

STUDENT
WORKBOOK

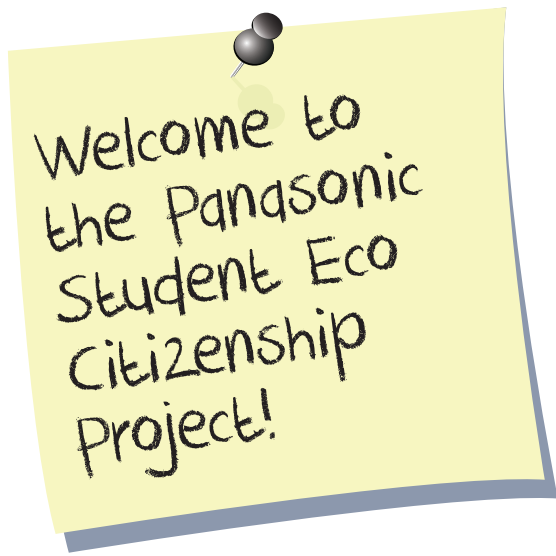
Panasonic Student Eco Citizenship Project



STUDENT WORKBOOK

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Get ready to learn about our Earth’s environment, the many factors affecting it and ways that you can become a *Global Citizen* to create a sustainable global environment and society. By the end of this project-based learning experience, you will put into practice specific actions you can carry out

in your school, home and community to protect and save the global environment. You will record and illustrate these actions in an *Eco Picture Diary* and submit them to the **Panasonic Eco Picture Diary Contest!** You will join thousands of students worldwide who are choosing to be global citizens by taking action to protect and save the world. So, let’s get started!



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Lesson 1

Define and research an environmental issue in your community

Find Out About Environmental Issues: Throughout the years, as science has advanced, we have learned more about the Earth and its environment. Many discoveries have been made about how the Earth works and how we as Earth's occupants, affect it. What is one way you positively or negatively affect the Earth? _____

STEP 1

The United States Environmental Protection Agency (EPA) is an organization created by the United States federal government. The primary purpose of the EPA is to protect human health and the environment by writing and enforcing regulations based on laws passed by the U.S. Congress. The EPA has created a list of environmental issues currently facing the Earth. Review the list of environmental issues below and learn about how these issues specifically impact you, your community and your world. Use the Internet to explore each issue and collect information as you complete the chart that follows.

*Your teacher has a list of websites for you. (Use additional paper as needed for your responses.)

ENVIRONMENTAL ISSUES CHART

Environmental Issues Identified by EPA	What I Already Know:
AIR	
CLIMATE CHANGE	
NATURAL EMERGENCIES	
GREEN LIVING	
LAND & CLEANUP	
PESTICIDES, CHEMICALS, & TOXICS	
RECYCLING/ELECTRIC WASTE (e-waste)	
WASTE (including e-waste)	
WATER	
What other issues have you heard or read about that are affecting our environment?	



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STEP 2

Observing My Neighborhood: Compare 3-4 of the environmental issues you researched, to the issues you see in your own neighborhood. Complete the chart with your observations. The first is completed as an example:

Environ. issue:	I see:	Cause, and effect	What we can do:	Pictures/proof?
Pollution (soil and water) and waste.	Litter. Potato chip bags, soda bottles on the side of the road.	Cause: Humans, overpopulation, not recycling. Effect: It will eventually get into drains, streams, rivers, lakes and possibly harm animals.	Recycle, Pick up after ourselves or others.	(you could take a picture of what you see- or take a neighborhood walk and describe what you see).

Examples to look for: effects of urbanization, weathering, trash, 'green space' (parks, nature preserves, trails). Think about alternatives to what is currently in place, alternative fuels, climate...etc.





Lesson 1 (cont.)

STEP
3

Brainstorm Solutions: Now that you have read about how individuals and organizations are taking action to protect and save the environment, it's time to think about the actions you can take to become a global citizen of the environment and inspire others to do the same. In the space below, list as many solutions as you can think of that you can do to protect and save the environment. At this point, no idea is too big or too small—just write down every solution that you can imagine! When you are finished go back and circle five solutions that most interest you.

