MANUAL FOR SCHOOL ENVIRONMENTAL CLUBS

"An individual has not started living until he can rise above the narrow confines of his individualistic concerns to the broader concerns of all humanity."

– Martin Luther King, Jr. –

In the end, we will conserve only what we love,
we will love only what we understand,
we will understand only what we are taught.

– Baba Dioum–

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KIDS ECO CLUB

This manual was designed to provide guidelines, resources and inspiration for your school based EcoClub.

It has been divided into four parts:

PART 1 – KEC BACKGROUND

SECTION 1: KEC History

Mission

The mission of KEC is to increase the eco-consciousness and social responsibility of K-12 children by providing them access to the natural world, state of the art social media, innovative educational programs and resources. Through diverse collaborative partnerships, KEC will develop the next generation of leaders who will have the knowledge, passion and skills to promote and work toward environmental sustainability.

Vision

The vision of KEC is to be the largest and most widespread and comprehensive organization for youth environmental education, connecting the community with youth, offering expansive programs, and providing resources for schools nation-wide.

Organizational History

In 2010, Susan Guinn was home with her son Max (then nine years old) when he made the comment, "One person can't make a difference." This statement greatly impacted Susan as she realized that Max along with many other kids often feel that they don't have the power to make a real difference and to change the course of the world. The ecological destruction and environmental concerns around the world are often discouraging and overwhelming for young kids because they do care and want to make a difference and be more responsible. Making a difference seems too big, too expansive for them to feel that they can have a real and lasting impact. As a result, Susan and Max formed KEC.

KEC believes that no matter what age, individuals can make a difference in their world. KEC is driven to inspire, educate and empower youth to make daily decisions to support a healthy, sustainable planet.

The initial stages of development of KEC have focused on creating collaborative partnerships with leading environmental science and educational groups, as well as creating a robust web site design that will drive its many programs. Additionally, KEC recruited a strong board of directors who bring both theoretical and applied expertise to KEC. The administrative leadership team for KEC has combined expertise in environmental education, youth programs and development, business marketing and organizational management.

Organizational Programs

KEC is a 501(c)3 nonprofit organization providing environmental education programs for K-12 schools.
Programs include :

PROGRAM NAME	PURPOSE
On-Campus EcoClubs	Establish and support after school and classroom clubs on the campus of lower, middle and high schools where kids can participate in environmental projects and gain exposure to the EEI curriculum and other sustainability principles.
Volunteer Match	Connect schools and clubs with volunteers that support KEC's mission and vision via a match.com type of database.
Eco Field Trips	Support and fund eco-educational field trips for low-income schools.
Eco School Projects	Support and fund eco-enhancing classroom and club needs.
Youth Eco Leadership Training	Offer leadership workshops, seminars, and conferences to develop and train kids involved in EcoClubs nationwide, focusing on developing the next generation of environmental leaders.
Green Youth Council	Provide leadership opportunities and training to 60 National Green Youth Council and 4,000 Regional Green Youth Council.
Ask an Expert	Establish partnerships with universities, corporations, and foundations to create video shorts designed to improve environmental awareness and share innovative energy solutions. Video shorts will be broadcast to clubs and classrooms who can participate in forum and blog discussions with Scientists, Engineers and Artists.
KidConnect	Engage, connect and mobilize kids, clubs, classrooms and volunteers using custom cutting edge social media.
Eco Share	Inspire and empower youth to share information through articles, photographs, film, blogs, forum chats, Facebook, Twitter, Skype, U-Tube and social networking to increase collective eco-consciousness.

SECTION 2: Benefits to Students, Educators & the Environment

Kids will benefit by:

- Expanding their eco-consciousness;
- Learning about green technology;
- Meeting and collaborating with other school clubs from varying socio-economic backgrounds and cultures;
- Developing leadership skills;
- Finding their voice;
- Stretching their expectations of self;
- Positively impacting their peers, families, schools, communities and planet;
- Creating and building upon a vision of a sustainable future;
- Opportunities to engage politicians, leaders, peers and educators;
- Participating in a grass roots movement to sustain the planet; and,
- Participating in field trips - a popular experiential form of learning that excites the imagination of students and actively involves teachers. – A large body of educational research supports that field trips are a key component of school instruction. They are not an add-on, or something that can be eliminated or reduced without serious consequences for student academic achievement.

