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ALASKA'S K-12 ENERGY EFFICIENCY CURRICULUM

www.akenergysmart.org

KATIE CROFT

RENEWABLE ENERGY ALASKA
PROJECT (REAP)



ACEP



REAP
Renewable Energy
Alaska Project



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ENERGY LITERACY

An energy-literate person:

- Can trace energy flows and think in terms of energy systems.
- Knows how much energy they use, for what purpose, and where the energy comes from.
- Can assess the credibility of information about energy.

Source: USDOE



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ENERGY LITERACY

An energy-literate person:

- Can communicate about energy and energy use in meaningful ways.
- Is able to make informed energy use decisions based on an understanding of impacts and consequences.

Source: USDOE

Energy Literacy Principles

1 Energy is a physical quantity that follows precise natural laws.



2 Physical processes on Earth are the result of energy flow through the Earth system



3 Biological Processes depend on energy flow through the Earth System



4 Various sources of energy can be used to power human activities, and often this energy must be transferred from source to destination.



5 Energy decisions are influenced by economic, political, environmental, and social factors.



6 The amount of energy used by human society depends on many factors.



7 The quality of life of individuals and societies is affected by energy choices.





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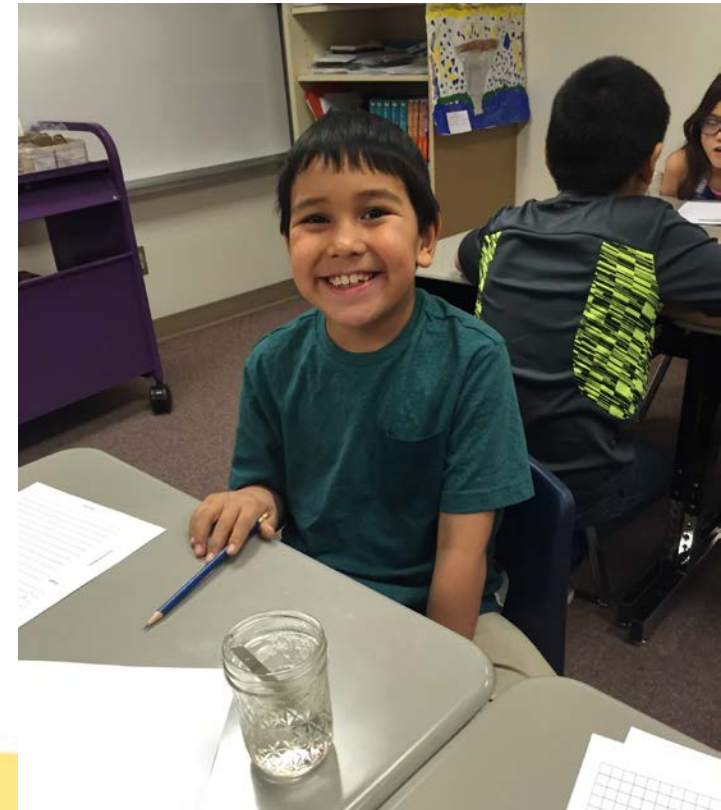
- Funded by the Alaska Housing Finance Corporation (AHFC) in 2011-2012, 2014-2015; developed by the Alaska Center for Energy and Power (ACEP) and Renewable Energy Alaska Project (REAP)
- Content reviewers:
 - Cold Climate Housing Research Center
 - Alaska Native Knowledge Network
 - Juneau Economic Development Council's STEM Program
 - Pilot teachers from around the state



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- **Purpose:** give Alaskan youth a better awareness of how they use energy and the importance of taking measures to use energy wisely both at home and school
- Alaska-specific; designed with Alaska's unique cultures, environments, and energy challenges in mind
- 23 lessons from Kindergarten to Grade 12





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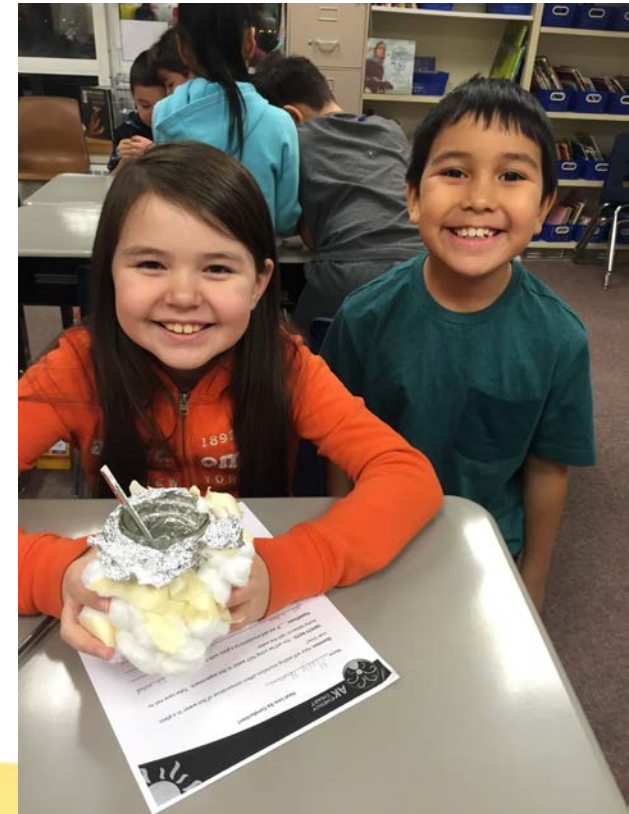
- **What are various forms and sources of energy?**
- **How do we use energy?** What various energy efficiency options are available?
- **Why should we care about energy efficiency?** How can demand side energy efficiency and conservation and generation side energy efficiency reduce overall energy consumption and why is that important?
- **What direct steps can I take in my school and home to lower consumption?**



