Cool School Challenge

Implementation Guide

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A climate education guide to challenge students, teachers, and schools to reduce their carbon footprint.

Eco-Schools USA
eco-schoolsusa.org
NATIONAL WILDLIFE FEDERATION®

coolschoolchallenge.org

Cool School Challenge: Implementation Guide

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Table of Contents

Overview

The Cool School Challenge is an educational program intended to engage students and teachers in practical strategies to reduce carbon dioxide (CO_2) and other greenhouse gas emissions school-wide, by improving energy efficiency, reducing consumption, increasing recycling and changing transportation behaviors. Challenge participants will learn how simple actions, taken together, can create a climate of change. Upon completing the challenge schools will be eligible to apply for a bronze level award through the Eco-Schools USA program.

How it works:

With the guidance of a "Challenge Coach," student teams will learn how to conduct a classroom energy audit and identify major sources of CO_2 emissions and opportunities for shrinking them. They will then recruit as many classrooms as possible into the Challenge, helping them collect data to measure their CO_2 emissions, setting a CO_2 reduction goal and then developing an action plan for achieving that goal.

The Cool School Challenge can be administered by anyone your school designates to be a Challenge Coach, such as a science, math or other teacher, administrator, or leader of student organizations. The role of the Challenge Coach is to train, support and oversee the Student Challenge Leaders in implementing the program at your school.

Goals of the Cool School Challenge

- Educate young people about climate change and everyday actions they can take to reduce their impact locally and globally;
- Reduce carbon dioxide emissions and other greenhouse gas emissions in and around schools;
- Encourage student leadership and empowerment;
- Foster a community of teachers and students working together to reduce their greenhouse gas emissions; and
- Foster a new generation of environmental advocates.

Student Challenge Leaders can be any interested class or group of students. Student Challenge Leaders monitor the progress of the participating classrooms and look for ways to motivate and inspire them to achieve the greatest reductions possible. The Cool School Challenge section of the Eco-Schools USA website includes guidelines on how to implement the Challenge, downloadable audit forms for measuring emissions, tips and resources, and other supporting materials.

About Us

The Cool School Challenge program was created and developed by Redmond High School environmental science teacher Mike Town in partnership with the Puget Sound Clean Air Agency and Puget Sound Energy's Powerful Choices for the Environment program. Conceptually modeled after the U.S. Mayor's Climate Protection Agreement, the Cool School Challenge aims to inspire and motivate students, teachers, and school districts to think globally but act locally on climate change. At the heart of the Cool School Challenge is the philosophy that big changes start with small steps, and that taken together, individual actions create a world of difference.

In 2012 ownership of the Cool School Challenge was transfered to the National Wildlife Federation, and the program was incorporated into the Eco-Schools USA program. As part of the largest international green school program, Eco-Schools USA utilizes a holistic educational model designed around ten core pathways that enhance green school buildings, grounds, curriculum, and student experiences. The general conservation concepts are introduced through a hands-on environmental review process that gives students the opportunity to calculate carbon footprints, create habitats, conserve water, reduce waste, etc. and develop actions to help improve consumption practices. The recommendations and changes implemented by students not only provide valuable experiential learning opportunities but also significantly cut water and energy resource consumption costs, resulting in financial savings and reduced environmental impact.

NWF was founded 75 years ago as the national voice of state and local conservation groups, and has since emerged as America's premier environmental education organization committed to increasing environmental literacy, appreciation, and leadership among young people. NWF leads an integrated network of more than four million members and supporters and nine regional offices to inspire Americans to take action to protect wildlife for our children's future. NWF partners with its 49 affiliate organizations located throughout the United States and its territories to work toward our goals of conserving, protecting and restoring wildlife and their habitats and connecting people to nature.

Get Started

The Cool School Challenge encourages flexibility and creativity in making it work for your unique situation: there is no right or wrong way to implement the program. You are welcome to use the materials provided here, or adapt them to better suit your needs. As you begin planning your approach, here are some tips and suggestions to help ensure your success.

Notify teachers and administrators

To garner support and buy-in from teachers and administrators, let them know you want to start the Challenge at your school and that you want as much participation from them as possible. You can send a memo or e-mail; arrange to speak at a faculty meeting, etc. See page 5 for a sample introduction memo, which you can tailor for your own use.