There are items that I am not currently recycling or reusing. What are these items?

What is e-waste?

Think about some alternative energy ideas that I can use in my school or home

Maybe I can educate my classmates and family about this environmental issue!



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Lesson 2

Create actions to prevent or improve the situation

You have explored many different issues affecting the environment. Now it is time to decide how you can become a true global citizen and make a difference in protecting and saving the environment. Divide into student teams and refer to the work you completed in Lesson 1 to develop a project goal to prevent or improve an environmental issue in your community.

Each team will:

- consist of 3-4 students.
- develop a unique project goal to complete together.
- share the results of the project in the *Eco Picture Diary*.
- submit the *Eco Picture Diary* by the contest deadline.



With your team, share the five solutions you circled at the end of Lesson 1. Once you have reviewed and discussed each team member's solutions, work together to select one solution the group is interested in addressing. Write that solution in the box below.

Our team's solution is:



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Lesson 2 (cont.)

STEP 2

Now that you have a solution selected, it is time to turn your solutions into ACTION! Think about what you can DO, what ACTIONS you can take, what your team can ACCOMPLISH to help protect the environment. This will be your team's Eco Project Goal and will be the first step in planning your project. For example, your team may select recycling as a solution you want to pursue. One Eco Project Goal for this solution would be to increase the recycling opportunities around your school.

Focus your goal on action that your team can take. For example, creating a social media account may draw attention to the environmental cause and inspire others to act, however, for this project your team will be the ones taking action and getting out in the community to make a difference. You want to be active in improving the environment, not just talking or posting about it. Focus on goals that are action-oriented like cleaning up litter or implementing a composting program. Write your team's Eco Project Goal in the box below.

Our team's Eco Project Goal is:



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Lesson 2 (cont.)

STEP 3

Having an Eco Project Goal is only the first step in making a difference in your local community. You must also have a plan to help you accomplish your goals. Use the planning tool below to determine the actions you will take to achieve the Eco Project Goal your team selected. Use all the resources available to you: the Internet, newspaper articles, classmates, family members, your teacher and local organizations. Take your time developing your plan and be specific as you develop and describe each action. Remember that each item you list should be an ACTION you can take that will help you ACCOMPLISH your team's goal.

Eco Project Goal	How Will You Accomplish This Goal? (Actions)	What Resources Will You Need?	Who Will Be Responsible?	Deadline
Ex. Increase Recycling opportunities around our school	Ex. Talk to principal and maintenance staff to get approval.	Ex. We may need a teacher to support our idea	Ex. Jim, Shatarah and Myron	Ex. January 15

Planning can take a lot of time, but a well-planned project goal will save you a lot of time in the long run and ensure the success of your project!



Lesson 3

Apply the planned actions in your community

Now that you have a plan, it is time to take action! It may seem like there is a long road ahead, but once you complete your actions you will be so proud of your hard work and all that you have achieved. Get ready to make a difference in your community!

STEP 1

Before you get to work, there are a few final details to consider.

- a) Review your plan and highlight the actions that are most important. You will want to get these done first. Consider putting the actions in the order you plan to complete them.
- b) Be sure to check deadlines and use a calendar so that your team does not run out of time.
- c) Photo opportunity! Assign someone to take pictures of your team in action. You will need to submit one photo of your team in action to complete your *Eco Picture Diary* submission.
- d) Keep track of your progress. Collect data and numerical information about the work you have completed. For example, if you are picking up trash around your school, you can count the number of bags you collect. Not everything can be measured with a number, but you can still describe your progress as you work through your plan.



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Lesson 3 (cont.)



Track Your Progress

Use the chart to track your progress and the actions you take as you work to accomplish your Eco Project Goal.

<i>What action did you complete from your plan?</i>	<i>What progress did you make in accomplishing your Eco Project Goal?</i>	<i>What data, numbers or evidence can you share to describe this action?</i>	<i>Date completed</i>

You will be describing the completion of your actions in your *Eco Picture Diary*. Your pictures, data and reflections from the table above will help you share the work you did to protect the Earth and improve your community.





