MMSA
Maine Mathematics and Science Alliance

Energy and Climate Education in Maine

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leadership | science | technology

Energy for *me*

Setting:

10 coastal and island communities
Middle and high school

Project Elements:

Summer Institutes
Energy for ME Curriculum and Toolkit
Community Energy Competition
Student-led data driven projects
Annual Energy Fair



Impacting Change?

E4ME students







Non- E4ME Students



Elementary

CONNECT SCIENCE

Topic/Problems	Community Partners
Topic: ***Energy and Natural Resources*** Essential question: ***How can we conserve and protect our natural resources for future generations?*** ***What are possible problems to address?*** • Much of the energy that humans use in their daily lives is produced using non-renewable resources. • Humans use fossil fuels to produce and transport food. • Most of our electricity comes from non-renewable energy sources.	***Who benefits from the service?*** (Examples) • School districts • Parents or families • Everyone, because there is less air pollution and there are more resources available for future generations ***What experts can help with the project?*** (Examples) • Local power company representative • Business owner interested in energy conservation • School cafeteria manager to discuss local foods • School custodial staff or administrator to discuss energy use
Student Ownership	**Academic Integrity**

How will students discover the problem/need?
• By engaging in guided activities about energy systems and renewable and non-renewable resources.
• By engaging in tasks in which students evaluate how they use energy in their daily lives. For instance, students conduct a classroom energy audit.
 	
What decisions will they make along the way to solve the problem?
• Which energy sources should we use the most, and why?
• Where can energy be conserved?
• What changes in our daily lives will reduce our energy use the most?
	What are the curricular connections?
	• NGSS Standards
	  ○ PS3 Energy
	  ○ ESS3 Earth and Human Activity
	  ○ Systems and System Models
	• CCSS Connections
	  ○ W 4.2, 4.7, 4.8, 4.9
	  ○ RI 4.3, 4.9
	• College, Career and Civic Life (C3) Standards
	• Social and Emotional Competencies

Climate and Energy Education Leaders in Maine

Gulf of Maine Research Institute
Science. Education. Community.

MMSA
Maine Mathematics and Science Alliance

MEEA
Maine Environmental Education Association

Maine Audubon

ISLAND INSTITUTE

Hurricane Island
Center for Science and Leadership

Opportunities

1. New science learning standards for Maine

2. Educators want experiential STEM learning opportunities for their students

3. Energy and climate issues are dinner table topics

4. Educator professional development – Results of the Maine Environmental Learning Census

5. Maine Environmental Literacy Plan