

ECO AMBASSADOR ENVIRONMENT IN ACTION



ACTIVITY GUIDE for Plastic Reduction



Initiative of

Center for Sustainable Development
EARTH INSTITUTE | COLUMBIA UNIVERSITY

Version
October 2019

Eco Ambassadors Program – Environment in Action is an initiative of the Center for Sustainable Development at the Earth Institute, Columbia University, with the goal to apply research from Lamont Doherty Earth Observatory scientists to educational content that builds awareness and action-taking by communities and school members along with local partnerships.

Earth Institute (EI) is a pioneering body that conducts cutting-edge research on climate change and sustainability. EI's Staff and researchers are paving way for a better planet. Eco-ambassadors at EI are a network of natural and social scientists, staff and students who are committed to bring life-style changes to embody sustainability. Starting at their homes and workplace, they will bring incremental changes to lead to sustainable living. Eco-ambassadors will form the core group of leaders at EI who will do their bit to observe and bring about sustainable changes in their work environment. The Eco-ambassadors will be using the science at Lamont to bring about sustainable changes in their workplace with spill-overs in their personal lives.

Partner Institutions

Program design and technical input

Columbia University: Center for Sustainable Development of the Earth Institute

Science content and research

Columbia University: Lamont Doherty Earth Observatory of the Earth Institute

Global network

Sustainable Development Solutions Network's Global Schools Program

For inquiries on the program, please contact:

iyengar@ei.columbia.edu

Dr. Radhika Iyengar

Director of Education

Center for Sustainable Development

Earth Institute, Columbia University

For inquiries on this document and contents, please contact:

hshin@ei.columbia.edu

Haein Shin

Education Technical Adviser

Center for Sustainable Development

Earth Institute, Columbia University

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About Eco Ambassador Program

Environment in Action initiative of [The Center for Sustainable Development](#) (CSD) within The Earth Institute at Columbia University came about as a means to apply the knowledge and research of Lamont Doherty Earth Observatory scientists at The Earth Institute to science curricula of schools and community centers in developing countries where the Center works in education spheres. It soon became clear that regardless of country and setting, every community of learners can benefit from environmental education at homes, schools, businesses and communities.

By presenting science that is alive and relevant to the daily lives of students, the **Eco Ambassador** program is meant to engage our next generation youth in all places, so that they can begin educating their own communities about local environmental issues and start small steps to solving these issues with community action. Our first pilot in Millburn, New Jersey, during summer of 2019 utilized [Design for Change's Feel-Imagine-Do-Share](#) method to engage participants in meaningful ways to promote ownership of the process. The initiative is in partnership with [Global Schools Program](#). The summer 2019 program ran from June to September, from recruitment in June, workshop in July, project planning and action in July and August, to final presentations at a side event of [International Conference on Sustainable Development](#) in September at Columbia University.

As we begin the new season with Fall 2019, we are in awe of the continued interest and passion of Eco Ambassadors and are in the process of expanding the program to Columbia University campus and schools in New York, New Jersey area.

Collaborating with our Earth Institute at Columbia University—a pioneering body that conducts cutting-edge research on climate change and sustainability—our plan is to merge the researchers paving way and solutions for a better planet with the Eco Ambassadors program – so that a network can be established with natural and social scientists, staff and students who are committed to bringing lifestyle changes to embody sustainability. Starting at their homes, schools, workplace and community, Eco Ambassadors will bring incremental changes to lead to sustainable living. Eco Ambassadors will form the core group of leaders who will do their bit to observe and bring about sustainable changes in their immediate environments. The Eco Ambassadors will be using science at Lamont to bring about sustainable changes in their workplace with spill-overs in their personal lives and advocate for change at all levels.

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How to Use this Guide

This guide is a collection of hands-on, practical activities that is a part of the larger Eco Ambassador initiative. Although you can use this Guide however you would like, here are some quick points to guide you.