Educators will benefit by:

- Gaining access to a wide network of volunteers to aid in projects, provide classroom lectures, hands-on teaching assistance, and guide field trips as well as nearby nature walks;
- Participating in guided fieldtrips and receiving help with transportation costs;
- Connecting classrooms with STEAM (science, technology, engineering, art and mathematics) professionals via ongoing “Ask a Scientist”, “Ask an Engineer”, “Ask a Green Technology Expert”, “Ask an Artist”, video shorts and related forum chats and blogs;
- Accessing a dynamic events calendar offering teacher workshops and information on upcoming events;
- Accessing monthly newsletters containing articles from STEAM professionals and children on environmental sustainability topics;
- Training;
- Accessing EEI curriculum and related curriculum models on the KEC website; and,
- Creating and customizing a KEC hosted classroom environmental club to securely post pictures, videos, blogs, event calendars, curriculum, newsletters and projects in addition to communicating with other KEC classroom clubs throughout the country.

The Environment will benefit by:

Starting and sustaining a grass roots movement committed to acting on behalf of a sustainable earth. Studies indicate that people protect what they know and what they love. KEC will educate children in environmental sustainability and give them access to the natural world around them to create a lasting connection with the health of the planet.

SECTION 3: On-Campus EcoClubs, Volunteer Match, and Fieldtrips

On-Campus EcoClubs

Imagine an educational system that enables students to engage in school environmental clubs, which are designed to increase eco-consciousness and promote environmental sustainability. Envision schools that foster environmental awareness, are connected by social media, knowledge, and the desire to develop and maintain sustainability initiatives that will help to ensure our collective future. Environmental concerns are rising and the education system is in dire need of support and additional resources to help create a future generation that is equipped with the content knowledge and the skills to lead efforts to sustain the planet. With its variety of programs, KEC intends to play a major role in fulfilling these challenges.

Unfortunately very few schools have an environmental club or other related outlets for interested students. KEC will establish and support on-campus EcoClubs in all schools where members and the directing faculty agree to support KEC's mission and vision. KEC will support both after school and classroom environmental clubs. Each club is able to customize their website through KEC. Customized content can include pictures, video, articles, newsletters, events, fund-raising goals/status, forums and blogs. The creation and support of clubs is a driving program within the KEC organization and a program that has the potential to reach hundreds of thousands of children, thereby resulting in a transformative impact on the eco-consciousness and environmental education of K-12 students.

A unique aspect of the KEC on-campus EcoClubs is the united curriculum and integrated social media platform that will link clubs and classrooms across San Diego County and the country. Clubs will initiate and share information about environmental projects and events at their schools to address not only the most pressing issues in their community such as water conservation, habitat restoration, energy efficiency and air quality improvements but also national and global issues.

This unique media platform will reach and inspire youth to learn about ways to protect the planet. It will expand the collective environmental awareness of countless youth by giving them access to world class volunteers, scientists, conservation artists, engineers and more.

KEC anticipates the social media site will be available by use in February of 2012. Until then, all other aspects of club support are available.

Volunteer Match

Volunteer Website (Coming Soon! – Register Volunteers Now)

The volunteer platform of the website is under construction and when complete will be a fully customized, unique, hand crafted database application that in many ways rivals the highly successful 'match.com' style of searching a large database and finding just the right volunteer. The Kids Eco Club database is designed to match the perfect volunteers with targeted opportunities within their local communities. The volunteer's security status, educational background, picture, geographic area and interest will all be searchable. Robust and ever expanding, this database is easily scalable to the entire country. This volunteer system will also be able to work seamlessly with all other aspects of the website including grants, schools, educators, calendar, security features and the like.

