

# **TEACHER GUIDE**





**TEACHER EDITION** 

Welcome to the Panasonic Student Eco Citizenship Project! 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 fivelesson, project-based learning experience that can be

completed in two weeks or extended over six weeks. The curriculum is intentionally aligned with Common Core State Standards and is designed to develop student skills in literacy, technology, research, critical thinking and problem-solving as defined in the Next Generation Science Standards (<a href="www.nextgenscience.org">www.nextgenscience.org</a>). 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 highlight five specific actions 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 their final projects to the **Panasonic Eco Picture Diary Contest** for a chance to win recognition and prizes.

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.





# Before You Begin

- Review the Panasonic Student Eco Citizenship Project website.
  - The website link will be shared with you in an email from <a href="fillprograms@outlook.com">fillprograms@outlook.com</a>. Become familiar with the contest 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 Contest. Your students will join students from around the world in highlighting the activities they put into practice in their schools, homes and other familiar places to protect and save their global environment. Also become familiar with the listed websites and rubric found in the back of the teacher's guide and on the program site.
- Read and become familiar with each step of the project for your students. **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.
- 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!
- 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!
- 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.
- Lessons are arranged in the following manner:
  Lessons 1-3 are individual based.
  Lessons 4-5 are team based.\*
  Lesson 5 is where the Eco Picture Diary begins.

\*Please note: Students will be complete five action STEPS from the action PLANS created in Lesson 4 for the *Eco Picture Diary* Contest entry.





**Suggested Time** 

One Student Workbook for each

60-90 minutes

Materials

student

Computers

Access to Internet

# Lesson 1

### Explore environmental issues in your world

#### **Common Core State Standards**

Anchor Standards for Reading: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

Anchor Standards for Writing: Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.

#### **Objectives**

#### Students will:

- Explore and share prior knowledge about environmental issues.
- Define and evaluate three environmental issues.
- Make a claim and use evidence from their research to support it.



#### **Lesson Introduction**

Begin the lesson with a class discussion by asking the following question: "What do you currently know about the environment, in the U.S. and globally?" Invite several students to share their thoughts with the class.



As students identify what they already know on the Environmental Issues Chart, be available to help them define unfamiliar issues. You may want to reference the EPA website, www2.epa.gov/learn-issues, to better understand each topic. This resource is only a starting point. Consider pointing students to the school or local library, respected newspapers or other reliable websites to collect information

On the last line of the chart, students are instructed to list other issues that are currently facing the environment. After completing the Environment 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.







#### Lesson 1 (cont.)



As students select three specific environmental issues to research from the environmental issues chart, the following websites, along with the resources found on the project website, may be helpful for students to collect the most reliable information (**These resources are just a starting point**. Consider pointing students to their local library, newspaper or other reliable websites to continue their research):

- O United States Environmental Protection Agency: www.epa.gov
- O Natural Resources Defense Council: www.nrdc.org/issues
- O World Wide Fund for Nature: Our Earth: wwf.panda.org
- O United States Energy Information Administration: Energy Kids www.eia.gov/kids



After students complete the "Make a Claim" writing assignment, invite them to share their positions with the class. You may want to ask students to read their written reflections or paraphrase their thoughts. If there is not enough time for all students to share their reflections, direct them to create teams of four and share their thoughts in small groups. (You may also want to consider assigning this for homework.)







### Find out what people are doing to protect the planet

**Suggested Time** 

One Student Workbook for

Copies of pre-selected news

60-90 minutes

Materials

each student

Computers

articles (optional)

Access to Internet

#### **Common Core State Standards**

Anchor Standards for Reading: Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Anchor Standards for Writing: Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

#### **Objectives**

#### Students will:

- Compare and contrast two current news articles about individuals or organizations that are doing something to protect and save the environment.
- 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**



For this lesson, students are asked to select two current news articles that describe what individuals or organizations are already doing to address environmental issues and use them to complete a compare and contrast activity.



Several national newspapers are suggested in the student workbook along with the corresponding websites for the online editions. While it is good practice for students to learn to navigate digital versions of newspapers, it may be helpful to have several pre-selected articles already printed out to use as examples. For younger students you may even want to select and assign one article for students and allow them to select the second article.

Another valuable tool for this activity is the print copy of your local newspaper. If your school receives any local or national newspapers, try to have copies available in your classroom on the day you complete this lesson. The newspaper is a rich source for informational texts and can be used to go along with this lesson and many others to help students grow as readers and learners.









Lesson 2 (cont.)