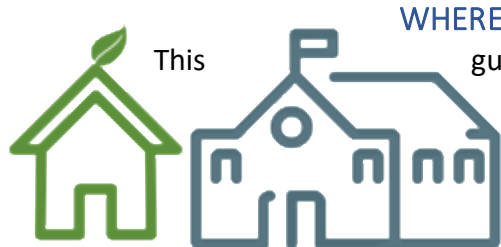
WHAT is this Guide for?

This guide is a **collection of activities** that is meant to support Eco Ambassadors in realizing environment-friendly passion into concrete, practical, small and big tasks with the aim of:

- 1) **Raising awareness** about environmental issues in their immediate surroundings
- 2) **Producing concrete items** that align with the environmental issues that we try to address, such as plastic use reduction
- 3) **Advocating for systemic change** that is necessary to resolve environmental issues, such as engaging and pressuring local leadership, businesses, government and various stakeholders

WHO is the Guide for?

This Guide is meant for everyone—specifically for **all interested Eco Ambassadors and those in their communities!** If you are a **parent, educator, club leader (academic, professional or social)**, you may also be interested in conducting these activities at your events.



WHERE can I use this Guide?

This guide is a collection of activities that can be done at **homes, schools, work places, clubs, as well as social and community gatherings.** You may modify the activities to best fit your situation.

HOW can I use this Guide?

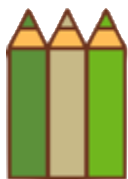
The Guide is divided into 2 main categories: **Crafts & Arts** and **Writing & Advocacy**. Both are symbolic of Eco Ambassadors' role and can be used for 2 main purposes. **Crafts & Arts** is more applicable for daily eco-friendly practices that we can promote and more actively adopt at individual, household and classroom levels.

Writing & Advocacy is more applicable for longer-term change at the systemic level, for which we are all collectively striving towards.



Icon Key

As you go through the manual, you may come across these icons for specific functions.



MATERIALS

This icon shows the materials you will need to prepare for the activity. Even without some of the materials listed, you may still find creative ways to use other materials in your immediate surroundings to substitute, replace or modify!



MODIFICATION

This icon shows points where the activity or materials can be modified. You know your setting better - further modifications are always welcome!



DISCUSSION POINT

This icon indicates moments in which a discussion, debriefing or informational content may be discussed in conjunction with the hands-on activities. It also indicates moments where you can share out messages.

Share Ideas!



For any & all activities, please feel free to share your footage, ideas or comments with us! You can also share modifications you have done or communications/share-outs (social media, newsletter, sharing with peers and schools, etc.) you have done about your activity.

Please email iyengar@ei.columbia.edu and hshin@ei.columbia.edu for the purpose of this correspondence.

Thank you! Enjoy and share away!

Crafts & Arts

HOW MUCH PLASTIC DO WE HAVE??

We see so much plastic around us, but how much do we really have and use? This is a quick **awareness activity** to understand the amount of plastic in our midst—in our homes, schools and at various events.

The best way to do this activity would be to conduct the activity **at least twice at different points in time** to observe whether there have been **any reductions in plastic usage over time**. For example, it can be done at an annual event so that the same event can be a reference for how much plastic usage there has been from one year to the next. At household levels, a certain day of the month can be referenced over a course of a few months.



MATERIALS

- Paper / notepad
- Pen
- Scale
- Light tote bag or mesh bag
- Rubber gloves
- Permission to conduct activity if being done in a particular location outside of home

STEPS

1. At your chosen time and location (house, event, school cafeteria), collect the plastics that have been thrown away at that specific point in time. This can be the trash bins or recycling bins.
2. Put on rubber gloves and collect the plastic waste into a lightweight tote or mesh bag (or if there are plastic bags in the trash pile, use them).
3. When a bag is filled, weigh the total plastic on a scale. Depending on the amount of plastic waste, you may have to weigh multiple times or fill multiple bags.
4. On a paper/notepad, write the date and the weight of the plastics gathered.
**Note the weight of the bag and use the same bag for the next measurement.*
5. Create an awareness poster or flyer to post by the trash bin (or submit your activity at www.edfordsd.org or a local newsletter) showing how much waste was generated. Communicate that the measurement will be done again at another future point in time.
6. Repeat the activity (at a set time later on, at least a month after) to compare plastic produced from a similar situation (household celebration, annual events, similar times at a school cafeteria, etc.)

