

TEACHER
GUIDE

Panasonic Student Eco Citizenship Project



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Panasonic

FOUNDATION *for* IMPACT
on LITERACY *and* LEARNING



You are embarking on a journey with your students to study the Earth’s environment and the many factors that affect it. While experiencing this student-centered curriculum, you and your students will become active participants in creating a sustainable global environment and society. Thousands of Panasonic employees across the world have become global citizens – engaging in local environment protection activities, joining forces with local residents, fundraising to support environmental initiatives – and now the invitation is extended to you.

The Panasonic Student Eco Citizenship Project is a four-lesson, project-based learning experience that leads students to take actions to protect the environment in their community. The lessons also direct students on how to complete their

team submission and enter it into the Panasonic *Eco Picture Diary*

Competition. The curriculum is intentionally designed to develop student skills in STEM, literacy, research, critical thinking and problem-solving as defined in the Next Generation Science Standards (www.nextgenscience.org). The corresponding standards and practices are referenced in each lesson. In addition, the curriculum aligns with the student standards from the International Society for Technology in Education (ISTE). The ISTE standards are designed to empower student voice and ensure that learning is a student-driven process. An alignment guide is provided on pages 12-13 to introduce these standards and demonstrate their use in the lessons. Students will read informational texts in order to build knowledge about environmental issues that affect the world and research current organizations that work to address these issues. Based on evidence they gather in their research students will take personal action to become a “global citizen” in their local communities. By the end of the project, students will create an illustrated *Eco Picture Diary* to share the story they completed to protect and save the environment. You may want to share the diary format with students when you begin this project. Students will submit either a print or digital version of the *Eco Picture Diary*. At the end of the project, you (the teacher) will select the three best entries from your participating teams for the chance to win prizes and recognition.

Take time to read through the details included in this Teacher Edition in order to become familiar with each lesson. You will find that the Student Edition contains all directions and handouts students will need; however, the Teacher Edition is packed with resources, tips and suggestions for successful implementation of each lesson. You can also find additional resources on the website at ecocitizenship.org.





Before You Begin

- 1** Review the **Panasonic Student Eco Citizenship Project** website, ecocitizenship.org. Become familiar with the competition and take time to view past winning entries before you lead students through the **Panasonic Student Eco Citizenship Project**. By the end of this project-based learning experience, students will create and submit an illustrated *Eco Picture Diary* to the **Panasonic Eco Picture Diary Competition**. Please become familiar with the rubric found in the back of the teacher's guide and additional resources on the program website.
- 2** Read and become familiar with each step students must take for their projects. **Entry deadlines and submission information can be found on the project website**. Allow enough time for students to complete all lessons in order for them to submit a complete *Eco Picture Diary* entry.
- 3** The *Eco Picture Diary* can be submitted by mail if using the printed booklet or submitted digitally if using the template that can be found on the website. ***Please Note:** Each participating teacher is only allowed to submit their top three student team entries. Each submission must include one photo of the student teams in action. If using the digital template, photo can be embedded into the deck. If using the hard version of the *Eco Picture Diary*, email your one photo to kim@fillprograms.org or print one photo and include it with your entry.
- 4** Visit <http://panasonic.com/global/home.html> to learn more about how Panasonic is already engaged as a global environmental citizen. This will give you and your students some great ideas!
- 5** Consider extending the **Panasonic Student Eco Citizenship Project** beyond the contest deadline. Encourage students to continue their Eco Citizenship beyond the classroom. You may even have students who want to start a Student Eco Citizenship Club!
- 6** Be sure that students save ALL work they complete during each lesson. They will need to refer back to information captured during previous steps as they complete their projects.



Lesson 1

Define and research an environmental issue in your community

Next Generation Science Standards

Practice 1: Asking questions and defining problems

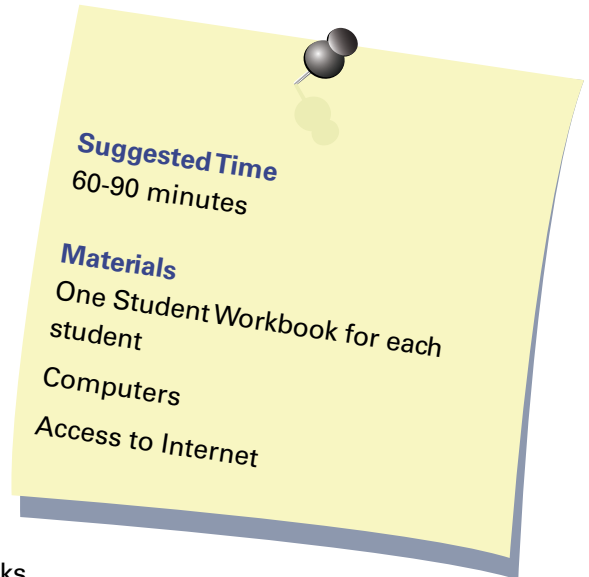
Practice 2: Planning and carrying out investigations

Practice 8: Obtaining, evaluating, and communicating information

NCTE National Literacy Standards

Standard 7: Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

Standard 8: Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.