Enabling all aspects of the system to speak and interact with each other is by far one of the most unique and challenging aspects of this website. However, by doing so properly from the onset, it ultimately develops an educational and interactive tool that is functionally unprecedented in the current educational marketplace.

Eco Field Trips

KEC will support environmental based field trips for schools that would otherwise not have access to such outings and educational adventures. KEC will help connect schools and classroom teachers with field trip guides, diverse locations for exploration and learning, and resources to complete projects aligned the EEI curriculum or other eco enhancing goals. KEC will also fund school bus transportation for the schools that do not have the necessary funds.

The value of field trips includes the following:

- Museums, aquariums, science centers, and natural areas offer resources that are simply not available in the classroom, including hands-on experiences, real artifacts, original sources, and more up-to-date information than textbooks.
- Well-designed field trips result in higher student academic performance in all subject areas.
- Students are motivated for classroom learning by real world application of what they are learning.
- Low-income and English language learner students make connections between community resources and opportunities, and their family and culture, leading to higher involvement in the classroom.
- The civic engagement mission of schools is met when students use their learning to benefit their community through service learning projects, and to practice the skills of citizenship.
- Experiences match the variety of learning styles and intelligences, allowing all students to succeed.

PART 2 – On Campus Club Procedures

SECTION 1: How to Start an On Campus Club in 7 steps

Step 1: Review KEC's Mission and Vision Statements

Please review KEC's Mission and Vision stated on page 3 and confirm that you will support and uphold them as you run an EcoClub. If so, then proceed to Step 2.

Step 2: Contact KEC.

Send an email to clubs@KEC.org to express your interest in starting an EcoClub and to ask any questions you might have about KEC.

Step 3: Talk to Your School about Starting an EcoClub on Your Campus.

Ask your school about how to start a student organization. Typically, schools require student organizations to adopt a set of by-laws or rules, have a core-group of officers, a faculty advisor and agree to abide by school rules. You can copy them with KEC's Overview to give them a better sense of the organization. The Overview is available on www.KidsEcoClub.org.

Step 4: The Basics of Setting-Up an EcoClub.

- **Recruit 4-6 core people to help you.**
  Find a few friends and a 'Nature Champion' at your school (typically a teacher or parent) to help you with the club. This core group can form your leadership team.
- **Appointment of a temporary chairman or president.**
  At first you will need to assign a temporary leader to preside over the drive to form the club. This may or may not be the person who serves as permanent chairman or president.
- **Election of temporary officers.**
  The members should discuss which officer appointments are necessary for your club. Decide whether you want a president or chairman; whether you want a vice president; whether you need a treasurer; and whether you need someone to keep the minutes of each meeting.
- **Preparation of by-laws or rules.**
  Decide upon a committee to write the by-laws or rule booklet. See these sample by-laws.

- **Adoption of by-laws or rules.**
  Once the by-laws or rules are written to everyone's satisfaction, you will vote to adopt them.
- **Election of permanent officers.**
  At this time you can decide if your club has enough officer positions or if you need to add some positions. Some of the positions you should consider are listed below.

  President: Leads meetings

  Vice president: Supports the president and helps plan events

  Secretary: Records and reads minutes

  Treasurer: Handles funds

  Historian: Keeps a picture book and notes

  Publicity Officer: Makes and distributes flyers, posters

  Webmaster: Maintains web site

Step 5: Review and Sign the EcoClub Charter.

Complete the EcoClub Charter on-line or print and return to become an official EcoClub.

Step 6: Prepare for First Meeting and Publicize.

Spread the word and call for your first meeting! It is helpful to have a game plan-- a calendar of events or topics for discussion. While all the planning doesn't have to be done before the club first forms, it helps to have at least a basic idea of what sorts of topics you will cover, activities you will do, and speakers you will host before you get started. We have access to a number of speakers and individuals willing to help. Just let us know what you need.