#### **Optional Vocabulary Lesson:**

As students read the news articles, they are likely to encounter new vocabulary. Encourage students to keep a journal of new words they discover with a definition and/or example of each. One tool for defining and acquiring new vocabulary is the Frayer Model. For more information about the Frayer Model, visit <a href="http://www.readingeducator.com/strategies/frayer.htm">http://www.readingeducator.com/strategies/frayer.htm</a>. One idea is to have blank Frayer Model worksheets on hand so that students can fill them out as they encounter new words and terms or start a word wall.



As students complete the compare and contrast activity, keep in mind the following:

In this lesson, compare and contrast is used as a learning strategy, not an assessment strategy. Be sure to provide a clear purpose for students and address misconceptions throughout the lesson.



The compare and contrast process does not end with the chart—it is important for the students to process the similarities and differences in order to draw conclusions and/or develop more probing questions. Be sure to allow time for the students to complete and discuss the questions that are in this section.



The questions students develop 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 action ideas 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 3

### Determine what you can do to impact your local environment

#### **Common Core State Standards**

Anchor Standards for Reading: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

Anchor Standards for Writing: Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

#### **Objectives**

Students will:

- Explore environmental issues that exist in their local neighborhoods by analyzing current data.
- Identify specific actions they can make that may have a positive impact on their local environment.

#### **Facilitation Tips**



As students reference websites you may need to guide them in the direct location for useful links. You may want to explore one or two sites together, or allow students to work with a partner/team to navigate the sites.

#### For sources, reference websites such as:

- Your city's Public Works Department for local issues and maps
- US Geological Survey Agency and CountyHealthRankings.org
- Epa.gov/nj (tends to be found in different locations)
- And the other sites referenced

These may be assigned as homework as they may need to look around their own neighborhood or, assign it ahead of time so they come to class prepared. If allowed, and deemed appropriate, you could take the students outside to make some observations.

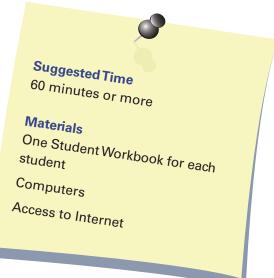


After students list simple and positive actions they can take to impact their local environment, direct them to share their ideas with classmates.

This lesson is intended to get students to think about environmental issues that interest them and that affect their local communities in order to identify specific actions they can take to make a difference. Encourage students to watch the local news, read the local newspaper, and talk with their family members to continue exploring these issues beyond the classroom.



**FOUNDATION** for **IMPACT** 





# Lesson 4

### Create an environmental action plan

#### **Common Core State Standards**

Anchor Standards for Speaking and Listening: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

#### **Objectives**

#### Students will:

- Create Environmental Action Plans.
- Share Environmental Action Plans with fellow students.
- Provide feedback to fellow students for Environmental Action Plans.
- Make revisions to Environmental Action Plans based on peer feedback.



#### **Facilitation Tips**

- This lesson involves a small amount of planning and preparation. Review the specific steps of the lesson and consider how best to facilitate it with your students.
- Students will work in teams of 3-4 students to complete an Environmental Action Plan and to prepare for their *Eco Picture Diary*.
- As student teams complete their Environmental Action Plans, encourage them to be specific and precise. It
  may be helpful to fill out a sample chart together as a class so students can better understand how to plan
  effectively for success. (See sample chart example following the Facilitation Tips.)
- Another way to prepare student teams to fill out the Environmental Action Plans, is to have several sample
  charts already filled out and posted around the room with a blank sheet of construction paper next to each
  one. Direct students to circulate around the room and list the strengths and opportunities for each sample
  chart. Follow the activity with a class discussion in order to compile a list of characteristics that make an
  effective Environmental Action Plan.
- While students are seeking to become global citizens through this project, the actions they take in their local community can sometimes be the most meaningful. Encourage students to include at least one action in their plan that will impact their immediate neighborhood.







#### Lesson 4 (cont.)

- As student teams share their Environmental Action Plans with another team, they will share feedback with
  one another. Consider modeling how to give feedback before starting this part of the lesson. One way
  to model feedback is to complete your own Environmental Action Plan and share it with students. Invite
  students to share feedback and collect all comments in one central location. If students provide inappropriate
  feedback, guide them through a discussion about how to reframe the feedback using these suggested
  sentence starters:
  - The strongest section of your plan is...
  - I like the way you...
  - The strengths of your action plan are...
  - One part of your plan that confused me is...
  - One question I have is...
  - One suggestion that might make your plan clearer is...
- After student teams complete their Environmental Action Plans, they are instructed to share them with another team. This is an opportunity to encourage students to work with individuals with whom they may not usually collaborate. Consider using a creative grouping strategy such as giving students numbered index cards and have them find the other students holding the same number.





Lesson 4 (cont.)

#### **Example - Environmental Action Plan**

The Environmental Issue we have selected is:

Protecting Clean Water

#### How does this issue affect people...

Around the world?