HOSTING PLASTIC-FREE PARTIES & EVENTS!

Around various special events or holidays throughout the year, there are multiple family and social gatherings to host and attend.



How about a challenge to make those parties as plastic-free as possible?

This activity doesn't include step-by-step instructions, but suggests some key elements to consider and plan.

Get creative and add more ideas as you plan!

The best is always to lead by example by hosting your own party where you set the ground rules.



However, there may also be ways to suggest ideas to other hosts or for events that you are co-hosting or co-organizing and spread the word about zero-plastic party.

FOOD



- Purchase foods with no or least plastic packaging
- Take reusable bags when you go grocery shopping
- Portion your food appropriately so that food waste is minimized
- Share food or freeze leftovers so that food is not wasted

UTENSILS



- Use china/glassware
- Make the party BYOU (Bring Your Own Utensils) party
- If disposal options are needed, go with bamboo or paper-based cutlery and utensils

DECORATIONS



- Use recycled materials or old materials to create decorations: paper, cloth, rags, towels, etc.
- Reuse decorations instead of throwing away after one-time use

Shout out to our Eco Ambassador Nidhi Thakur for hosting a zero-waste party for Diwali! See how she organized her party at www.edfordsd.org.

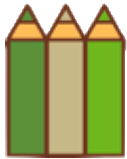
If you host your own Plastic-Free party, please take some footage of your event and post on www.edfordsd.org !

HALLOWEEN TRICK-OR-TREAT TOTE BAG



Ditch single-use plastic bags & plastic Trick-or-Treat pumpkin buckets this year! Be a trend-setter by designing your own eco-friendly Halloween tote bag to take around for your trick-or-treating! This can be done with pretty much any bag you have at home.

MATERIALS



- Any tote bag at home
 - Non-single-use bags, such as canvas, cloth/fabric, cotton reusable bags, drawstring sport packs, etc.)
- Scissors
- 4-5 Clothes pins
- Markers, Crayons or paint
- Paper (recycled paper or back of used paper)

STEPS

1. On a piece of paper draw a big pumpkin or your Halloween themed image of choice.
2. Cut along the edges of your design.
3. Place the cut-out design on a canvas bag of your choice.
4. Using a few clothes pins, secure the paper design onto your canvas bag.
5. And voila! You have your own bag!
6. When you go Trick-or-Treating around the neighborhood,



show your bag to others and share that you made your own bag this year to reduce plastic usage.

Modified Digital Version



- Iron-on-paper / fabric transfers (some papers require you to use ink-jet printer and others work for direct coloring on paper with crayons. Take note of type when purchasing paper)
 - Camera (phone camera also works)
 - Printer
 - Iron
 - Crayons
1. Draw your Halloween themed image of choice
 2. Take a picture of your drawing (if you have direct color-to-iron paper, skip steps 2-3).
 3. Print on iron-on-paper / fabric-transfer paper
 4. Iron on your printed design to a canvas bag of your choice.

Writing & Advocacy

Have you ever seen the movie, **Pay It Forward**? (Check out video clips [here](#)¹ and [here](#)²)

Even if you haven't yet, the idea is this: someone who receives a good deed repays the kindness to others instead of to the original person who gave this someone a good deed—so, rather than to “pay back”, you “pay forward”.

By passing the good deed to new people, the good deed spreads wider and faster (see diagram below).