Objectives

Students will:

- Explore and share prior knowledge about environmental issues.
- Draw conclusions about how their actions can positively affect the environment.
- Brainstorm a list of actions they can do to protect and save the environment.

Facilitation Tips



As students begin filling out the Environmental Issues Chart, be available to help them define unfamiliar issues. You may want to reference the EPA website, www.epa.gov/environmental-topics, to better understand each topic. This resource is only a starting point. Use the list of Additional Resources found at ecocitizenship.org. You may also consider pointing students to the school or local library, respected newspapers or other reliable websites to collect information.

If students are new to research, you may want to provide additional help. Refer to the Teacher Resources section on the website for a lesson on Effective Online Research.



Lesson 1 (cont.)

STEP 1 cont.

On the last line of the chart, students are instructed to list other issues that are currently facing the environment. After completing the Environmental Issues Chart, invite students to share their responses in order to collect their ideas in a central location. Leave this list of topics in the classroom so students can refer to the list during future lessons.

STEP 2

To fill out the chart, have students select 3-4 of the issues they researched in Step 1. They will compare what they learned in their research to what they personally see in their own community. Explain to students that community can mean their school, their local neighborhood or even the world since they are global citizens.

After students list simple and positive actions they can take to impact their local environment, direct them to share their ideas with classmates.

STEP 3

The charts students complete during this lesson will lead them to think about possible answers and actions they can personally take to become global citizens. Use this step as a transition into the brainstorming activity.

After students have brainstormed solutions to protect and save the environment, record student responses in a central location so students may refer to the list during future lessons. Encourage students as they brainstorm to list all possible ideas – big or small! Remind students that during the brainstorming process there is no wrong answer and no idea that is out of reach. Creative thinking is encouraged.



Lesson 2

Create actions to prevent or improve the situation

Next Generation Science Standards

Practice 2: Developing and using models

Practice 6: Constructing explanations and designing solutions

Practice 7: Engaging in argument from evidence

NCTE National Literacy Standards

Standard 4: Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Standard 8: Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

Objectives

Students will:

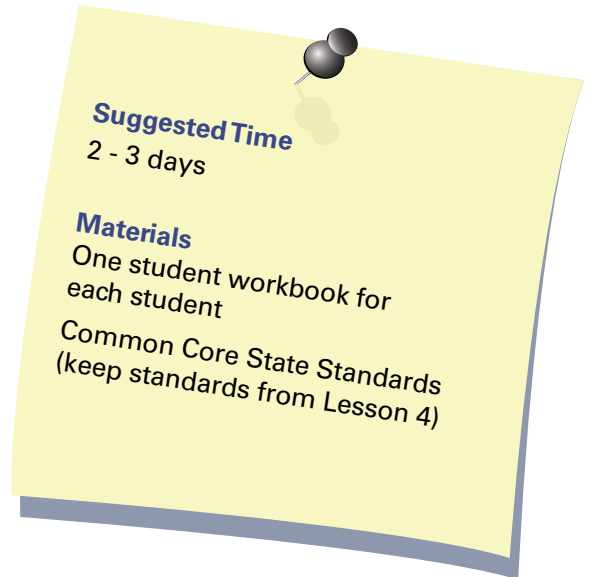
- Identify specific actions they can take that may have a positive impact on their local environment.
- Determine an Eco Project Goal.
- Create a plan to achieve their Eco Project Goal.

Facilitation Tips

Students will work in teams of 3-4 students. This is a part of the official contest rules, so please ensure that each team has the specified number of students.



As teams get together to share their brainstorming ideas from the previous lesson, circulate throughout the room to monitor progress. Help any teams that may be stuck reaching consensus. There will be many solutions generated in each group and they will need to select one to work on together as a team.





Lesson 2 (cont.)

STEP 2

In this step, it is very important for students to create an Eco Project Goal that will enable them to complete actions to help improve the environment. Encourage students to keep their goals **action-oriented**. While they can use social media to help publicize their project, this should **NOT** be the main focus of their work.

