

Ocean Energy PRESENTATION Project

Directions: Choose **only one** project to complete and present it for a grade by 11/24 (Odd) or 11/25 (Even)

BUILD & DESIGN	Design a type of machine or device that has the potential to harness energy from the ocean to make electricity and then build a small scale prototype or model of the machine to present in class.
RESEARCH & MARKET	Research an existing technology/machine that harnesses energy from the ocean to make electricity and then create an advertisement persuading people to adopt this item as their new source of energy.
PLAN & INTERVIEW	Select a college program or profession that has to do with Ocean Energy Technology or Engineering and interview someone from that institute/company.
RAP or SING	Create an original song or rap about the main ways we harness energy from the ocean. Be specific and talk about all of the types of technology that is being developed, what colleges in our area offer those programs, and how it can impact the environment and the future of human energy consumption.

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Build and Design Project

Description:	Design a type of machine or platform that has the potential to harness energy from the ocean to make electricity and then build a small scale prototype or model of the machine to present in class.
Requirements:	<ul style="list-style-type: none"> • Design your own type of technology that will harness energy from the ocean. • Build a small model of the technology using any material that will allow you to show how the water will move parts of it. (MUST show movement in the model) • Write a summary that explains the following: <ul style="list-style-type: none"> ○ What type of moving water does this machine/device use to produce electricity? ○ What sea conditions does this device require in order to function properly? ○ What type of materials will it be made of? ○ How much money do you estimate one since device to cost in order to build? ○ Will this require maintenance? How often will it need to be fixed? ○ How many of these devices do you think we need in order to power the entire city of West Palm Beach? ○ What impact could this have on the ocean? ○ What impact could this have on marine habitats? ○ What impact could this have on the future of human energy use?
SPECIAL NOTES:	<ul style="list-style-type: none"> • It does not have go into any water • It does not have to actually produce electricity! • You must PRESENT the model and the summary to class.

Research and Market Project

Description:	Research an existing technology/machine that harnesses energy from the ocean to make electricity and then create an advertisement persuading people to adopt this item as their new source of energy.
Requirements:	<ul style="list-style-type: none"> • Research an existing type of technology that is in use harnessing energy from the ocean. • Create a visual presentation that explains the following: <ul style="list-style-type: none"> ○ What type of moving water does this machine/device use to produce electricity? ○ How does it convert hydrokinetic energy into electricity? ○ Who designed/developed this technology? ○ How long has this technology been around? ○ What impact could this have on the future of human energy use? ○ What impact does this energy technology have on the ocean habitat it is used in? ○ What impact do power plants have on the ocean? ○ What types of pollution do power plants create? ○ Compare and Contrast our current energy supplier (FPL) and this technology's benefits, costs, and global impact. • PERSUADE your audience to use this technology over nuclear power plant energy!
SPECIAL NOTES:	<ul style="list-style-type: none"> • You can create a video, powerpoint, prezzi, large poster, advertisement, infographic, or slideshow as long as it includes all of the important information from above. • You must PRESENT your creation to the class.

Plan and Interview Project

Description:	Select a college program or profession that has to do with Ocean Energy Technology or Engineering and interview someone from that institute/company.
Requirements:	<ul style="list-style-type: none"> • Research a college program that works with Ocean Energy Technology or Engineering. • Interview someone from that college program (director, professor, or student) to help you answer questions about the field of Ocean Energy Technology. • Create a visual presentation that explains the following: <ul style="list-style-type: none"> ○ Include a short biography about the person you interview or some background about their career and personal interests. ○ What college program does this person teach or study? ○ How long has this college program been available to students? ○ What type of jobs can someone get when they graduate this program? ○ What basic salary would each of those jobs earn? ○ What types of Ocean Energy does this college program study? ○ What type of machines or device has this college program designed? ○ Is this college program currently testing any new devices to harness energy? ○ If so, what impact does this energy technology have on the ocean habitat it is used in? ○ What impact could this program have on the future of human energy use?
SPECIAL NOTES:	<ul style="list-style-type: none"> • You can create a video, powerpoint, prezi, or slideshow of the important information from above about the college program/job field. • You must PRESENT your creation to the class.

Rap or Sing Project

Description:	Create an original song or rap about the main ways we harness energy from the ocean. Be specific and talk about all of the types of technology that is being developed, what colleges in our area offer those programs, and how it can impact the environment and the future of human energy consumption.
Requirements:	<ul style="list-style-type: none"> • Create a song or rap that includes ALL of the following: <ul style="list-style-type: none"> ○ What are the main ways we harness energy from the ocean? ○ What types of technology already exists to convert electricity from water? ○ What impact could this have on the environment due to pollution? ○ What impact could this have on marine habitats? ○ What impact could this have on the future of human energy use? ○ What college programs are in our area that you can pursue this degree from? ○ What type of jobs are there in this field of study?
SPECIAL NOTES:	<ul style="list-style-type: none"> • You can create a video of your rap instead of performing it in class. • MUST have instrumental music (no words except for you singing) to sing along to. • You must PRESENT your song/rap to the class. • MUST be school appropriate and contain no foul language!