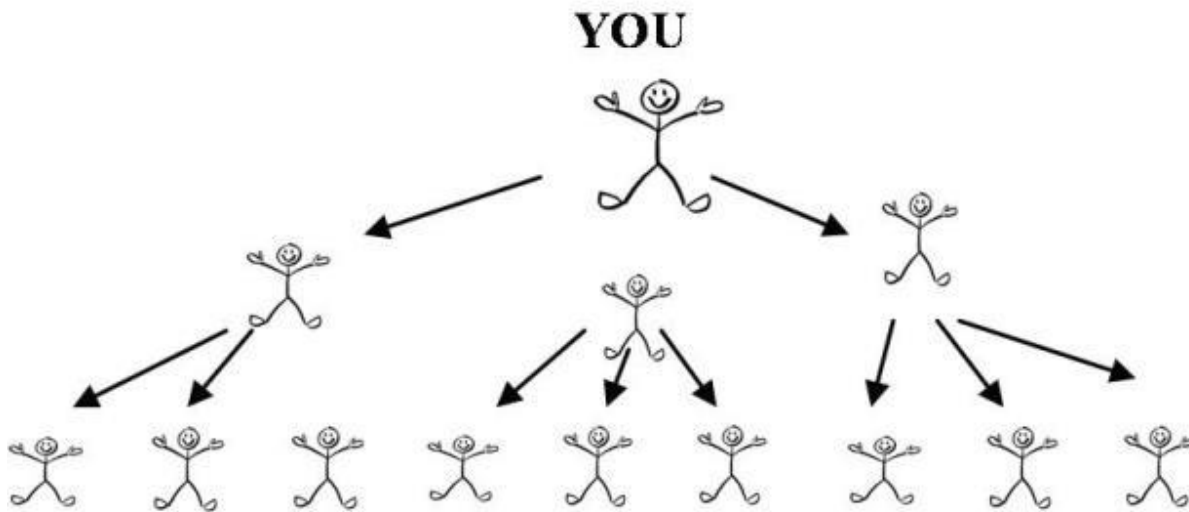


Diagram. Source³

We see **Eco Ambassadors** in the same way.

The activism and advocacy to save the environment to quite literally protect and preserve our world can happen by spreading the good deeds and words to everyone around us, just like “paying forward” actions of kindness.

Here are some activity ideas to spread the message.

¹ <https://www.youtube.com/watch?v=KxB43PxasGA>

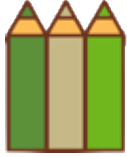
² <https://www.youtube.com/watch?v=5ZTm-iYUpm4>

³ <https://theescapeartist.me/2018/08/06/your-part-in-the-revolution-is-to-pay-it-forward/>

PAY IT FORWARD: LETTER TO A NEIGHBOR

Giving thanks during Thanksgiving

MATERIALS



- Paper (recycled paper or back of used paper) & pen
- Email
- Courage to reach out to your neighbor and pay it forward!

STEPS

1. Please read the “Writing & Advocacy” 1-page & watch the Pay It Forward movie clips (less than [3 minutes](#) & [5 minutes](#) respectively)
2. Take a few moments to reflect and think of 3 things you are grateful for related to nature, your environment, including what you are grateful for in your neighbors who are in your immediate environment.
3. Think of what you can “pay forward” in sharing with your neighbor.
4. On a piece of paper, write a letter of appreciation to your neighbor/friend and share:
 - *Think about some of the common environmental things you share with your neighbors and friends in your neighborhood. For example, trees, parks, a small river or lake and others.*
 - *Write down 1-2 things and be thankful that you share such beautiful gifts from nature.*
 - *Reflect and write your message about what you can do to improve or preserve natures gifts to your environment.*
 - Suggest to your neighbor/friend to “pay forward” to others in their lives with an environment message



Dear Neighbor,

This Thanksgiving, I am grateful for our community and the environment.

I love the Wyoming School Stayton field that we share with our community. I love the swings that the field has. When I get tired of reading, I like to do monkey bars. I am very good at it! I hope that we can all help to keep Stayton field free from plastic.

This thanksgiving, I want to appreciate natures blessings. Please carry on this chain and send your appreciation letter to your friend, thanking natures beauty that we all share together.

Happy thanksgiving!



Share what you suggested to your neighbor at www.edfords.org !