Many water resources around the world lack proper protections so they are polluted by waste from factories and industrial plants. This is hazardous to the health of people who use this polluted water as a drinking source.

In our local community?

The stream that runs at the end of my street is often polluted with local waste. Instead of disposing of trash properly, people dump it into the stream. This causes pollution of the water and the surrounding environment.

At our school?

Students drink water from the fountains in the school building. If the water is contaminated, it could cause the spread of disease and other outbreaks.

#### What organizations address this issue...

Around the world?

The Centers for Disease Control and Prevention (CDC) has a global water and sanitation program. They partner with local communities around the world to help improve water conditions by using household treatment options.

In our local community

The Virginia Department of Health has an office dedicated to ensuring safe drinking water for the state of Virginia.

At our school?

There are not currently any clubs or organizations at my school that address this issue.

Remember: Students will take 5 Actions in their *Eco Picture Diaries*.





Lesson 4 (cont.)

#### **Example - Environmental Action Plan (cont.)**

In order to address your selected environmental issue, list five specific actions you can take in your local area and list them in the action tables below. Determine the steps you will take to accomplish each action, who will be involved and when you will complete each task. Be specific as you describe the tasks you will complete!

#### Action #1: Example

Steps we will take to complete this task:

- 1) Collect facts and statistics about water pollution around the world.
- 2) Make posters using the information collected.
- 3) Write messages to be included in the daily announcements about water pollution.
- 4) Use water pollution as the topic for my science fair project. Share project with the class, school and district.

Who will assist us in completing this task? Students at school, science teacher, parents

We will complete this task by the following date: February 27





#### Action #2: **Example**

Steps we will take to complete this task:

- 1) Collect facts and statistics about water pollution around the world.
- 2) Make posters using the information collected.
- 3) Write messages to be included in the daily announcements about water pollution.
- 4) Use water pollution as the topic for my science fair project. Share project with the class, school and district.

Who will assist us in completing this task? Students at school, science teacher, parents

We will complete this task by the following date: February 27

#### Action #3: **Example**

Steps we will take to complete this task:

- 1) Collect facts and statistics about water pollution around the world.
- 2) Make posters using the information collected.
- 3) Write messages to be included in the daily announcements about water pollution.
- 4) Use water pollution as the topic for my science fair project. Share project with the class, school and district.

Who will assist us in completing this task? Students at school, science teacher, parents

We will complete this task by the following date: February 27







#### Action #4: **Example**

Steps we will take to complete this task:

- 1) Collect facts and statistics about water pollution around the world.
- 2) Make posters using the information collected.
- 3) Write messages to be included in the daily announcements about water pollution.
- 4) Use water pollution as the topic for my science fair project. Share project with the class, school and district.

Who will assist us in completing this task? Students at school, science teacher, parents

We will complete this task by the following date: February 27

#### Action #5: **Example**

Steps we will take to complete this task:

- 1) Collect facts and statistics about water pollution around the world.
- 2) Make posters using the information collected.
- 3) Write messages to be included in the daily announcements about water pollution.
- 4) Use water pollution as the topic for my science fair project. Share project with the class, school and district.

Who will assist us in completing this task? Students at school, science teacher, parents

We will complete this task by the following date: February 27





# Lesson 5

# Highlight your actions in your Eco Picture Diary!

#### **Common Core State Standards**

Anchor Standards for Writing: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

#### **Objectives**

#### Students will:

- Implement their Environmental Action Plans.
- Create Eco Picture Diaries for contest submission.
- Share *Eco Picture Diaries* with peers in order to provide and receive feedback.



#### **Facilitation Tips**

- Student teams comprised of 3-4 students will implement their action plans. Check in frequently
  with students to see how they are progressing. Have students complete the reflection questions as they
  complete their action plans—this will be <u>essential for their final submissions</u> to the **Panasonic Eco Picture**Diary Contest.
- Consider having time each class period for students to check-in with their teams. Students can share their journal entries with each other, review their action plans together to check off steps that have been completed and discuss how they can be sure to complete the remaining steps by the designated deadlines.
- Students should complete the reflection questions for each action step before creating their *Eco Picture Diaries*. These questions will help student teams capture their thoughts and experiences as they complete each action. Student teams can then draw information from their reflections to complete their *Eco Picture Diaries*.
- This step 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 rather than just simply answering questions and providing information. This will encourage students to think critically and evaluate their own progress. By the end of this process, student teams should be able to work independently, with little outside support, in order to complete their action plans.