To have meetings you will need to reserve a meeting room. Most schools allow student groups to use classrooms or meeting rooms for their gatherings. A meeting room or classroom which holds 20 to 40 people is ideal for an EcoClub meeting.

General Order of a Meeting

You can use these steps as a guideline for your meetings. Your specific style can be less formal, or even more formal, according to your goals and tastes.

- Call to order by the president or chairman
- Reading and approval of the minutes from the previous meeting
- Discussion of old business
- Discussion of new business
- Program
- Adjournment

Step 7: Start Your Own Customized EcoClub Website through KEC

Select a Webmaster within your club and use our EcoClub template for starting your website, which will be accessed and hosted through the main KEC website. You will be able to customize content. Please contact us for details.

SECTION 2: Sample Bylaws

Article 1. Club Mission

1. Increase eco-consciousness by learning about green technology
2. Provide a positive forum in which students can be creative, innovative, and develop leadership skills
3. Positively impact peers, families, schools, communities and planet by participating in community service projects
4. Promote school environmental activities and community projects
5. Participate in field trips to increase knowledge about eco related issues
6. Bring noted speakers to campus to inspire and educate peers about sustainability
7. Participate in habitat restoration
8. Increase school-wide energy efficiency
9. Support KEC's Fallen Fruit Project
10. Inspire others by participating and planning Earth Day Events , projects and competitions
11. Participate in legislative policy and changes to protect the planet
12. Establish and support projects which support KEC mission and vision
13. Draft and submit grant proposals to various foundations to raise funds for sustainability projects at your school or within your community
14. Establish and maintain an e-newsletter and/or regular submit articles to KEC for broadcast
15. Adopt a physical location for regular habitat restoration or clean-up
16. Become experts in a particular estuary, wetlands, dessert, green technology etc. and be the KEC voice for that site or issue.

Article 2. Code of Ethics

1. All individual members will be responsible for their actions and be respectful of other members.
2. All members will continuously work to improve their knowledge and skills to benefit themselves, their EcoClub and KEC.
3. Members will act as representatives of KEC while in the community and will not engage in activities harmful to the mission or vision of KEC.
4. Members shall abide by the student code of conduct published by your school and/or school district.
5. The club shall operate in accordance with current school policy.

Article 3. Membership

1. Membership is open to any currently enrolled (your school) middle/high school student.
2. Membership is open to any current faculty and staff at (your school) middle/high School.
3. At this time, only enrolled students are allowed to run for club offices.
4. Clubs shall not discriminate based upon race, religion, gender, gender identity or sexual orientation.

Article 4. Officer Positions

1. The officers of this club shall be President, Vice President, Secretary, Treasurer, Historian, Publicity Officer, and Webmaster. Officer positions may be deleted or established by a majority vote of the club.
2. Officers will be elected for one year by a vote of the club at the beginning of each term year.
3. If an officer position opens for any reason, the club will hold elections at the next club meeting.
4. Officers must attend every club meeting (they have one excused absence every quarter).

Article 5. Officer Tasks

1. President - is the principal officer and therefore responsible for leading the club in meetings and activities in accordance with guidance established by your school and/or school district and these bylaws.
2. Vice President - will assist the president in club management, will supervise club meetings in the absence of the president, and will carry out other duties assigned by the President.
3. Secretary - will keep minutes of club meetings, maintain the attendance roster for the club, and maintain club membership records with the names and email addresses of all current members.
4. Treasurer - receives and disburses all club funds, maintains a current balance sheet, makes a financial report to the club twice a year or whenever the faculty sponsor or President believes it is necessary.
5. Historian - creates and maintains a book of photos, newsletters, committee notes, programs from community services projects, letters from the community, any written accolades, and anything else of historical significance to the club.
6. Publicity Officer - responsible for reporting and promoting club activities and community events sponsored by the KEC. May assist webmaster in promoting EcoClub events on the website.
7. Webmaster - creates and maintains the website for the EcoClub.