Each team should complete a unique project. It is acceptable for the entire class to focus on one idea or topic, but each group should seek to complete their own project. For example, the entire class may decide to focus on recycling. In this case, one group may decide to replace old recycling bins while another group creates a school presentation to educate other students on how to recycle. Yet another group may decide to organize a recycling drive to collect recyclable materials from people in their community. It is important that each project is different and that they are all action-oriented.

STEP 3

As student teams complete their plan, encourage them to think about all the individual actions they will need to complete to achieve their Eco Project Goal. You may want to check in with groups during this step to ensure they are not overlooking important steps such as gaining permission from appropriate authorities or soliciting support from valuable stakeholders.

If groups appear stuck, consider facilitating a class discussion to generate ideas.



Lesson 3

Apply the planned actions in your community

Next Generation Science Standards

Practice 3: Planning and carrying out investigations

NCTE National Literacy Standards

Standard 4: Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Standard 5: Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

Standard 12: Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Suggested Time

Varies per group

Materials

One student workbook for each student, access to calendar, other materials needed or identified in their lesson two action plan.

Objectives

Students will:

- Implement their plan to achieve the Eco Project Goal.
- Collect data and record progress

Facilitation Tips

- Consider having time each class period for students to work with their teams. Students can share their progress with each other, review their plans together, check off actions that have been completed and discuss how they can be sure to complete the remaining actions by the designated deadlines.
- This lesson is designed for students to take action with their teams while still receiving support and assistance from you. Make sure you are available during group check-ins. Engage students in conversations about their projects to encourage students to think critically and evaluate their own progress.
- A few teams may need this time to leave the room and take action, or to plan their outside of class-time meeting.
- You may want to have a whole-group meeting with the class at the beginning of this lesson to discuss the “fine details” of their plan which will help with their progress tracker and data. Use the following as a guideline for conversation:



Lesson 3 (cont.)

Plan Implementation Tips

Creating an advertisement (informative flyer/invite)?

- Check spelling, date, time, location (be sure it is written large enough)
- Do you have permission to hang it (set a reminder date to take it down)

Setting up a for an event or going somewhere to complete the task (at lunch or before/after school)?

- Be sure to get permission
- Have a purpose, be organized and polite
- Collect before/after data (show results and impact)(necessary for the diary)
- Stick to the timeframe
- Know who should be in attendance
- Be sure to follow-up or clean-up at the conclusion of event/task

Writing an announcement?

- Be clear and concise with your statement - give it in a short amount of time
- Have a teacher or another group proofread what is going to be said
- If you will be reading the announcement, practice, practice, practice!

Planning a meeting?

- Write down meeting discussion points (and pre-arrange the meeting time)
- Have a clear purpose (and stay within the timeframe)
- Decide who will attend, who will speak, and who will take notes

Implementing a project at home?

- Take data or before and after pictures or statements
- Get quotes from family members about their thoughts on the new procedures

Remember!:

All *Eco Picture Diary* entries must include one photo of the team in action working towards the end goal.



Lesson 4

Evaluate your final results

Next Generation Science Standards

Practice 2: Developing and using models

Practice 4: Analyzing and interpreting data

Practice 8: Obtaining, evaluating, and communicating information

NCTE National Literacy Standards

Standard 4: Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Standard 5: Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

Standard 11: Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.

Objectives

Students will:

- Create *Eco Picture Diary* for competition submission.
- Share *Eco Picture Diary* with peers in order to provide and receive feedback.
- Reflect on the work of the team over the course of the lessons.

Facilitation Tips

- Students should review their process, progress and results for their Eco Project Goal.
- Students should reflect and capture their thoughts and experiences as they complete their diaries.
- Once student teams have completed all actions of their plan and worked through the rough drafts, they may begin the creation of their final *Eco Picture Diary*.
- Only ONE *Eco Picture Diary* may be submitted per student team.
- The final artistic submissions for the Panasonic *Eco Picture Diary* Competition must be original work, to include at least one photograph of the team in action.

Suggested Time
2-5 class periods

Materials
One student workbook for each student, computer, one *Eco Picture Diary* per team, other team notes/photos, diary supplies (colored pencils, pens, markers, etc.)



