



**The Fairchild Challenge 2009-2010**  
**How to Guide For Teachers and Students**  
**Option 8 (MS) and Option 9 (HS): Environmental Action**

**I. Overview**

The Environmental Action option is designed to get students involved in making a difference in the home, school, and the community. This option allows great potential for creativity as students are engaged to come up with their own initiatives that will promote environmental awareness and conservation. Applying lessons from the classroom to real world scenarios encourages students to become civic minded thinkers and actively engaged citizens, while they experience first-hand how they can make a difference in the world around them.

For this option, multiple environmental action projects done throughout the school year are encouraged. **Ultimately, this option should become an all-school effort, engaging as much of the student body as possible.** To receive the maximum amount of points, it is important to remember to target all three areas of **home, school and community** through the various projects because each area will earn your school 100 points. While creative and original ideas for projects are welcomed, we have also provided some optional examples below. Please know that you are not required to complete the following suggested projects; in fact creativity is encouraged and opportunities are endless.

**II. Approaching the Option**

As the students plan for potential projects, remember that there should be clearly defined outcomes to their efforts. Projects will be judged on concept, impact, and relevance among other criteria (see Fairchild Challenge booklet for complete guidelines). **At least two initiatives must be quantifiable** (i.e. data collected through measurement and/or calculations). Examples include tree canopy measurements, carbon footprint calculations, or water use reduction.

The following examples are provided as *suggestions but are not mandatory*.

- A. Perform a School Audit – This is an inspection, survey and analysis of resource flow (i.e. energy, water, or waste) in a specified area, with the objective being to find ways to reduce consumption and usage.

1. Involve as many students as possible by encouraging the students to talk to their peers, various classrooms, and student clubs about their participation.
2. Choose an area of the school to be audited. (Students can also do this at home).
  - May include one or more classrooms, or an entire building; may include both indoor and outdoor sources.
  - Identify potential sources of use (i.e. faucets, hose bibs, toilets for a water audit; air conditioning, lights for energy audit, etc.).
3. Obtain Records for Baseline Data
  - Request current utility bills from school administration or facilities dept. that can provide initial data in terms of resource use. Students may want to look at the bill history to compare usage during different months.
4. Create Data Sheet to record monthly usage and/or expense.
5. Collect and enter data over specified time frame, keeping notes to gain a clear perspective of how the resource is being used, and how usage varies at different times.
6. Make conclusions and recommendations based on data
  - Organize data into charts and graphs
  - Use an on-line carbon footprint calculator to process data
  - Brainstorm ways to reduce the use of the targeted resource(s) and have students present to their peers, teachers, staff and/or administrators.

B. Conduct a Citizen Science Project - Individuals can help contribute data to ongoing scientific research worldwide by recording measurements of local natural phenomena, which is then entered into a collective database and translated into significant scientific statistics.

1. There are a variety of citizen science opportunities that can be researched on the internet, or you can visit Fairchild's Environmental Action webpage for additional Citizen Science opportunities ([www.fairchildchallenge.org/environmentalaction](http://www.fairchildchallenge.org/environmentalaction)).
2. Students should select a study area that is easily accessible and likely to contain their target species. This might be in their backyard, school, or a local park.
3. Survey/choose which species to monitor over a specified amount of time. Decide on variables, which might include the number sighted, various life stages identified, etc.
4. Record data on a data sheet. Make an additional copy of the completed data sheet(s) to turn into Fairchild.
5. Students should review and draw conclusions from the data collected. Did they notice anything peculiar? What are the potential causes? What are the potential implications?

C. Other Ideas:

Please remember that these are only suggestions, and that there are many other potential ideas for projects. Also remember that these ideas are most effective if implemented by many students, not just a few individuals.

**Home**

- Set a recycling goal for your household
- Create a Florida-friendly habitat in your backyard that invites wildlife and minimizes environmental impact
- Educate and encourage your family to become responsible purchasers and consumers
- Encourage your family to have one sustainable (i.e., meat-free, locally grown, organic) meal each week

**School**

- Host an educational Earth Day event at school
- Host an environmental documentary at school and donate proceeds to an environmental organization
- Have a school grounds clean up, being sure to recycle and/or dispose of materials properly
- Devise a plan to reduce waste at your school, involving recycling as appropriate.
- Create a mentoring program where older students can educate younger students about environmental issues
- Post environmental tips and reminders on posters in visible locations throughout your school
- Encourage your kitchen and maintenance staff to use environmentally friendly products
- Conduct a biodiversity inventory of your school grounds, including plants, birds, butterflies, insects and other wildlife

**Community**

- Volunteer with a local environmental organization
  - Assist with environmental education or initiatives at a local community center
  - Host a fundraiser and donate money to an environmental cause
  - Write letters about your environmental concerns to local politicians
  - Participate in a citizen science project
- Visit Fairchild's Environmental Action webpage ([www.fairchildchallenge.org/environmentalaction](http://www.fairchildchallenge.org/environmentalaction)) for updates on additional environmental action opportunities in the community

### III. The Presentation

1. Students must present their Environmental Action project reports at Fairchild Tropical Botanic Garden on Thursday April 29, 8:30-11:30 am (HS) and 12:00-3:00pm (MS). While an unlimited number of students may participate in the environmental initiatives, no more than 3 students per school must provide the presentation at Fairchild.
  2. Each presentation must consist of a 3 ½ minute Power Point, followed by a 1 ½ minute question and answer period, for a total of 5 minutes per group presentation.
  3. Students must include in their presentation:
    - Brief descriptions of student initiatives in **each** of the three areas: home, school and community
    - Clearly defined outcomes for each initiative, including the quantifiable aspect and data sheets, if applicable
    - A clear explanation of how **home, school** and **community** were impacted by the project(s)
    - Visual documentation which might include photos, video, charts and/or graphs
    - Total number of students participating in the option
  4. A PowerPoint Presentation (on a jump drive) and one printout of the presentation must be presented by students for judging on Thursday, April 29.
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### CHECKLIST

- The Environmental Action project consists of multiple initiatives which impact the **home, school and community**, with clearly defined and stated outcomes and results
- No more than 3 students must be available to present the Environmental Action Report on April 29 at Fairchild
- Presentation will consist of a PowerPoint that is no longer than 3 ½ minutes, which includes but is not limited to: documentation of methods, data collection, results, total number of students involved, and visual representation of project
- An electronic and hard copy of the PowerPoint presentation and all data sheets must be turned into Fairchild at the Environmental Action Report Event on April 29<sup>th</sup>.