#### Lesson 5 (cont.)

- Once student teams have completed all steps of their action plans and responded to the reflection questions
  for each action, they may begin the creation of their *Eco Picture Diaries*. Only ONE *Eco Picture Diary* may be
  submitted per student team (3-4 students).
- The final artistic submissions for the **Panasonic Eco Picture Diary Contest** must be hand-created, not digital. Consider having supplies on hand to assist students as they create their final product: colored pencils, crayons, pens, markers, etc.
- Once student teams have completed their *Eco Picture Diaries*, facilitate a presentation format that allows
  for students to share their work with one another. One option is to place the diaries on display around the
  room. Students can travel around the room in a "gallery walk," viewing the *Eco Picture Diaries*. Encourage
  students to leave positive comments for one another on post-its next to each diary.
- Be sure to collect all final *Eco Picture Diaries* for submission to the **Panasonic Eco Picture Diary Contest**.







# Panasonic Eco Picture Diary Contest contest Rules

- 1. One Entry Form must be completed and submitted with each student team entry to the Eco Picture Diary Contest. Student teams must be comprised of 3-4 students.
- 2. The Eco Picture Diary must consist of 5 actions taken and be completed in the Eco Picture Diary booklet.
- 3. Each action will highlight specific steps taken by the student team to protect the Earth and improve the environment.
- 4. Each action will include a picture and a paragraph to explain the steps taken.
- 5. The pictures must be 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. Please review the Official Contest Rules prior to submitting entries.





### 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.sustainablejerseyschools.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-

 $\underline{\text{bird-killer-lurks-in-revitalized-new-jersey-meadowlands}}.$ 

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







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-andsustainability.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





#### **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

#### 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

Ted Talks – How Pollution is Changing the Oceans <a href="https://www.ted.com/talks/triona\_mcgrath">https://www.ted.com/talks/triona\_mcgrath</a> 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://intraweb.stockton.edu/eyos/page.

cfm?siteID=172&pageID=5





# Eco Picture Diary (EPD) Scoring Rubric

This rubric will be used to evaluate the 2018 Panasonic Student Eco Picture Diary submissions. Please share the rubric with the student teams. All submissions must be the original work of and completed by teams comprised of a minimum of 3 and maximum of 4 students.

Category	20 Points	15 Points	10 Points	5 Points	Points Earned
Understanding the Issues	Students provide a clear and concise overview of what they learned about environmental issues, in their own words, with relevant examples, some from their personal experiences to defend their claims. They make a direct connection between what they learned and its application to themselves, their homes, school, community and possibly the world.	Students provide a description of what they learned about environmental issues. They do not provide a personal experience to defend their claims. They are not as clear on a connection between what they learned and its application to themselves, their homes, school community and possibly the world.	Students describe a few random and unconnected statements on environmental issues. They do not make a connection between what they learned and its application to themselves, their homes, school, community and possibly the world.	Students provide a limited description of their environmental issues, thus unable to make a determination on their understanding of the issues.	
Taking Action	Students present a focused plan of action that describes how they selected their environmental issue(s) and why it was important to them, their homes, school or community. Their actions and strategies are creative, imaginative, and workable. They show a long-term intent to be part of the solution. They report and explain results and identify specific next steps.	Students describe how they selected their environmental issue(s) they chose to address and the actions completed. They do not directly address why taking these actions is important to them, their homes, school or community. They report some results with little explanation and identify some next steps.	Students describe how they selected their environmental issue(s), but did not identify the importance to them, their homes, school or community. They propose actions and complete a few, small steps, show no results and are unclear on next steps.	Students do not provide enough information to make a determination on their actions planned or completed.	
Supporting Evidence	Students provide data collected and relevant to their environmental issue(s) as part of their project. They also give substantial examples including personal experiences to support their project and actions.	Students provide data collected and relevant to their environmental issue(s), but only a limited discussion and few or no examples on how the data supports their project and actions.	Students present some data but without context, or connection to support their project or actions.	Students present little or no data to support their project or actions.	
Supporting Illustrations	Drawings across all five action steps engage the viewer, visually tell a compelling story of the students' study and actions, clearly illustrate the written narrative and show attention to detail and impact.	Drawings across all five action steps align with the written narrative with limited visual interest and attention to detail and impact.	Drawings are inconsistent across the five action steps with some aligning more than others to the written narrative and in attention to detail and impact.	Drawings show little or no alignment with the written narrative or attention to detail and impact.	
Writing	Written narrative is descriptive, fluid and contains sufficient information and detail to tell an engaging story. They use correct words, sentence structure, and have no errors in spelling or grammar.	Written narrative is descriptive with some details. It contains some incomplete sentences and a few errors in word usage, spelling and grammar.	Written narrative is rambling and disorganized with few or no details, poor sentence structure, and a number of errors in word usage, spelling and grammar.	Written narrative is sloppy, difficult to follow with many errors in word usage, spelling and grammar.	



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# For More Information Contact: fillprograms@outlook.com

