discussion Worksheet  
Data Collection Worksheet  
How To Create A Powtoon instruction sheet  
Information to Be Included in Your Powtoon  
Graph Rubric  
Presentation Rubric  
Letter Rubric (Obtained from the source below)  
Rubric for Persuasive Letters. *Read. Write. Think.* Retrieved November 29, 2013 from [http://www.readwritethink.org/files/resources/lesson\\_images/lesson945/Rubric.pdf](http://www.readwritethink.org/files/resources/lesson_images/lesson945/Rubric.pdf)

### Websites to be used:

#### Introductory video:

Energy for the Future, Shell. Retrieved November 30, 2013, from <http://www.youtube.com/watch?v=y1anKyI-JCs>

#### General background:

Renewable Energy Sources in the United States. *NationalAtlas.gov*. Retrieved November 9, 2013, from [http://nationalatlas.gov/articles/people/a\\_energy.html](http://nationalatlas.gov/articles/people/a_energy.html)

Renewable Energy for America: Harvesting the Benefits of Homegrown, Renewable Energy. *Natural Resources Defense Council*. Retrieved November 9, 2013, from <http://www.nrdc.org/energy/renewables/default.asp>

Energy Sources: Diversity for Reliability. *Georgia Power*. Retrieved November 20, 2013 from <http://www.georgiapower.com/about-energy/energy-sources/home.cshtml>

Renewable Energy *Energy Kids: U.S. Energy Information Administration*. Retrieved November 9, 2013, from [http://www.eia.gov/kids/energy.cfm?page=renewable\\_home-basics](http://www.eia.gov/kids/energy.cfm?page=renewable_home-basics)

#### Solar energy:

Whitburn, Greg. 13 Fundamental Advantages and Disadvantages of Solar Energy. *ExploringGreenTechnology.com* Retrieved November 9, 2013, from <http://exploringgreentechnology.com/solar-energy/advantages-and-disadvantages-of-solar-energy/>

#### Data Collection:

*SunPower for Schools*. Retrieved November 9, 2013, from <https://solaros.datareadings.com/>

#### Presentation:

*PowToon, Beta*. Retrieved November 9, 2013, from <http://www.powtoon.com/>

#### Letter Writing Research

Open States. Retrieved November 29, 2013 from <http://openstates.org/ga/>

## Advantages and Disadvantages of Renewable Energy Sources (\*To be used in Google Docs)

Use the following websites to fill in the graphic organizer.

Renewable Energy Sources in the United States. *NationalAtlas.gov*. Retrieved November 9, 2013, from [http://nationalatlas.gov/articles/people/a\\_energy.html](http://nationalatlas.gov/articles/people/a_energy.html)

Renewable Energy for America: Harvesting the Benefits of Homegrown, Renewable Energy. *Natural Resources Defense Council*. Retrieved November 9, 2013, from <http://www.nrdc.org/energy/renewables/default.asp>

Energy Sources: Diversity for Reliability. *Georgia Power*. Retrieved November 20, 2013 from <http://www.georgiapower.com/about-energy/energy-sources/home.cshtml>

Renewable Energy *Energy Kids: U.S. Energy Information Administration*. Retrieved November 9, 2013, from [http://www.eia.gov/kids/energy.cfm?page=renewable\\_home-basics](http://www.eia.gov/kids/energy.cfm?page=renewable_home-basics)

<b>Energy Source</b>	<b>What Is It?</b>	<b>Advantages (at least three)</b>	<b>Disadvantages (at least three)</b>
<b>Hydropower</b>			
<b>Wind Power</b>			
<b>Biomass</b>			
<b>Nuclear</b>			
<b>Solar</b>			