Lesson 4

Evaluate Your Final Results

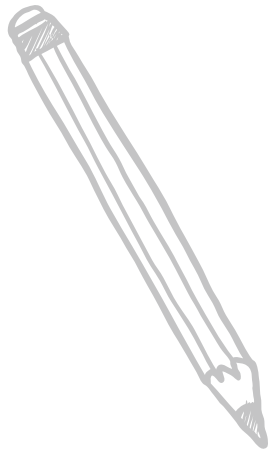
You have completed all the actions from your plan and you have accomplished your Eco Project Goal.

Congratulations! You have done valuable work to make a difference in the environment and in your community.

Now it is time to share your results in your *Eco Picture Diary*.

STEP
1

Review the instructions for completing your *Eco Picture Diary*.



Instructions

1. One entry form must be completed and submitted with each student team entry to the Eco Picture Diary Contest. 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.

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Lesson 4 (cont.)



Before you fill out your *Eco Picture Diary* booklet, it is a good idea to complete a rough draft first.

This will allow you to share the entry with your team and receive feedback on grammar and content. Use this space (or your own paper) to complete your rough draft.

Diary 1 Draft: Define and research an environmental issue in your community

To be completed by (teammate): _____

- The Diary picture shows: Your team's environmental issue. Remember this can be a photo of your team working or original artwork created by a member of your team.
- Paragraph: Describe the environmental issue your team selected, how your group selected the issue and why it is important to you, your home, school or community.



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Lesson 4 (cont.)



Prepare your Final *Eco Picture Diary*:

- Edit your rough drafts,
- Create a final version of your *Eco Picture Diary* booklet or digital entry.
- Complete the team reflection questions at the end of the diary.

Finally, share your team's completed *Eco Picture Diary* with your class. Your teacher will give you details on how and when you will share your final submission. Once you have shared your *Eco Picture Diary*, give it to your teacher, who will submit it to the Panasonic *Eco Picture Diary* Contest.

GREAT Job! You have completed the Panasonic Student Eco Citizenship Project! You did important work to protect and save your global environment. Continue to take action to impact your world. **YOU MAKE A DIFFERENCE!**

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Additional Resources

Note: These resources are just a starting point. Consider being creative and thinking of other resources that might be helpful as well!

National Organizations

United States Environmental Protection Agency
<https://www.epa.gov/>

National Resources Defense Council
<https://www.nrdc.org/>

World Wildlife Fund
<https://www.worldwildlife.org/>

US. Energy Information Administration
<https://www.eia.gov/>

U.S. Green Building Council
<https://www.usgbc.org/>

U.S. Water Alliance
<http://uswateralliance.org/resources>

New Jersey Organizations

several website organizations here:
<http://www.eco-usa.net/orgs/nj.shtml>

Environment New Jersey
<http://www.environmentnewjersey.org/home>

Sustainable Jersey Schools
<http://www.sustainablejersyschools.com/>

The Port Authority of New York and New Jersey
<https://www.panynj.gov/about/energy.html>

NJ Sports & Exposition Authority
<http://www.njsea.com/>

Alliance for a Living Ocean
<http://www.livingocean.org>

Atlantic Audubon Society
<http://www.atlanticaudubonsociety.com>

Bergen County Audubon Society
<http://www.bergencountyaudubon.org>

Camden Greenways
<http://www.camdengreenways.org>

Conserve Wildlife Foundation of New Jersey
<http://www.conservewildlifenj.org>

News Articles - New Jersey

NJ Environmental News
<http://njenvironmentnews.com/>

Energy & Environment News for New Jersey
<http://www.njspotlight.com/energy-environment/>

North Jersey - Environment
<http://www.northjersey.com/news/environment/>

Invisible 'Bird Killer' – New York Times
<https://www.nytimes.com/2017/04/26/nyregion/invisible-bird-killer-lurks-in-revitalized-new-jersey-meadowlands.html?mcubz=2>

News Releases – Environment New Jersey
<http://www.environmentnewjersey.org/news>

New Jersey Department of Environmental Protection – News Releases
<http://www.nj.gov/dep/newsrel/>

Political Battle Lines Drawn on Changes
http://www.nj.com/morris/index.ssf/2017/02/nj_highlands_council_moving_closer_to_master_plan.html

