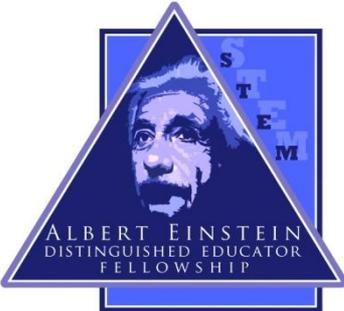


DaNel Hogan

Department of Energy

Office of Energy Efficiency and Renewable Energy



Albert Einstein Distinguished Educator Fellowship

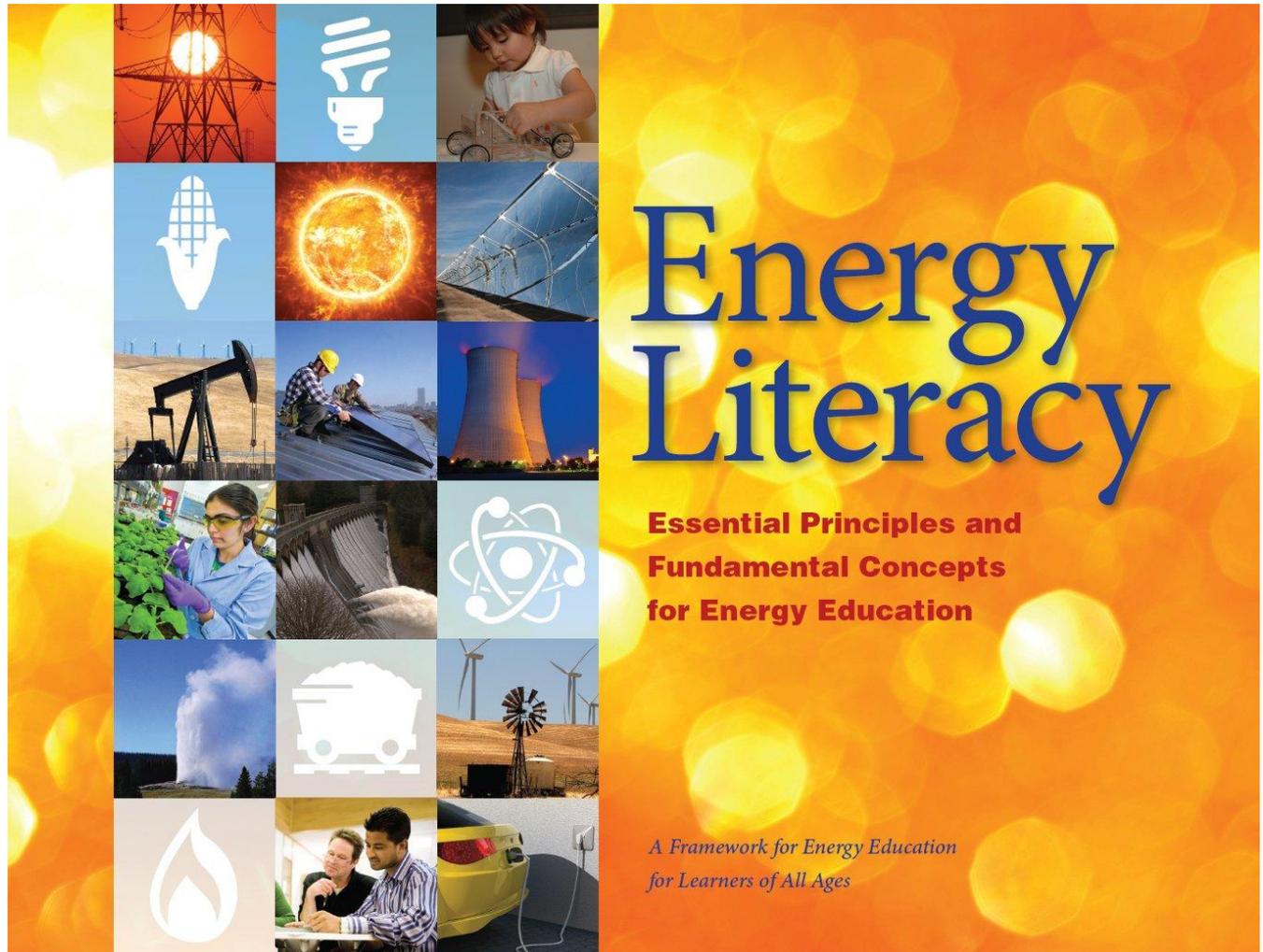
- K-12 STEM educators
- Serve in the national public policy arena
 - National Science Foundation
 - U.S. Department of Energy
 - NASA
 - National Oceanic and Atmospheric Administration
- Provide practical insight in establishing and operating education programs
- Increase understanding, communication, and cooperation between legislative and executive branches and the science, mathematics, and technology education community

Energy Literacy

Essential Principles and Fundamental Concepts for Energy Education

An effort to define what it means to be energy literate and to identify the essential understandings that underlie this literacy.

Centerpiece (at right) – A guiding document that provides context, background and definitions, along with identifying the Essential Principles and Fundamental Concepts that underlie Energy Literacy.



Energy Literacy

The Essential Principles of Energy Education:

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.



Energy Literacy

Back Cover:

U.S. Global Change Research Program Partner Agencies:

- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Energy
- Department of Health and Human Services
- Department of the Interior
- Department of State
- Department of Transportation
- Environmental Protection Agency
- National Aeronautics and Space Administration
- National Science Foundation
- The Smithsonian Institution
- US Agency for International Development



Education Partners:

- Alliance to Save Energy
- American Association for the Advancement of Science, Project 2061
- American Association of Blacks in Energy
- American Nuclear Society
- Association of Public and Land-Grant Universities
- Center of Science and Mathematics in Context, University of Massachusetts, Boston
- Chabot Space & Science Center
- Climate Literacy and Energy Awareness Network
- Cooperative Institute for Research in the Environmental Sciences, University of Colorado, Boulder
- Energy Bridge
- KQED San Francisco, QUEST
- National Center for Science Education
- National Council for Science and the Environment
- National Energy Education Development Project
- National Energy Foundation
- National Science Teachers Association
- North American Association for Environmental Education
- Otherlab
- Science Museum of Minnesota
- TERC
- WestEd
- Wisconsin K-12 Energy Education Program
- Women Impacting Public Policy

U.S. Department of Energy
1000 Independence Ave SW
Washington, DC 20585
202-586-5000
<http://www.globalchange.gov>



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INTERNATIONAL ATOMIC ENERGY AGENCY



steinsteinfellows.org

Energy Literacy

Essential Principles and Fundamental Concepts for Energy Literacy

Framework

- Seven Essential Principles each with 6-8 Fundamental Concepts
- Approved by 13 U.S. federal agencies and many more education partners
- Presents energy concepts that, if understood and applied, will help individuals and communities make informed energy decisions

globalchange.gc

A portrait of a woman with glasses and a blue and white patterned shirt, smiling.

Idaho STEM Opportunities

- One-to-one Technology
- Next Generation Science Standards
- Partnerships!
 - Internships
 - Competitions
 - Citizen Scientists
- STEM Master Teacher Corps

Idaho STEM Challenges

- STEM for Everyone
- Systemic Sustainability
- Teachers
 - Time/Sacrifice
 - Professional Development
 - Highly Qualified
 - Elementary STEM

Free First Step

RESPECT for
the profession
of teaching!