Form an Eco-Action team

Build a team to administer the Challenge at your school. Ideally a team will consist of:

- **A Challenge Coach** – such as a teacher, administrator, or interested parent. The program is especially suited for secondary science and math teachers. The role of the Challenge Coach is to train, support and guide students throughout the process.

- **Student Challenge Leaders**. Student Challenge Leaders are any group of students that want to lead the challenge at their school. They might be an entire class, or smaller group of motivated students (Earth Club, or other service organization, for example). Student Challenge Leaders will recruit classroom participation in the Challenge, create CO_2 emission reduction plans for each classroom and, at the end of the Challenge, monitor, evaluate and summarize the school's accomplishments.

Decide on your timeline

You should develop a realistic timeframe for implementing the Challenge. **Here for simplicity it's been structured as a four-week program, with emissions savings amortized for one school year.** You can certainly keep the Challenge running for a longer period of time! A sample timeline is available on page 6 for guidance.

Develop a participation strategy

Spend some time thinking about how to maximize participation in the Challenge. A lot of the actions we can take to protect the environment are fairly simple, such as turning off the lights or unplugging machines that aren't being used! What are some ways you can motivate and inspire schoolmates to actively participate in the Challenge?

Cool Ideas

- Kick off the Challenge with a school assembly, rally, public announcement or other attention-getting means, so everyone in the school knows what you are doing, why and how they can help.

- Offer a prize or other reward to the classroom(s) that achieve the greatest reductions. Especially consider incentives that are climate-friendly, or further encourage greenhouse-gas reducing behavior. You could hold fundraisers, or ask local businesses to donate prizes.

- Organize a school-wide education campaign to increase awareness about climate change along with the various ways students and teachers can take action. The campaign could include posters, daily announcements, articles in student publications, speaking at faculty meetings, coordinating behavior-changing activities such as a recycling drive, or a Carpool- or Bike-to-School Week, etc.

Sample Introduction Memo

To garner support and buy-in from teachers and administrators, let them know you want to start the Challenge at your school and that you want as much participation from them as possible. Here is some sample language you could use in a memo or e-mail, or as talking points for a presentation at a faculty meeting, etc.

Dear [Teacher, principal, etc.]:

We are concerned about global climate change and believe that through education and action, we can make a difference at our school. That's why as a class project we are initiating the Cool School Challenge. Through the Challenge, we aim to reduce carbon dioxide (CO_2) emissions for our entire school by encouraging every classroom to take a pledge to reduce CO_2 over the course of a school year. Upon completing the Challenge our school will qualify for a bronze award through the Eco-Schools USA program. To help participating classrooms accomplish this goal, we will:

1. Conduct a quick pre-Challenge CO_2 emissions audit for each classroom;
2. Write a Climate Action Plan for each classroom;
3. Incorporate one climate change inspired lesson into your classroom curriculum;
4. At the end of the Challenge period, conduct a post-Challenge survey to measure results and project how much CO_2 could be reduced by each classroom if these efforts are implemented over the course of a 180-day school year;
5. Finally, help create a mission statement for your school highlighting its commitment to lowering its carbon footprint.

Please join us in this effort to reduce CO_2 emissions at our school and to support us in finding solutions to this important community issue. We look forward to your participation!

Sincerely,

[Teacher/Students]

COOL TIPS

- Personalize the language to make it most compelling to your teachers/administration, etc.
- Have all the students in your class sign the memo/email, to demonstrate how many are behind this effort.
- Be sure you indicate how teachers can demonstrate their support or sign up to be part of the Cool School Challenge. Should they email you? Or sign a sheet in the faculty lounge? Give them a method for following up.

Sample Challenge Timeline

You should develop a realistic timeframe for implementing the Challenge. For simplicity, this sample timeline has been structured as a 40-day program, with emissions savings amortized for one school year. This is only a guideline – you can organize your Challenge in whatever manner works best for you, and can certainly keep the Challenge running for a longer period of time!