New Jersey Hopefuls for Governor Differ on Environment
<https://www.usnews.com/news/best-states/new-jersey/articles/2017-05-07/new-jersey-hopefuls-for-governor-differ-on-environment>

Environmental Groups Appeal New Jersey Pipeline Approval
<https://www.usnews.com/news/best-states/new-jersey/articles/2017-04-10/sierra-club-appeals-new-jersey-gas-pipeline-approval>

NJ Environmental Law's Top 10 of 2017
<http://www.njlawjournal.com/id=1202788263456/NJ-Environmental-Laws-Top-10-of-2017?slreturn=20170618201311>

World News articles

Giant Antarctic Iceberg
<https://www.theguardian.com/world/2017/jun/02/giant-antarctic-iceberg-hanging-by-a-thread-say-scientists>

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How Green is a Tesla, Really?

http://www.slate.com/articles/technology/technology/2013/09/how_green_is_a_tesla_electric_cars_environmental_impact_depends_on_where.html

Green Building and Sustainability

<https://eponline.com/articles/2017/01/23/green-building-and-sustainability.aspx>

Green Cleaning vs. Chemicals in Household Products

<http://www.grinningplanet.com/articles/chemicals-toxics/green-cleaning-vs-chemicals-in-household-products-article.htm>

Greening the City

<https://www.sciencedaily.com/releases/2017/07/170703121025.htm>

Ecological Underpinnings of Rural Poverty

<https://www.sciencedaily.com/releases/2017/07/170714140435.htm>

Does Hunting Help or Hurt the Environment?

<https://www.scientificamerican.com/article/earth-talks-hunting/>

Water Crisis

<http://news.nationalgeographic.com/water-crisis/>

Environmental Issues News

https://www.sciencedaily.com/news/earth_climate/environmental_issues/

Science – Environment NBC News

<http://www.nbcnews.com/science/environment>

Books/Magazines – Informational Text

It's Getting Hot in Here: The Past, Present, and Future of Climate Change by Bridget Heos

Plants Vs. Meats: The Health, History, and Ethics of What We Eat by Meredith Sayles Hughes

The Story of Seeds: From Mendel's Garden to your Plate, and How There's More of Less to Eat Around the World by Nancy F. Castaldo

Eyes Wide Open: Going Behind the Environmental Headlines by Paul Fleischman

Unstoppable: Harnessing Science to Change the World by Bill Nye

Climate Changed: A Personal Journey Through the Science by Philippe Squarzoni

Moonbird: A Year on the Wind With the Great Survivor B95 by Phillip M. Hoose

World Without Fish: How Could We Let This Happen?

by Mark Kurlansky

We Are the Weather Makers: The History of Climate Change

by Sally M. Walker

The Green Teen: The Eco-friendly Teen's Guide to Saving the Planet

by Jenn Savedge

Books/Magazines – Fiction

Fuzzy Mud by Louis Sachar

Threatened by Eliot Schrefer

The Story of Owen: Dragon Slayer of Trondheim

by E. K. Johnston

Skink No Surrender by Carl Hiaasen

Endangered by Eliot Schrefer

Ship Breaker by Paolo Bacigalupi

Wolves, Boys, & Other Things That Might Kill Me by Kristen Chandler

Empty by Suzanne Weyn

The Carbon Diaries 2015 by Saci Lloyd

The Law of Ueki by Tsubasa Fukuchi

Boys, Bears, and A Serious Pair of Hiking Boots by Abby McDonald

The Wild Robot by Peter Brown

Books/Magazines – Magazines

Nature Conservatory

<https://www.nature.org/magazine/>

National Wildlife

<http://www.nwf.org/Home/News-and-Magazines/National-Wildlife.aspx>

Sierra

<http://www.sierraclub.org/sierra>

Missouri Conversationalist

<https://mdc.mo.gov/conmag>

Mother Earth News

<http://www.motherearthnews.com>

Audubon

<http://www.audubon.org>

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Defenders

<http://www.defenders.org>

National Parks

<https://www.npca.org/articles/magazine#sm.001tzavh91axzegjrcd2p9l6hkvty>

Greenpeace

<http://www.greenpeace.org/usa/>

Natural History

<http://www.naturalhistorymag.com>

Tours/Classroom Visits

Liberty Science Center

<http://lsc.org/>

Monmouth County Park System

<https://www.monmouthcountyparks.com>

Close Encounters with the Coast

<http://www.littoralsociety.org/schoolscout-programs.html>

Science Behind-the-scenes Tours

<http://www.classtrips.com/detail/2054/2395/field-trips-in-new-jersey-to-science-behind-the-scenes-tours>

