

4th Grade

# Sharing the Planet

*An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution.*

---

February–March 2019/20

## TEACHERS

Barbara James, Jill Frauenthal, Dana Davis

### CENTRAL IDEA

Energy choices impact society and the environment.

Lines of Inquiry	Teacher Questions	Key Concepts	Related Concepts
<ul style="list-style-type: none"><li>• Energy sources</li><li>• Transfer of energy</li><li>• Societal &amp; environmental effects</li></ul>	<ul style="list-style-type: none"><li>• How is energy obtained, converted, transferred, and used?</li><li>• What is the impact of our energy choices?</li><li>• What responsibility do humans have in the acquisition and production of energy?</li></ul>	Change Connection Responsibility	Energy Society Environment

## UNIT VOCABULARY

Impact, society, environment, climate change, acquisition, fossil fuels, energy, solar, global warming, pollution, responsibility, wave, renewable, nonrenewable, transfer, source, resource

SKILLS AND PROCESSES			
Reading	Writing	Science/SS	Math
<ul style="list-style-type: none"><li>• RU of S: Testing as a genre</li></ul>	<ul style="list-style-type: none"><li>• Essays (analytical expository)</li><li>• Debate opinion essay</li></ul>	<ul style="list-style-type: none"><li>• Waves</li><li>• Energy</li><li>• Resources</li><li>• Economics</li></ul>	<ul style="list-style-type: none"><li>• Fractions</li><li>• Decimals</li><li>• Geometry</li><li>• Measurement</li></ul>

## PRIOR LEARNING/CONNECTIONS

*(What do you know about the Central Idea? What connections can you make?-planners in earlier grade levels)*

- KWL
- Student Surveys
- Discussions
- Student Checklists
- Writing

LEARNER PROFILE ATTRIBUTES <i>(attributes which are focused on in this unit are in this color)</i>					
Inquirer	Communicator	Risk-taker	Thinker	Reflective	Quality Producer
<b>Caring</b>	Knowledgeable	Open-minded	<b>Balanced</b>	Principled	Community Contributor

## STUDENT QUESTIONS

- How does electricity work?
- How does energy change?
- What is an atom?
- How does global warming affect cold areas?
- Do plants use energy when growing?
- Does everything have energy?

## LEARNING ENGAGEMENTS

- Frontloading: [energy sources video](#) and [notes page](#)
- [Bill Nye Video “Waves” \(transfer of energy\)](#) (LOI 2)
- Energy Source Sort (renewable and nonrenewable energy)
- [Energy Slideshows \(renewable and nonrenewable energy\)/presentations](#) (LOI 1 & 3)
- [Energy Debate: persuasive essay/presentation](#) (LOI 1 & 3)

<b>APPROACHES TO LEARNING</b> <i>(skills which are focused on in this unit are in this color)</i>	
<b>Social Skills</b>	<ul style="list-style-type: none"><li>• <b>Developing positive interpersonal relationships and collaboration skills</b><ul style="list-style-type: none"><li>◦ Accept Responsibility</li><li>◦ Respect others</li><li>◦ Cooperate</li><li>◦ Resolve conflict</li><li>◦ Group decision-making</li><li>◦ Adopt a variety of group roles</li></ul></li><li>• <b>Developing social-emotional intelligence</b></li></ul>
<b>Communication Skills</b>	<ul style="list-style-type: none"><li>• <b>Exchanging information skills</b><ul style="list-style-type: none"><li>◦ Listening</li><li>◦ Speaking</li><li>◦ Non-verbal communication</li></ul></li><li>• <b>Literacy skills</b><ul style="list-style-type: none"><li>◦ Viewing</li><li>◦ Presenting</li></ul></li><li>• <b>ITC skills</b> (using technology to gather, investigate and communicate info)</li></ul>

<b>Research Skills</b>	<ul style="list-style-type: none"> <li>• <b>Information-literacy skills</b> <ul style="list-style-type: none"> <li>◦ formulating/planning</li> <li>◦ Observing</li> <li>◦ Data gathering/recording/organizing</li> <li>◦ synthesizing/interpreting</li> <li>◦ evaluating/communicating/presenting research findings</li> </ul> </li> <li>• <b>Media Literacy</b></li> <li>• <b>Ethical use of media/information</b></li> </ul>
<b>Self-Management Skills</b>	<ul style="list-style-type: none"> <li>• <b>Organization skills</b> (manage time and tasks effectively)</li> <li>• <b>States of mind</b> <ul style="list-style-type: none"> <li>◦ Mindfulness</li> <li>◦ Perseverance</li> <li>◦ Emotional management</li> <li>◦ Self motivation</li> <li>◦ Resilience</li> </ul> </li> <li>• <b>Gross motor skills</b></li> <li>• <b>Fine motor skills</b></li> <li>• <b>Spatial awareness</b></li> <li>• <b>Organization</b></li> <li>• <b>Safety</b></li> <li>• <b>Healthy</b></li> <li>• <b>Codes of behavior</b></li> <li>• <b>Informed choices</b></li> </ul>
<b>Thinking Skills</b>	<ul style="list-style-type: none"> <li>• <b>Critical thinking skills</b> <ul style="list-style-type: none"> <li>◦ Synthesis (combining parts to make wholes, creating, designing)</li> <li>◦ Analysis (taking ideas apart, separating into component parts, seeing relationships)</li> <li>◦ Evaluation</li> </ul> </li> <li>• <b>Creative thinking skills</b></li> <li>• <b>Transfer skills</b> <ul style="list-style-type: none"> <li>◦ Application (using previous knowledge)</li> </ul> </li> <li>• <b>Reflection/metacognitive skills</b></li> <li>• <b>Acquisition of knowledge</b> (gaining specific facts, ideas, vocab, remembering in a similar form)</li> </ul>

## ACTION

- A student created a model of a windmill at home.
- Students noticed solar panels and windmills when driving past them on a field trip.

- A student typed their own debate and notes during spring break.

## LEARNING GOALS AND SUCCESS CRITERIA

- [Rubric, Self-assessments,](#) and [Reflections](#) (this is a link to the [template](#) teacher will use to make a copy of for their own class to fill out and link below)
  - James Rubric (sample student rubric)
  - Frauenthal Rubric (sample student rubric)
  - Davis Rubric (sample student rubric)