Step	When?	Who?	What?
Get Started	Day 1	Challenge Coaches	Assign Student Challenge Leaders into small teams.
		Coaches/Student Challenge Leaders	Assign student teams to (or let them choose) classrooms to recruit for participation in the Challenge.
		Student Challenge Leaders	Notify teachers about the Challenge and encourage them to participate. (See sample Introductory Memo on page 5 of the "Get Started" section of CoolSchoolChallenge.org.)
		Coaches/Student Challenge Leaders	Develop a participation strategy (*optional*).
Conduct an Audit	Days 2 - 3	Challenge Coaches	Train Student Challenge Leaders how to conduct the **Climate Change Audit**, using their classrooms as a model.
	Days 4 - 6	Student Challenge Leaders	Conduct the Climate Change Audit before or after school with the teachers of assigned classrooms.

Step	When?	Who?	What?
Create an Action Plan	Days 7-10	Student Challenge Leaders	Write an Action Plan for each assigned classroom, identifying how each can reduce emissions (can be done as a graded activity).
		Challenge Coaches	Grade and offer feedback on Action Plans (optional).
		Student Challenge Leaders	Present the Action Plans to each teacher and ask if they will "pledge" their classroom to reduce $C0_2$ emissions by taking the actions outlined in the plan.
Take the Pledge	Days 11-13	Student Challenge Leaders	Collect names of each classroom making the pledge. Create a poster, certificate or other kind of signage to recognize each classroom that takes the pledge.
		Challenge Coaches	Send a note home to parents or reach out to your local newspaper to let them know that your school is participating in the challenge. (optional)
Link to Curriculum	Days 14-16	Challenge Coaches	Talk to participating teachers about how they might be able to tie the challenge to their classroom curriculum. Visit the ***Curriculum Connections*** section of any pathway for suggestions.
		Classroom Teachers	Implement a lesson, or add a component to an existing lesson that highlights climate change, carbon emissions, consumption and waste, transportation, etc.

Step	When?	Who?	What?
Monitor and Evaluate	Days 17-28	Student Challenge Leaders	Periodically check in with each classroom to monitor progress and troubleshoot any difficulties with the action plan.
	Days 29-32	Student Challenge Leaders	Conduct the **Post-Challenge Audit** with the teachers of participating classrooms. (Use the same audit that you initially used to collect data)
	Days 33-34	Challenge Coaches and Student Challenge Leaders	Show Student Challenge Leaders how to analyze results from the Post-Challenge Audit and make result projections using the Cool School Challenge Calculator. Calculate CO2 emission reduction results for each participating classroom. Create a Cool School Report Card, using the "Classroom Results Template" for each classroom summarizing their results. http://www.nwf.org/Eco-Schools-USA/Become-an-Eco-School/Cool-School-Challenge/Materials.aspx
Share Your Results	Days 35-38	Student Challenge Leaders	Compile results and share them with your student body by announcing them at an assembly or posting them on a school bulletin board. Be creative!
		Challenge Coaches	Share information with your community about the work you have done to reduce your carbon footprint. Write an article for the local newspaper or put up a notice on your school's website.
Apply for an Award	Days 39-40	Challenge Coaches or **High School** Student Challenge Leaders	Apply for a **Bronze Award** through NWF's Eco-Schools USA program. You may be ready for other award levels if you have been addressing other pathways to sustainability. http://www.nwf.org/Eco-Schools-USA/Become-an-Eco-School/Awards.aspx Once you have submitted your application for an award be sure to print of the **Certificates of Participation** for all of the Student Challenge Leaders. http://www.nwf.org/Eco-Schools-USA/Become-an-Eco-School/Awards/Participation_Certificates.aspx

Step 1: Conduct an Audit

Now that your Cool School Challenge team is in place and ready to start reducing emissions at your school, the next step is to conduct an audit to identify sources of CO_2. You'll begin by gathering information on classroom electricity use, transportation, heating, and waste generation and recycling. You'll then use this data to estimate your classroom's carbon footprint. Repeat the audit process for other classrooms throughout the school - try to recruit as many teachers as possible to participate! **The information gathered in the audits will be used to develop an Action Plan in Step 2, outlining the various ways the classroom can reduce CO_2 emissions.**

Refer to the Classroom Audit Kit to get started!

Step 2: Create an Action Plan

Based on the results of your classroom audits, develop an Action Plan for each classroom to successfully reduce their CO_2 emissions over the course of the school year. Take a look at where most of their emissions are coming from and where it might be possible to change habits and behavior. Turning off half the lights, for example, reduces emissions from lighting by half. Eliminating unnecessary waste – either by conserving, using materials more efficiently or recycling – can reduce the amount of trash that ends up in the landfill which in turn reduces greenhouse gases.

