Conducting the Energy Conservation Pathway

BEFORE AND AFTER THE AUDIT, GRADES K-2

BEFORE

BE PREPARED

- Read through this document, the baseline audit and the post-action audit.
- Invite community experts to participate.
- Gather science tools (if applicable) and print materials.
- Conduct mini-lessons (if needed) to strengthen concept foundation.

ENDURING UNDERSTANDING

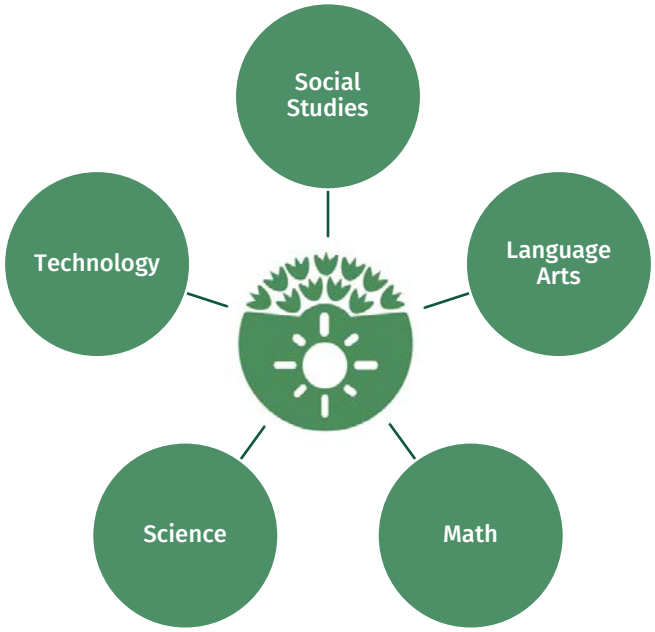
1. Energy comes in many forms.
2. Living things depend on different forms of energy for what they need and want.
3. People can use a variety of tools including data collection and analysis to make decisions about their energy use.
4. A sustainable future depends on personal choices and actions.

COMMUNITY AND CULTURE

- Our current reliance on fossil fuels is unsustainable and harmful to the planet and to the communities who rely upon energy to sustain their way of life.
- Cultural diversity is a source for learning sustainable practices.
- Energy poverty is a lack of access to modern energy services. Access to energy is fundamental to improving quality of life and is a key imperative for economic development. In the developing world, energy poverty is still rife. Nearly 1.6 billion people still have no access to electricity.
- Intercultural dialogue should be a guiding principle in developing solutions, raising awareness and promoting action.
- Create an inclusive, safe place for Eco-Action Team members and others within and outside of the school community to participate.

INTERDISCIPLINARY CONNECTIONS

- **Language Arts –** Insert basic academic vocabulary and provide resources for students to begin practicing and comprehending informational and scientific text as the reader and/or as the listener, such as *Energy Makes Things Happen*, by Kimberly Bradley.
- **Science –** Identify different forms of energy, light, heat, wind, solar, hydro. Sort them by where the energy type comes from, the atmosphere, the ground or the ocean.
- **Technology –** Use the data collected from monitoring to create a digital story that can be shared to inform the school or grade level about the progress toward the goals.
- **Math –** Make charts and graphs using the data collected from energy monitoring.



SUSTAINABLE DEVELOPMENT GOALS

In 2016, seventeen Global Goals for Sustainable Development were adopted by world leaders at a United Nations Summit. These goals universally apply to all countries, therefore Eco-Schools USA is committed to doing our part. Over the next fifteen years, efforts will be made by governments, institutions and citizens all across the globe to end all forms of poverty, fight inequalities and tackle climate change, while ensuring nobody is left behind.

7 AFFORDABLE AND CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Learn more at globalgoals.org

GATHER THE FOLLOWING MATERIALS

- Student worksheet(s)
- Audit form
- Clip boards
- School map(s) – inside and outside
- Lumen meter (optional)

DASHBOARD METRIC

On average, by how many kWh has your school's electricity decreased since collecting your baseline data?

PROCEDURE

1. Before the audit, contact local experts who are willing to assist. These individuals can provide more in depth understanding and can help direct the team when questions and/or concerns arise.
2. Read through the audit. As an Eco-Action Team determine, based on the size of your school and the number of appliances/devices, how much time will be needed to complete the baseline or post-action audit.
3. Highlight the locations on the school maps where teams will collect data.
4. Conduct the baseline audit and make plans to conduct the post-action audit.
5. Analyze the results and develop an action plan.
6. Frequently communicate results and plans with the school and community.

AFTER

1. NEXT STEP: DEVELOP AN ACTION PLAN

Move into Step 3 of the Seven Step Framework by using the audit results to develop an action plan.

Identify community leaders, experts, advocacy organizations who can assist students with solution implementation and advise the Eco-Action Team how to address issues of social justice.

2. UPDATE YOUR DASHBOARD

Login to the school's dashboard and complete the following tasks.

- Upload your audit results and your action plan.
- Add any related photos or videos.
- After completing the post-action audit and moving through the Seven Step Framework apply for an award.

3. RANGER RICK, A MENTOR FOR TODAY'S KIDS

Ranger Rick, the National Wildlife Federation's friendly raccoon, helps children of all ages discover and connect with nature so they become good stewards of the environment.

- Ranger Rick Jr. for ages 4-7, classroom subscriptions
- Ranger Rick Photo Contest
- Ranger Rick Zoobooks

4. NEXT PATHWAY

Climate Change Pathway –
Water is a critical habitat element and plays an important role in the preparation, implementation and maintenance of gardens for wildlife.

Healthy Schools Pathway – Addressing Water and Soil Contaminants and IAQ
Providing students and staff with a healthy learning and working environment is an important component of every sustainable school. Learn more about conditions that can impact the learning environment and how to inform the community and advocate for change.

5. CONNECT TO THE GLOBE PROGRAM

The Global Learning and Observations to Benefit the Environment (GLOBE) Program is an international science and education program that provides students and the public worldwide with the opportunity to participate in data collection, the scientific process, and contribute meaningfully to our understanding of the Earth system and global environment.

Atmosphere
clouds | precipitation | surface temperature

Biosphere
land cover classification

Hydrosphere
freshwater macroinvertebrates | water temperature | water pH

Pedosphere
infiltration | fertility | pH | temperature