Instructions

1. One entry form must be completed and submitted with each student team entry to the Eco Picture Diary Competition. Students teams must be comprised of 3-4 students.
2. The *Eco Picture Diary* must consist of 4 entries (one for each lesson) and be completed in the *Eco Picture Diary* booklet, or the digital submission template.
3. Each entry will highlight specific actions taken by the student team to protect the Earth and improve the environment in your community.
4. Each Diary entry will include a picture and a paragraph to explain the steps taken.
5. The pictures must be actual photos of the student team working or original, hand-created artwork of the student team submitting the diary.
6. The paragraphs may be typed or hand-written in English and must be the original work of the student team submitting the diary.
7. Review the Official Contest Rules prior to submitting entries. Rules can be found on the website: ecocitizenship.org



Eco Picture Diary (EPD) Scoring Rubric

This rubric will be used to evaluate the Panasonic Student *Eco Picture Diary* entries.

All students should be familiar with the expectations. All entries must be the original work of the team and completed by teams comprised of a minimum of 3 and a maximum of 4 students.

Category	Scoring	PointsEarned
Diary Entry 1	<input type="checkbox"/> The entry includes one photo or original piece of artwork. (up to 5 pts) <input type="checkbox"/> The entry includes one paragraph describing the issue the team selected. (up to 5 pts) <input type="checkbox"/> The writing is coherent, uses correct sentence structure and has no errors in spelling or grammar. (up to 5 pts) <input type="checkbox"/> The photo or illustration is a clear representation of the team's environmental issue. (up to 5 pts)	___/20
Diary Entry 2	<input type="checkbox"/> The entry includes one photo or original piece of artwork. (up to 5 pts) <input type="checkbox"/> The entry includes one paragraph describing the actions the team took. (up to 5 pts) <input type="checkbox"/> The writing is coherent, uses correct sentence structure and has no errors in spelling or grammar. (up to 5 pts) <input type="checkbox"/> The photo or illustration is a clear representation of the impact of the team's work. (up to 5 pts)	___/20
Diary Entry 3	<input type="checkbox"/> The entry includes one photo or original piece of artwork. (up to 5 pts) <input type="checkbox"/> The entry includes one paragraph describing the successes and challenges the team faced. (up to 5 pts) <input type="checkbox"/> The writing is coherent, uses correct sentence structure and has no errors in spelling or grammar. (up to 5 pts) <input type="checkbox"/> The photo or illustration is a clear representation of the action taken in the community. (up to 5 pts)	___/20
Diary Entry 4	<input type="checkbox"/> The entry includes one photo or original piece of artwork. (up to 5 pts) <input type="checkbox"/> The entry includes one paragraph describing the results of the project and the teamwork needed to accomplish the goal. (up to 5 pts) <input type="checkbox"/> The writing is coherent, uses correct sentence structure and has no errors in spelling or grammar. (up to 5 pts) <input type="checkbox"/> The photo or illustration is a clear representation of the team's final result. (up to 5 pts)	___/20
Overall Presentation	The story as written and illustrated shows great enthusiasm and engagement by the whole team. It is clear that the team took action in their community to improve the environment. The impact of their actions was apparent. It is evident that the team took time to ensure the accuracy of the information presented including grammar, sentence structure and spelling. The illustrations draw your attention and are well aligned with the narrative. (The judge will award up to 20 pts in this category)	___/20
GRAND TOTAL OF POINTS AWARDED		___/100



ISTE Standards Alignment Guide

The International Society for Technology in Education has developed seven student standards that empower student voice and allow the learning experience to be driven by students. A further set of skills and behaviors are listed to define each standard.

All students should be familiar with the expectations. All entries must be the original work of the team and completed by teams comprised of a minimum of 3 and a maximum of 4 students.

ISTE Standard	Lesson 1	Lesson 2	Lesson 3	Lesson 4
Empowered Learner: Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.	1d - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.	1a – Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.	1a – Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.	1c - Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
Digital Citizen: Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.	2b - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.		2b - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.	2b - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
Knowledge Constructor: Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.	3a - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.	3d - Students build knowledge by active actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.	3d - Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions	3d - Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.



ISTE Standards Alignment Guide

ISTE Standard	Lesson 1	Lesson 2	Lesson 3	Lesson 4
<p>Innovative Designer: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.</p>	4d - Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.	4a - Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.	4a - Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.	
<p>Computational Thinker: Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</p>		5c - Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.	5c - Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.	
<p>Creative Communicator: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.</p>		6a - Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication. answers and solutions.	6a - Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.	6d - Students publish or present content that customizes the message and medium for their intended audiences.
<p>Global Collaborator: Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.</p>	7d- Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.	7c - Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.	7b - Students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.	7c - Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.



For More Information Visit:
ecocitizenship.org

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