Article 6. Faculty Sponsors

1. Each KEC needs at least one faculty, administrative or adult sponsor (additional faculty sponsors are allowed).
2. Sponsors may vote in meetings and participate in all club activities.
3. A sponsor must be present at all club meetings.
4. A sponsor will be responsible for organizing elections at the beginning of each school year.
5. A sponsor will work closely with the club officers in business matters of the club, including maintenance of the club website.

Article 7. Meetings

1. General meetings will be held monthly during school months.
2. At least one adult sponsor is required to attend each meeting.
3. Current members may bring up new business during the open forum portion of regularly scheduled meetings.

Article 8. Dues

1. The Club Treasurer will collect the annual membership dues of $5.00 to $10.00 at the beginning of each school year.

2. The dues will go toward expenses not covered by the funds raised by the club (i.e., food and beverages at meetings).

3. Dues will be deposited into the club's school account and maintained by the Treasurer.

Article 9. Voting

1. All proposed changes to these bylaws must be approved by a _ majority vote by members of the club.

2. Each member that has paid dues may vote.

3. Any member may bring up an issue during the open forum portion of the club meeting and ask it to be put to a vote.

Article 10. Club Activities

1. Community Service Projects – the members of the KEC will participate in community service projects to expand their eco-consciousness, help teach people in the community about the mission of their club, and positive impact their community and planet It is recommended that the club engage in at least two events per year. Examples include habitat restoration, Fallen Fruit Project, environmental clean-up, Earth Day activities, recycling events, speaking engagements etc.

2. Field Trips- a large body of educational research supports that field trips are a key component of school instruction. They are not an add-on, or something that can be eliminated or reduced without serious consequences for student academic achievement.

3. Fundraisers - proceeds from fundraisers will be deposited into the club's school account and be used for expenses not covered by club member dues (e.g., food and beverages at meetings), projects and events.

Article 11. Website

1. The content of the KEC EcoClub website may include, but is not limited to:
   a. Discussion
   b. Q&A
   c. Links
   d. Tutorials
   e. Downloads
   f. Uploads of pictures, videos, articles and other content
   g. Articles
   h. Schedule/Calendar
   i. Events
   j. Blogs
   k. Fundraising goals/status

2. Items and links on the website will adhere to all your school and school district policies.

Article 12. Blog

1. The webmaster should maintain a blog and/or e-newsletter instead of creating a paper newspaper (to save paper!) that is to be updated weekly or monthly as needed (the web address will be made available to the student body through the school newspaper.)

2. The content of the blog may include, but is not limited to; club activities, meeting schedule, green technology articles, articles on youth leadership, upcoming field trips, etc.

Article 13. Changes to Bylaws

1. Articles in this set of bylaws may be deleted or modified by a _ majority of the club.
2. Changes to the bylaws will be done as amendments.

How to Use the Bylaws

These sample bylaws are to serve as a template for the rules and regulations of each On Campus KEC EcoClub. All clubs are free to use these articles as they are listed or add or remove articles as they apply to the specific club. Please contact KEC if you have any questions concerning the bylaws.

SECTION 3: Sample Officer Roles

President – Roles and Responsibilities:

1. Conduct monthly meetings during school year.
2. Attend all club meetings (if unable to attend due to illness or emergency the president needs to contact the Vice-President to run the meeting in their place).
3. Make sure all club meetings are fun, organized, start and end on time, and follow the agenda you set at the beginning of the meeting.
4. Lead the club in meeting and activities in accordance with guidance established by the School District (your school area) and these bylaws.
5. Sustain and/or increase the membership of your EcoClub.
6. Help to execute successful projects that address the needs of your eco community.
7. Help to develop the leadership skills of the other EcoClub officers as well as members of the EcoClub.
8. Delegate tasks to club officers and members of the club and ensure such tasks are completed timely and in line with the mission and vision of the KEC.
9. Evaluate and set attainable goals for the club.
10. Inspire the officers and members of the EcoClub.
11. Present KEC with a report at the end of each academic semester detailing the activities of the Club and number of members during the past semester and indicating their future goals and any needed assistance and/or support from KEC.
12. Helping all officers fulfill the goals of their club position and providing guidance and encouragement.
13. Meet regularly with faculty or parent advisor to go over monthly agenda, community service projects, and any club issues.
14. Conduct elections of new officers and help all candidates who are running to understand about the roles and responsibilities of the positions. Elections should be scheduled in April to allow the new officers to learn about their offices and formulate club and project ideas for the coming year.