## Advantages and Disadvantages of Renewable Energy Sources Rubric

Category	5 (Exemplary)	3 (Proficient)	2 (Partially Proficient)	0 (Not Included)
<b>What Is It?</b>	All 5 energy sources are clearly defined with complete descriptions; a reader who has little knowledge of the source would understand	The energy sources are defined and mostly explained; some parts of the research may be missing	Only a few of the energy sources are completely defined or explained; much research is lacking	Not completed or is copied and pasted directly from a source
<b>Advantages</b>	Three or more advantages are named and explained in detail for each energy source	Three or more advantages are named but with limited detail provided for every source	Only two advantages are listed for most sources	Only 1 advantage is listed or information is copied and pasted directly from a source
<b>Disadvantages</b>	Three or more disadvantages are named and explained in detail for each energy source	Three or more disadvantages are named but with limited detail provided for every source	Only two disadvantages are listed for most sources	Only 1 disadvantage is listed or information is copied and pasted directly from a source
<b>Participation</b>	Individual participated fully in the background research and was a self-starter	Individual participated in the research but only when directed to do so	Individual's participation was somewhat limited	Individual's participation was very limited or did not participate

**Total \_\_\_\_\_/20**

## **Group Discussion Worksheet**

Print out your Google Doc worksheet with your background research. Based on what you found, use the following questions to help guide your discussion as you create your own questions for the Skype session. (Please don't limit yourself to these questions – these are just to get you talking!)

- a) Was there one particular energy source that we would like to learn more about?
- b) Was there one particular energy source that had limited information that we could ask about?
- c) Do we know if any of our energy comes from any of these sources?
- d) Do we know enough about any of these energy sources (especially solar) to investigate them and collect data? And if not, which would we like to investigate further and what would we need to know to do so?

Use the space below to brainstorm five questions. Two of the five questions must be related to solar power. Then choose a group member to be your journalist and submit the questions under your Edmodo small group.



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**Data Collection Sheet (Sample\* - Spreadsheet to be shared via Google Docs)**

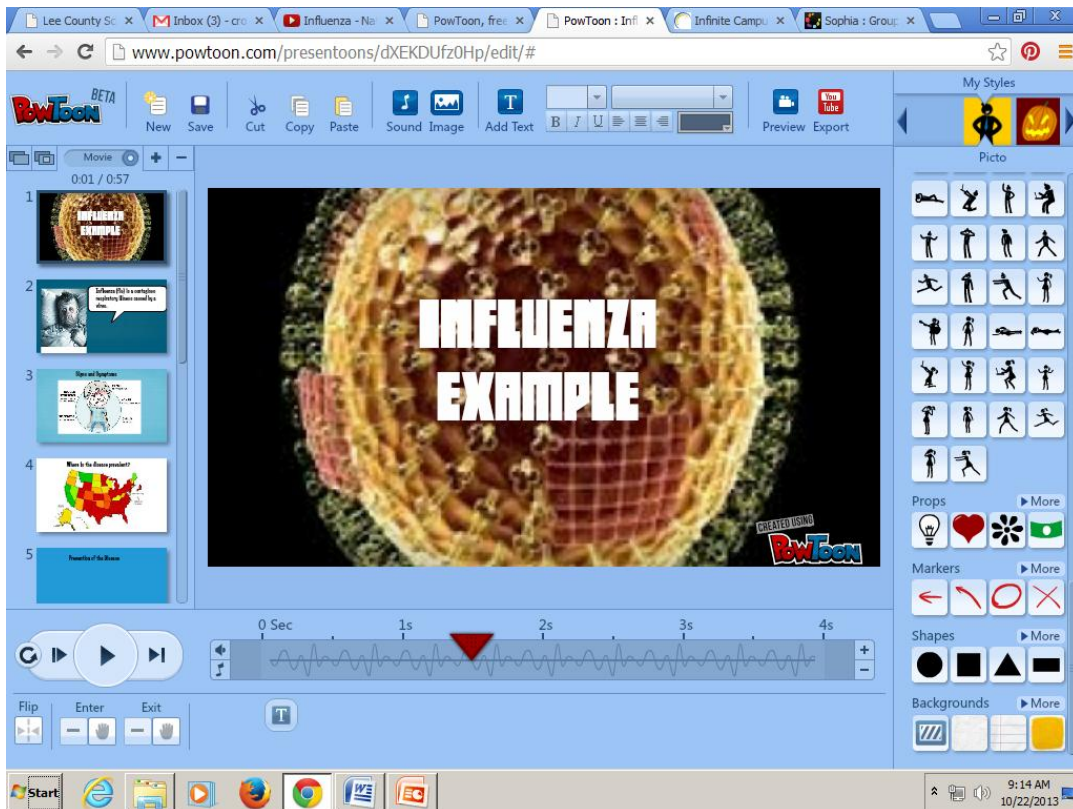
<b>Day</b>	<b>Location 1 (kWh generated)</b>	<b>Location 2 (kWh generated)</b>	<b>Location 3 (kWh generated)</b>
<b>1</b>			
<b>2</b>			
<b>3</b>			
<b>4</b>			
<b>5</b>			