Duke Farms

<http://www.dukefarms.org>

Ted Talks – How Pollution is Changing the Oceans

https://www.ted.com/talks/triona_mcgrath_how_pollution_is_changing_the_ocean_s_chemistry

Ted Talks – Can Clouds Buy Us More Time to Solve Climate Change?

https://www.ted.com/talks/kate_marvel_can_clouds_buy_us_more_time_to_solve_climate_change

Local College Resources

Rutgers

<http://envsci.rutgers.edu/index.shtml>

Princeton

<https://environment.princeton.edu/outreach>

Camden County College

<http://libguides.camdencc.edu/c.php?g=29640&p=185053>

Montclair State University

<https://www.montclair.edu/csam/cels/>

New Jersey College Health and Environmental Safety Society

<http://njchess.org/resources.html>

Stockton University

<https://inraweb.stockton.edu/eyos/page.cfm?siteID=172&pageID=5>

T.V. Shows

Sundance – Big Ideas for a Small Planet

<http://www.sundance.tv/series/big-ideas-for-a-small-planet>

Eco Company

<http://www.eco-company.tv>

Green TV

<http://www.green.tv/greentvshow>

Television for the Environment

<http://tve.org>

Ted Talks – Sustainability by Design

https://www.ted.com/playlists/28/sustainability_by_design

Ted Talks – The End of Oil?

https://www.ted.com/playlists/58/the_end_of_oil

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Eco Picture Diary (EPD) Scoring Rubric

This rubric will be used to evaluate the 2018-2019 school year Panasonic Student *Eco Picture Diary* submissions.

All students should be familiar with the expectations. All submissions 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	Points Earned
Diary Entry 1	<ul style="list-style-type: none"> ___ The entry includes one photo or original piece of artwork. (up to 3 pts) ___ The entry includes one paragraph describing the issue the team selected. (up to 3 pts) ___ The writing is coherent, uses correct sentence structure and has no errors in spelling or grammar. (up to 3 pts) ___ The photo or illustration is a clear representation of the team's environmental issue. (up to 3 pts) 	___/12
Diary Entry 2	<ul style="list-style-type: none"> ___ The entry includes one photo or original piece of artwork. (up to 3 pts) ___ The entry includes one paragraph describing the actions the team took. (up to 3 pts) ___ The writing is coherent, uses correct sentence structure and has no errors in spelling or grammar. (up to 3 pts) ___ The photo or illustration is a clear representation of the impact of the team's work. (up to 3 pts) 	___/12
Diary Entry 3	<ul style="list-style-type: none"> ___ The entry includes one photo or original piece of artwork. (up to 3 pts) ___ The entry includes one paragraph describing the successes and challenges the team faced. (up to 3 pts) ___ The writing is coherent, uses correct sentence structure and has no errors in spelling or grammar. (up to 3 pts) ___ The photo or illustration is a clear representation of the action taken in the community. (up to 3 pts) 	___/12
Diary Entry 4	<ul style="list-style-type: none"> ___ The entry includes one photo or original piece of artwork. (up to 3 pts) ___ The entry includes one paragraph describing the results of the project and the teamwork needed to accomplish the goal. (up to 3 pts) ___ The writing is coherent, uses correct sentence structure and has no errors in spelling or grammar. (up to 3 pts) ___ The photo or illustration is a clear representation of the team's final result. (up to 3 pts) 	___/12
Overall Presentation	<p>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. 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.</p> <p>(The judge will award up to 12 pts in this category)</p>	___/12
GRAND TOTAL OF POINTS AWARDED		___/60





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www.foundationforimpactliteracyandlearning.org/ecocitizen

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