Vice President – Roles and Responsibilities:

1. Assist the President in club management and will supervise club meetings in the absence of the president.
2. Attend all club meetings *(if unable to attend due to illness or emergency the vice-president needs to inform the club officers and read the meeting notes to get caught up on club business and project progress).*
3. Assist the President in any way he or she needs and become familiar with presidential duties should he or she be absent at club meetings or community service projects.
4. Help spread the word about the KEC to students at your school and help them decide if the club is right for them.
5. Give advice, support, and encouragement to all officers and members of the EcoClub.

Secretary – Roles and Responsibilities:

1. Keep minutes at club meetings.
2. Attend all club meetings (if unable to attend due to illness or emergency the secretary needs to inform another club officer to keep minutes at the meeting).
3. Maintain the attendance roster for club meetings and community projects.
4. Maintain club membership records of all current members including: name, address, phone and email contacts, grade level, birthday, EcoClub joining date, any officer positions held, and eco related interests.
5. Maintain all other important club record files including: copy of the EcoClub guidebook, EcoClub bylaws, past achievement reports, past monthly reports, past and current rosters of members and officers.
6. Give advice, support, and encouragement to all officers and members of the EcoClub.
7. Help spread the word about the KEC to students at your school and help them decide if the club is right for them.

Treasurer – Roles and Responsibilities:

1. Receives and disburses all club funds.
2. Attends all meetings (if unable to attend due to illness or emergency the treasurer needs to inform another club officer about his or her absence).
3. Maintains a current balance sheet of club funds.
4. Lead and organize fundraisers to raise funds for the EcoClub.
5. Makes a financial report to the club twice a year or whenever the faculty sponsor or president thinks it is necessary.
6. Give advice, support, and encouragement to all officers and members of the EcoClub.
7. Help spread the word about the KEC to students at your school and help them decide if the club is right for them.

Historian – Roles and Responsibilities:

1. Attends all meetings *(if unable to attend due to illness or emergency the historian needs to inform another club officer about his or her absence).*
2. Takes photos and/or video at club meetings, community project events, field trips, and any other club event.
3. Creates and maintains a book of photos, newsletters, committee notes, programs from community services projects, letters from the community, any written accolades, and anything else of historical significance to the club.
4. Responsible for creating any award certificates given to officers or members for outstanding service to the EcoClub.
5. Provide necessary documentation to any other officer to aid in the completion of their duties.
6. Give advice, support, and encouragement to all officers and members of the EcoClub.
7. Help spread the word about the KEC to students at your school and help them decide if the club is right for them.

Publicity Officer – Roles and Responsibilities:

1. Attends all meetings *(if unable to attend due to illness or emergency the historian needs to inform another lub officer about his or her absence).*
2. Responsible for publicizing the club, fundraising events, community service projects, and club members.
3. Lead and organize projects designed to promote the EcoClub and work to build a list of local media contact (i.e., local news stations, radio stations, and community newsletters or newspapers).
4. Write articles about the EcoClub and how their community projects relate to the mission and vision of the KEC and submit them to the school newsletters and community newsletters.
5. Give advice, support, and encouragement to all officers and members of the EcoClub.
6. Help spread the word about the KEC to students at your school and help them decide if the club is right for them.
7. May assist the webmaster in promoting club events on the club website.