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### To Create a Powtoon:

1. Go to [www.powtoon.com](http://www.powtoon.com) and create an account.
2. Click on Start Now.
3. Choose one of the pre-made templates or a blank template.
4. Create your PowToon similar to the way you would create a PowerPoint – add slides by hitting the + button above the slide bar.
5. Hit Save often.
6. You can hit the play button (the > button) to do a short preview where you can pause and make changes. The red sliding bar at the bottom shows you where you are at in the preview.
7. Below the time bar with the red slider you will see small icons every time you add in text, pictures and animations. If you click on these, it will show you the amount of time they appear on the slide. You can adjust as necessary.
8. On the right side of the time bar you will also see a + and – sign, indicating that you can shorten or extend the length of the slide.
9. To add images, first save the image into my pictures and then click on the image icon at the top to add it to the slide.
10. To add sound, click on the sound icon at the top and preview sounds available (there are some good free ones) or add your own file (\*\*Note that if you choose to add your own it must be APPROPRIATE!!!)
11. When you think you are done, preview the presentation by hitting the preview button.
12. When you have made all changes, click on the Export (YouTube) icon. You will receive a message once your PowToon is done processing.

Below is a screenshot example of the PowToon creator:



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## Information to be included in your PowToon

“Slide” 1

Title (be creative, but use your chosen energy source)

Team Name

Team Members Names

“Slide” 2

Energy source description

Picture of energy source in use

“Slide” 3

At least three advantages of energy source; be thorough

(You may use separate slides if necessary)

“Slide” 4

At least three disadvantages of energy source; be thorough

(You may use separate slides if necessary)

“Slide” 5

Graphs generated from data (be sure to extend the time enough to clearly see the data)

Descriptions of what is seen on graphs

“Slide” 6

Analysis of your data

“Slide” 7

In what ways our local power companies are rising to the challenge in this particular technology

In addition, teams must include the following:

- 3 other visuals that enhance your message
- 1 animation to enhance your message
- Background music

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**Data and Graphing Rubric**

<b>Criteria</b>	<b>Points Possible</b>	<b>Points Earned</b>
Data was collected for all five days for all locations	10	
Graph was given a descriptive title that clearly defines the variables	2	
An appropriate style graph was used (line, circle, bar)	2	
Both x- and y-axis are clearly and correctly labeled with appropriate variables and units	2	
Colors, textures, etc were used to enhance the graph but were not used to limit the detail of the graph (i.e. colors made it easier to see)	2	
The graph is clear and complete.	2	

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**Presentation (Video) Rubric**