Give each classroom a goal that is attainable – but not too easy. A reduction goal of 2,000 lbs or more per classroom is usually a good place to start. Or the goal could be to reduce emissions by a certain percent. It might be helpful to give teachers a menu of options to choose from, so they can select the actions that are most appropriate for their classroom. Some sample tips are provided on page 11.

Cool Ideas

- The success of the action plan in each classroom depends not only on the teacher, but on all the students who learn in that classroom. Getting them on board is important to meeting your Action Plan goals. If the teacher is willing, arrange to visit their class to speak directly with those students and brainstorm ideas to enhance their experience of the Challenge, such as classroom competitions, games, events, etc.
- Post the Action Plan in a visible location, so everyone is aware of the goals.
- Create "tip signs" near light switches and recycling containers, for example, with reminders to turn things off and recycle properly.
- Identify the "low hanging fruit" and include them in your action plan. Just turning off one panel of lights is an easy way to cut down on electricity use and emissions, and it's something just about every classroom should be able to do for a few hours each day.

HERE ARE SOME TIPS YOU MIGHT INCLUDE:

ELECTRICITY TIPS

- ⇨ **Use the lights less, when possible.**
  - Turning off half the lights will reduce lighting emissions by 50%.
  - Turning off one-third of the lights will reduce lighting emissions by 33%.
  - Turn off lights when the classroom is empty - during lunch, planning periods, etc.
  - Turn off lights at the end of the day.
- ⇨ **Slay energy vampires.** Plug appliances into power strips, and turn the strips off at night. This will significantly reduce phantom loads.
- ⇨ **Flip the switch.** Turn off computers and printers at the end of the day, rather than putting them in sleep mode.

TRANSPORTATION TIPS

- ⇨ **Drive less, and walk, bike, bus, or carpool instead.**
  - Every gallon of gasoline reduced prevents roughly 20 pounds of CO_2 emissions.
  - Walking and biking are zero-emission ways to commute!
  - Sharing a ride with one other person halves your emissions; carpooling with two others reduces your emissions by one-third.

HEATING TIPS

If the classroom has an adjustable thermostat:

- ⇨ **Turn down the heat.** For every degree you turn down your heat, you could reduce your CO_2 up to 500 lbs/year (depending on how your school is heated).

SOLID WASTE TIPS

- ⇨ **Reduce.**
  - Every pound of waste that goes to the landfill creates 1.75 pounds of CO_2 pollution. *Generating less waste = Fewer greenhouse gas emissions*

- ⇨ **Reuse.**
  - Using one ream of regular copy paper generates 13 pounds of greenhouse gases. Print and photocopy on both sides of the paper and get twice the use of your paper, and fewer emissions.
  - Use a reusable water bottle or cup instead of buying individual water bottles.
  - Use a reusable coffee tumbler for hot drinks instead of paper, plastic or Styrofoam cups.

- ⇨ **Recycle.**
  - Recycle - Recycle - Recycle! If the classroom doesn't recycle, start! Every pound of material recycled rather than thrown away prevents 1.75 pounds of CO_2 pollution.
  - Recycle disposable water bottles.
  - Use recycled paper. One ream of paper made from 100% recycled material generates 5 pounds less CO_2 pollution than regular copy paper.

Step 3: Take the Cool School Pledge

For each teacher who accepts the Action Plan, have them take a 'pledge' to implement the recommendations in the plan. It's up to you to decide how formal to make the pledge: you could create individual pledge sheets for each teacher to sign with their goal clearly stated (sample template is provided). Or you might post a scorecard in the school commons or other public area with a list of all participating classrooms and their pledged goals – the sky's the limit! Once you decide on your method, Student Challenge Leaders should gather and compile pledges. It's not a bad idea to have a designated "scorekeeper" to create a log of classrooms and their CO_2 reduction goals.

Cool Ideas

- To motivate students and teachers to participate, create signs, posters or other fun visuals to place in each classroom that takes the pledge, so other students and teachers know who in the school is committed to protecting the climate and reducing greenhouse gas emissions.
- One school sent weekly emails to participating classrooms with different climate 'tips' and reminders on ways to protect the planet.
- You could also post each classroom's action plan in a highly visible location, so everyone who uses that classroom can be aware of the goals.