Webmaster – Roles and Responsibilities:

1. Attends all meetings *(if unable to attend due to illness or emergency the historian needs to inform another club officer about his or her absence).*
2. Creates and maintains the website for the club.
3. Coordinate efforts with other EcoClub officers to obtain important club information and promptly transfer information to EcoClub website.
4. Encourage club members and officers to understand and effectively use EcoClub website.
5. Give advice, support, and encouragement to all officers and members of the EcoClub.
6. Help spread the word about the KEC to students at your school and help them decide if the club is right for them.

How to Use the Sample Officer Roles

These sample officer roles and responsibilities are to serve as a template for the roles of each On Campus KEC EcoClub. All clubs are free to use these roles as they are listed or add or remove responsibilities as they apply to the specific club. Please contact KEC if you have any questions concerning the officer roles.

Section 4: Frequently Asked Questions (FAQs)

1. **Does a faculty member have to sponsor an On-Campus EcoClub?**

   You do not need a faculty member to sponsor your On-Campus KEC EcoClub. However, you do need an adult sponsor. A sponsor can be an educator, parent, grandparent, guardian, teacher's aide, volunteer, etc.

2. **How many members do I need to start a club?**

   You can start an On-Campus EcoClub with an adult sponsor and 4-6 students.

3. **What's the best way to get our school administration excited about KEC and our On-Campus KEC EcoClub?**

   Make an appointment with key administration members and share KEC Overview and one page flyer, club materials and/or video. Contact KEC and we will be happy to present or help you in any way you need.

4. **What action do we take if a member or officer of our EcoClub does not appropriately represent the mission and vision of KEC?**

   See sample bylaws for full details. Ultimately, if any club members fail to act appropriately or fail to represent the mission and vision of KEC, the club can lose its status as an On Campus KEC EcoClub. This would result in reduced or suspended funding, assistance, and/or communication from KEC.

5. **How many fundraising events should our Kids EcoClub put on in any given year?**

   There is no requirement for fundraising. Each club should decide the number of events they can support based on time, resources and number of club members.

6. **How many community service projects should we take on in any given year?**

   Each Eco Club is free to set their own priorities as long as they support the mission and vision of KEC.

7. **Are there established projects our club could get involved in right away?**

   Any fully functioning project will be highlighted on the KEC website. If you have any questions about getting involved with the project you can contact any member of the KEC Team.

8. **Is there an age requirement for participation in the EcoClub?**

   KEC is open to students K-12.

9. How often should we update our Kids EcoClub website?

There are no requirements for updating the website. The Webmaster should coordinate efforts with other EcoClub officers to obtain important club information and promptly transfer information to the school EcoClub website.

10. When should we vote for club officers?

At the inaugural meeting of the EcoClub you should vote for club officers. Each successive year you should hold elections in April to help transition the new officers before the end of the school year.

11. Can I start an EcoClub if there is already another environmental or eco-related club at my school?

Yes. Depending on your school, there may be several classroom EcoClubs as well as an afterschool club. It is best to only have one after school EcoClub for a given age group. For example, one after school high school EcoClub. Schools with a lower, middle and high school may consider three after school EcoClubs or decide to combine efforts. If your school already has an after school environmental club, we encourage you to support that club and/or work together.

12. Do you have to be an expert in science, the environment, green technology or sustainable practices to start an EcoClub?

You do not need to "be an expert" to start and run a successful EcoClub. KEC is here to help you and provide resources and guidance so you can educate others. We are here to help you get started and to provide resources and guidance to sustain your club for the long term. Just ask - whether you need help in science, leadership skills, tips for running the club or help launching your own EcoClub website and/or newsletter, we want to help you succeed.

Section 5: Advice for Successfully Running an On Campus EcoClub

1. Spread the word about the EcoClub: advertise at school functions, during recess, and have the administration publicize your new club to get new members.
2. Be realistic: Choose community projects that can be completed within an appropriate time frame and with the resources available to you.
3. Ask for Help: If you ever need support, funding, assistance, and/or communication from KEC do not hesitate to contact any member of the KidsEcoClub Team. We are here to make your club a success!
4. Keep it Fun! Make sure to have fun with the meeting topics and club meetings. Think of ways to jazz up meetings with skits, video clips, and games.