<b>Categories</b>	<b>Exemplary (4)</b>	<b>Proficient (3)</b>	<b>Partially Proficient (2)</b>	<b>Incomplete (1)</b>	<b>Not Included (0)</b>
<b>Overall Effectiveness of Video (category will be multiplied x2)</b>	Video was effective, informative and appealing.	Video was effective and appealing.	Video was effective or appealing, but not both.	Video was not visually interesting. Did not show much imagination. Did not convey information or compelling message.	Video was not finished.
<b>Organization</b>	Team presents information in logical, interesting sequence which audience can follow.	Team presents information in logical sequence which audience can follow.	Audience has difficulty following presentation because team jumps around.	Audience cannot understand presentation because there is no sequence of information.	Video was partially finished and what was there was disorganized.
<b>Content Knowledge (category will be multiplied x4)</b>	All content throughout the video is accurate. There are no factual errors. All parts of the research are answered.	1 part of the research is not accurate or not included.	2 parts of the research are not accurate or not included.	3 – 4 parts of the research are not accurate or not included.	5 or more parts of the research are not accurate or not included.
<b>Visuals</b>	All required visuals are included.	1 visual is missing from the video.	2 visuals are missing from the video.	3 visuals were included but the required visual is missing	Appropriate visuals were not included.
<b>Color Usage</b>	Background and text colors/fonts were easy to see and were consistently used.	Background and text colors/fonts were easy to see.	Background OR text colors/fonts were difficult to see at times.	Background and text colors/fonts were difficult to see most times.	Background and text was impossible to see consistently through the video.
<b>Animations</b>	At least 1 animation was used effectively	1 animation was used but it did not add to the presentation	N/A	N/A	No animation was included
<b>Total</b>					

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**Rubric for Writing Persuasive Letters (Recommended by LCH9 Literature Dept from Read. Write. Think.)**

CATEGORY	4	3	2	1
<b>Audience</b>	Demonstrates a clear understanding of the potential reader and uses appropriate vocabulary and arguments. Anticipates reader's questions and provides thorough answers appropriate for that audience.	Demonstrates a general understanding of the potential reader and uses vocabulary and arguments appropriate for that audience.	Demonstrates some understanding of the potential reader and uses arguments appropriate for that audience.	It is not clear who the author is writing for.
<b>Goal or Thesis Statement</b>	The goal or thesis provides a clear, strong statement of the author's position on the topic.	The goal or thesis provides a clear statement of the author's position on the topic.	A goal or thesis is present, but does not make the the author's position clear.	There is no goal or thesis.
<b>Reasons Supporting Goal or Thesis Statement</b>	Includes 3 or more reasons (facts, statistics, examples, real-life experiences) that support the goal or thesis statement. The writer anticipates the reader's concerns, biases or arguments. and has provided at least 1 counter-argument.	Includes 3 or more reasons (facts, statistics, examples, real-life experiences) that support the goal or thesis statement.	Includes 2 reasons (facts, statistics, examples, real-life experiences) that support the goal or thesis statement.	Includes 1 or fewer reasons (facts, statistics, examples, real-life experiences).
<b>Facts and Examples</b>	All of the facts and examples are specific and relevant, and explanations are given that show how each piece of evidence supports the author's position.	Most of the facts and examples are specific and relevant, and explanations are given that show how each piece of evidence supports the author's position.	At least one of the facts and examples is relevant and has an explanation that shows how that piece of evidence supports the author's position.	Facts and examples are not relevant and/or are not explained.
<b>Sequencing</b>	Arguments and support are provided in a logical order that makes it easy and interesting to follow the author's train of thought.	Arguments and support are provided in a fairly logical order that makes it reasonably easy to follow the author's train of thought.	A few of the support details or arguments are not in an expected or logical order, distracting the reader and making the letter seem a little confusing.	Many of the support details or arguments are not in an expected or logical order, distracting the reader and making the letter seem very confusing.
<b>Letter Format</b>	Complies with all the requirements for a business letter.	Complies with almost all the requirements for a business letter.	Complies with several of the requirements for a business letter.	Complies with fewer than 75% of the requirements for a business letter.

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