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- **Standards Alignments:**
 - Alaska English Language Arts and Mathematics Standards
 - Next Generation Science Standards
 - Alaska Science Grade Level Expectations
 - Alaska Cultural Standards
 - Alaska Technology Standards



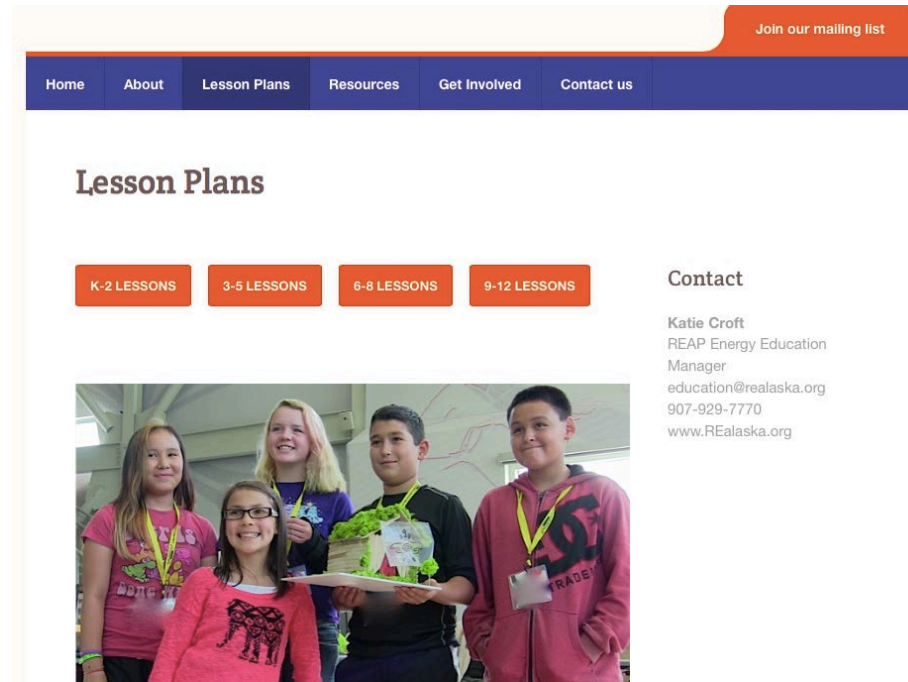
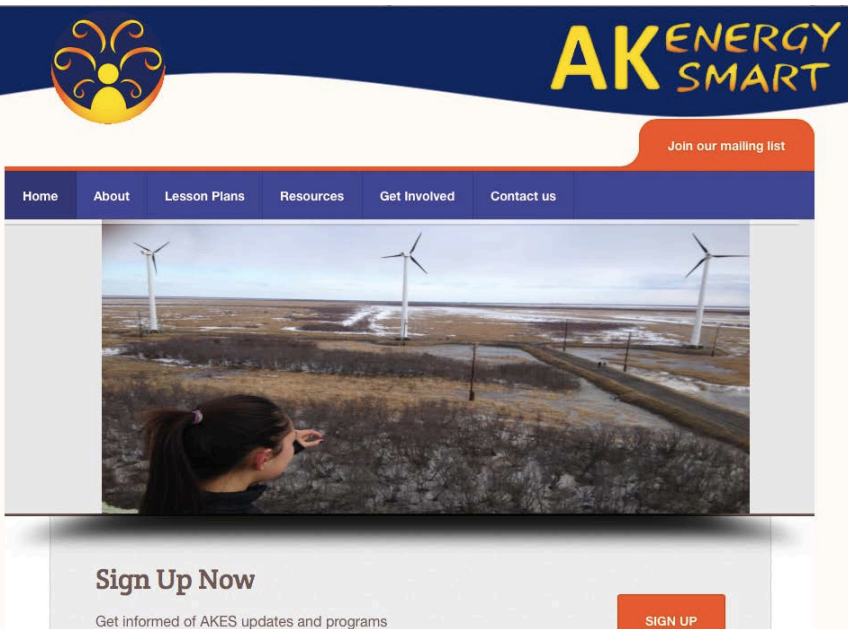


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WWW.AKENERGYSMART.ORG

- Houses all lessons and corresponding worksheets/multimedia
- FREE to download and use
- Links to further resources and testimonials



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Renewable Energy
Alaska Project



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WHAT WE OFFER

- Access to AKES lessons
- Teacher trainings in hub communities
- Classroom visits to model the curriculum
- Free kits including Kill-A-Watt meters and other supplies that support the curriculum mailed anywhere in AK





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- Educator workshops and classroom visits around the state



Classroom visit in Anchorage



Teacher workshop in Fairbanks



Classroom visit in Kokhanok



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OTHER ENERGY EDUCATION PROGRAMS



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- “I appreciate the AK focus; this is not often seen in energy curriculum yet we have some specific challenges to address.” – Alaskan educator
- “I like that the lessons are appropriate for our students, and the age group I'm teaching, easily adaptable, and can lead to other energy topics.” – Alaskan educator
- “I found the lesson on building your own home particularly useful. I feel it would be interesting to see kids’ reactions when they realize how much energy they go through.” – Alaskan educator
- “More teachers should be utilizing this curriculum and resources. Students should be learning about this NOW!” – Alaskan educator



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FOR MORE INFORMATION

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