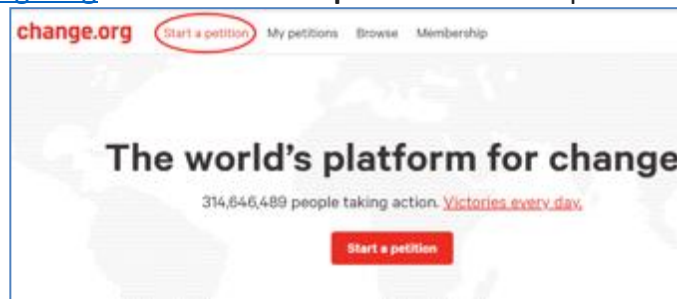
Petitions for Your Issue & Writing to Political Leaders



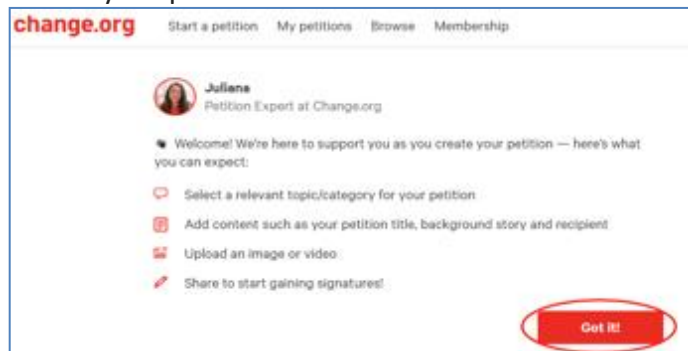
Choose your topic (like plastic pollution!)
Visit www.change.org, here we take *plastic waste reduction* as an example.

STEPS

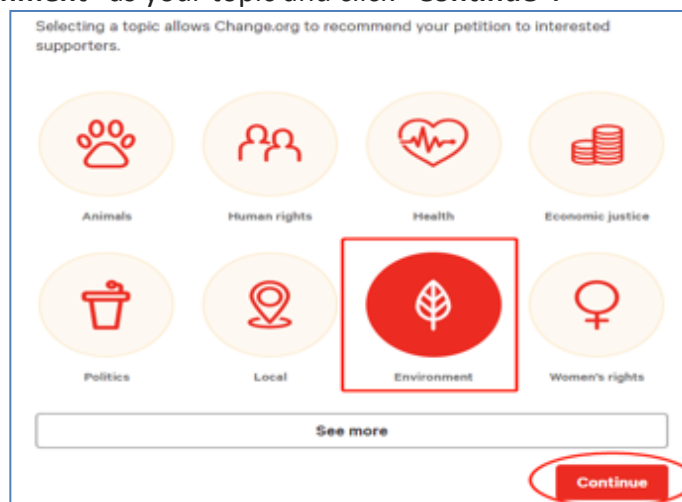
1. Open www.change.org and click “Start a petition” in the top line.



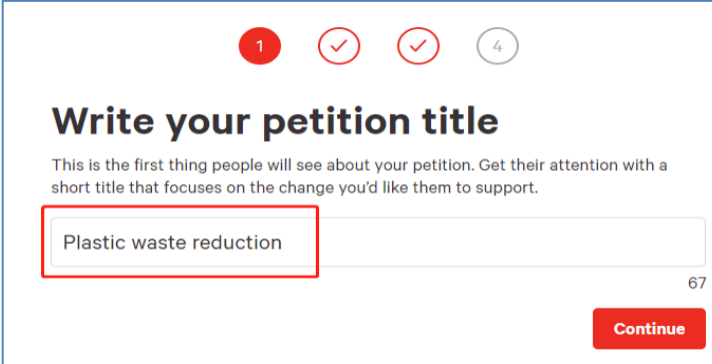
2. Click “Got it” and start your petition.