Cool School Pledge

This classroom is concerned about global climate change and believes that through education and action, we can make a difference at our school. That's why we are participating in the Cool School Challenge, and hereby pledge to reduce our classroom carbon dioxide (CO_2) emissions.

Our CO_2 reduction goal: _____

Signed by _____

(teacher signature)

Print name_____Classroom_____

Date:_____

Please post this pledge sheet in your classroom

Step 4: Link to Curriculum

Talk with each participating teacher about how they can link the Cool School Challenge to their classroom curriculum. It is up to the teacher to decide how they will teach climate change, energy, recycling, etc. to their students. Some ideas include:

- Incorporating the classroom auditing process and the process of reducing the classroom's carbon footprint into the classroom curriculum.
- Incorporate a specific climate change or energy focused lesson or activity into the classroom curriculum. Be sure to look at what NWF's Eco-Schools USA program offers under ***Curriculum Connections*** for both pathways.
- Take an existing lesson and add a climate change inspired twist to it.

Cool Links

- **NWF/NAAEE Proposed Guidelines for K-12 Global Climate Change Education** –

  Educators can use these guidelines, presented by the National Wildlife Federation and the North American Association For Environmental Education, to determine whether K-12 materials on global climate change are:

  1) fairly and accurately presented
  2) developmentally appropriate
  3) instructionally sound
  4) easy to use in the classroom
  5) action-oriented and supportive of lifelong learning skills

- **Eco-Schools USA Climate Change and Energy Curriculum** – Links to curriculum and lessons that can help you teach about climate change and energy.

- **Eco-Schools USA Alignment to National Science Standards**

Step 5: Monitor and Evaluate

After implementing your Action Plan for a set amount of time you will want to go back and evaluate how much progress each classroom has made towards meeting their carbon reduction goals. To do this you will need to go around to each participating classroom and complete the climate change audit again. You will notice that the audit form you used initially has columns for pre- and post- audit data.

Step 6: Share your Results

Tally the results for all classrooms and use the form below to inform participating classrooms of their carbon dioxide emissions savings. Share school-wide results with the student body and members of your community.

Ideas include:

- Allot time during a school assembly for Student Challenge Leaders to share results of the challenge and make others aware of actions they can take to reduce their own carbon footprint.
- Post information about the Challenge on your school's website and in highly visible spots around the school.
- Create a Cool School Challenge report that you can share with parents and community members
- Submit press releases publicizing the Challenge and highlighting your school's successes.

Cool School Results

This classroom participated in the Cool School Challenge and pledged to reduce its classroom carbon dioxide (CO_2) emissions. Because of your commitment we made a difference at our school and helped the planet!

Teachers name_____

Classroom_____

Your CO_2 reduction pledge: _____

Your CO_2 reduction savings: _____

Combining your commitment with those of other teachers around the school was amazing. Here is how we did as a school:

Total School CO_2 reduction pledge: _____

Total School CO_2 reduction savings: _____

Congratulations and Thanks!

Step 7: Apply for an Award!

Now that you have completed all of the steps, you can apply for a bronze-level award through the Eco-Schools USA program! The application process is simple. You just need to go onto the Eco-Schools USA website and complete the Bronze Award Application form. Once you submit the form you will automatically receive the award.

How to Apply for an Award:

- Go to www.eco-schoolsusa.org/map and click on your state in the interactive map to find out if your school is already registered as an Eco-School. If not, go to the registration page (www.eco-schoolsusa.org/registration) and sign-up! Complete the registration form and click 'submit'.
- If you previously registered as an Eco-School, go to www.eco-schoolsusa.org/registration and click the login button to access the login page. Enter your email address and password to access your school's profile.
- On your school's profile page locate the 'submit new form' section. Using the pull down menu select ‘bronze’ and click 'submit'.
- Fill-out the award application and click 'submit'. If the application is only partially completed you can click 'save' and return to it at a later point.
- If the application is successfully entered your school will be automatically awarded the Eco-Schools USA Bronze Award. You will be able to download and print a personalized certificate of achievement!
- Login in with your email used to create your Eco-Schools USA account and update your school’s personal dashboard. Your school’s dashboard must be completed by the time you apply for the Green Flag.