3. Choose “Environment” as your topic and click “Continue”.

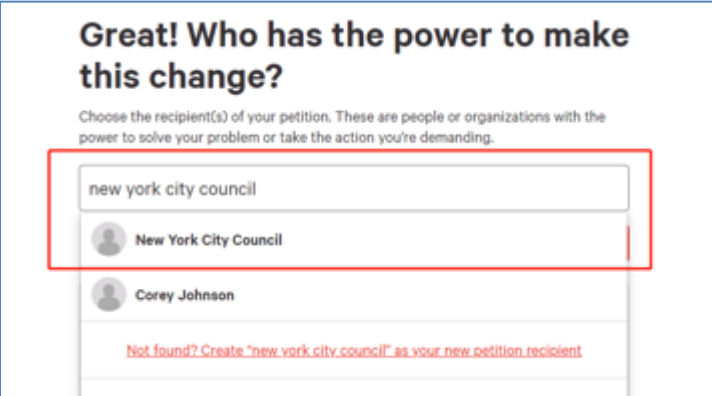


4. Write the title of your petition. Try to keep it short and clear.



The screenshot shows a four-step progress indicator at the top, with the first step (1) highlighted in red. Below the indicator is the heading "Write your petition title" and a sub-heading: "This is the first thing people will see about your petition. Get their attention with a short title that focuses on the change you'd like them to support." A text input field contains the text "Plastic waste reduction" and is highlighted with a red border. A "Continue" button is located at the bottom right, and the number "67" is visible in the bottom right corner of the form area.

5. Type the name of organization or people who can help you solve your problems.



The screenshot shows the heading "Great! Who has the power to make this change?" and a sub-heading: "Choose the recipient(s) of your petition. These are people or organizations with the power to solve your problem or take the action you're demanding." A search input field contains the text "new york city council" and is highlighted with a red border. Below the search field are two search results: "New York City Council" and "Corey Johnson". A red link at the bottom of the search results reads: "Not found? Create 'new york city council' as your new petition recipient".

6. Explain the reason why you choose this topic and highlight the impacts of these environmental issues.




The screenshot shows the heading "Explain the problem you want to solve" and a sub-heading: "People are more likely to support your petition if it's clear why you care. Explain how this change will impact you, your family, or your community." Below the sub-heading is a rich text editor with a toolbar containing icons for bold, italic, list, and link. The text area contains two bullet points: "The reasons for why we need to care about plastic waste..." and "What are the impacts of plastic waste...". The text area is highlighted with a red border.

7. Upload a photo or video to describe your environmental issues and receive more signatures.

Add a photo or video

Petitions with a photo or video receive **six times** more signatures than those without. Include one that captures the emotion of your story.



or

Change.org may test a variety of images to help your petition be seen by more people. [Learn more.](#)

8. Click “Save and preview” to finish your writing.

Add a photo or video

Petitions with a photo or video receive **six times** more signatures than those without. Include one that captures the emotion of your story.



Drag to reposition your photo

9. Send the completed petition to your local government official and request a meeting to share why this is an issue in your community and what changes you want seen and done*.

*This exercise would be more powerful if you have the facts and background on the plastic issue. Link this activity to speaking with experts on the topic. (See page).



Modification Option:

You can also use www.moveon.org to write a petition for your topic.

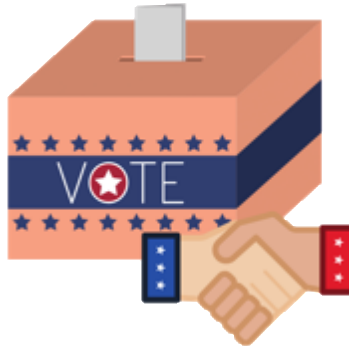


Offline Modification:

You can also do this activity without Internet!

1. Prepare paper and pen for the petition writing.
2. Determine the local authorities/people who can help you with the issues.
3. Write the reason why you choose this topic and the importance of this environmental issue.
4. Collect signatures in community or schools.

Writing to Political Leaders



Writing to a government (district office, local leaders, representative) or Senators

1. Talk to your parents and/or educators to discuss who are the local government officials in your area.
You may also search the official website and determine the local authorities or senators who are in charge of environmental issues in your area.
2. Write an email or send a letter to the government.
You will be able to find mailing addresses or email addresses on official websites.
3. Address your purpose for writing.
Explain the reasons why you choose this topic.
Highlight the impacts of environmental issues.
4. Try to make the key points clear and brief.
5. Provide an implementable solution to the environmental problems.

Bring an Expert (Academic) Community Workshop

Expert(s) who are working on plastics issue daily, such as research, data, educators.

1. Search the website of different departments (such as your local universities, ie. Columbia University) and use the key words of your environmental issue, such as “plastic waste” to locate the related newsletter or faculty website.
2. From the related website, choose the most suitable professors, researchers or educators with professional knowledge and skills.
Read their recent publications and understand their work on your topic, then find their contact information.
3. Write an email to invite your target professors or researchers. In the email, explain the reason for why you chose the topic and describe your proposal briefly.
4. Set up a meeting with the professors and discuss the whole process of following workshop or seminars.
5. Simultaneously, call on the people, parents, educators, peers in your immediate community (and Eco Ambassadors in your area), who can co-organize the workshop and seminar with you.

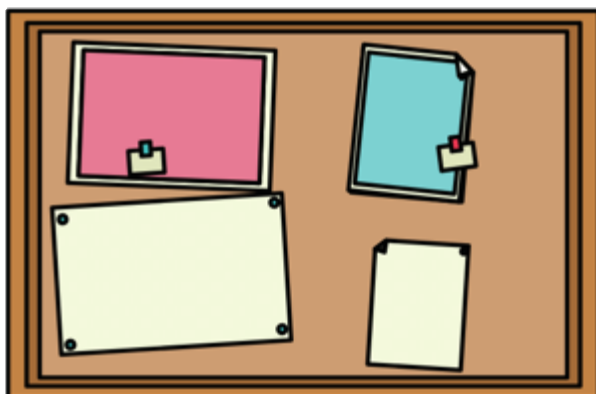


Bring an Expert (Practitioner) Community Workshop

Expert(s) who are working on plastics issue daily, such as plastic usage, waste management, facilities managers, etc.

1. Search the website of NGO or companies. Use the key words of your environmental issue, such as “plastic waste” to locate those working on plastic waste daily, they could be the program managers or technical staff.
2. Find their contact information and write an email to invite them to share related professional experience with public. In the email, you could also describe your proposal briefly and explain the reason for this topic choosing.
3. Set up a meeting with the professors and discuss the process of workshop or seminars.
4. Simultaneously, call on the people, parents, educators, peers in your immediate community (and Eco Ambassadors in your area), who can co-organize the workshop and seminar with you.

NEWSLETTERS & SEASONAL CARDS



Perhaps the best way to share your activism is by sharing your knowledge and actions on the environmental issue with a personal note, writing and perspective.

These perspectives and documentation of what you are doing can be shared in various written formats: newsletters, bulletins, personal notes or cards or letters between schools and homes, etc. The possibilities are endless! Feel free to get creative here!

MATERIALS



- Paper (recycled paper or back of used paper) & pen
- Email
- Courage to reach out to your neighbor and pay it forward!

STEPS

1. Pick the recipient of your personal note.
This can be your parents, siblings, friends/peers, teacher, your town/city Mayor, school principal, community leader.
2. Convince them by sharing the environmental issue you are passionate about (ie. plastic pollution).
3. If you have received the program's science training and spoken with experts on the topic (even if you haven't some basic research on the topic will help you do this), this is a perfect opportunity to share your science knowledge on the environmental issue with the recipient of your writing (notes or newsletter posts, or otherwise).

It is important to frame your convictions in the environmental activism with supporting facts and knowledge, showing your grasp of the issue at hand.

Modification Option:



This note can be a communication or post on the environmental issue, in which a note is being sent from the schools to the homes or vice versa, on some eco-friendly daily practices we can all adopt.

It can also be embedded into a newsletter or regularly scheduled correspondence (such as school, community or library bulletins, physical and online newsletters, etc.)