PART 3 – Ideas and Resources

Section 1: Sample Meeting Agenda

Introduction:
Welcome the group to the EcoClub meeting. If there are a number of guests and new members you may want to explain a little about the history and mission of the KEC.

Program Agenda:
Explain the talking points of the day's meeting and if possible, pass out an agenda.

New Guests and Member Introduction:
Introduce any speakers or non-student guests as well as new student EcoClub members.

Announcements:
Includes recognition of member achievements (i.e., EcoClub perfect attendance, college acceptance, school athletic awards, community awards, EcoClub member of the week, club member birthdays, events, any special thanks to officers, members or faculty sponsors.

Discussion about Status of Projects:
Talk about roles, logistics, progress of project, reminders about recording service hours and allow members and officers to ask questions and/or make suggestions about projects.

Meeting Topic for the Day:
See Section 13 for monthly club meeting topics.

Closing Comments:
Thank all of the meeting participants and remind the club about the upcoming projects and the date for the next club meeting. You may also want to ask if anyone has anything to add or has any questions.

Refreshments:
Use funds from the club treasury to buy snacks and beverages for a short social at the end of each meeting. This can help club members get to know one another outside of the community projects.

Section 2: Meeting Topic Ideas

- Learn how to be more eco-friendly in your home.
- Every Drop Counts: Learn about ways to reduce the amount of water we use every day. (According to "Good Is" website, a family of 4 only needs 3 gallons of water a day to survive and in America they use up to 400 gallons a day.)
- Learn how to make recycling easier at your house, at school, and in your community. Then implement.
- Learn about alternative sources of energy (wind, solar, geothermal, etc.) and their benefits as well as the challenges associated with lessening our reliance on fossil fuels (political reasons, not cost-effective in the short term, governmental reluctance, etc.). Brainstorm potential speakers and field trips.
- Learn to compost (i.e., resources, best practices, different ways to compost, and benefits of composting). Start composting at home, school and/or your community.
- Learn how to "Green Gift": How to be more eco-friendly when gift giving.
- Learn how to be "green when you clean": The pros & cons to green cleaning products and best practices.
- Learn about carbon footprints and what each club member can do to reduce their own footprint. Your club could even turn this into a fundraising competition. Conduct a school energy efficiency audit and work with school to implement changes.
- Green Transportation and making it work for you: Instead of driving consider biking, walking, riding your scooter, skateboarding, or taking public transportation.
- How to reuse everyday products: (Example: Instead of throwing out plastic bags from your lunch, take them home and reuse them. Plastic bags can actually hold up to washing, drying, and reuse. 1. Insert chopsticks or wooden dowels into the holes of an unused toothbrush holder. 2. Hand-wash bags with warm, soapy water. 3. Hang bags upside-down on the chopstick prongs to let water run out and air flow in). Better yet, stop using plastic bags.
- How to eat green in a way that works for your family and budget.
- Talk about the green initiatives in your city and how your EcoClub can get involved.
- Effects of climate change in your backyard: Discuss how you see climate change affecting your surroundings (i.e., animals, oceans, extreme weather events, etc.).
- Micro steps to combating macro problems: Individual changes that can reduce greenhouse emissions, animal testing in companies, bad corporate policies concerning animal treatment and recycling, etc..
- Learn about animals on the endangered species list.
- Learn about urban gardens and help members learn how to create and sustain them.
- Learn about the controversy surrounding genetically modified foods.
- Dedicate a month to learning about nuclear issues: nuclear power, nuclear weapons, radiation accidents, nuclear safety and waste management, and nuclear fallout. Request speakers.
- Learn about ozone depletion and what EcoClub members could do to prevent it.
- Learn about and then discuss the "Pacific Garbage Patch" (the plastic trash heap in the middle of the Pacific Ocean that is about twice the size of Texas). What can we do to better protect our oceans from the trash that we produce (recycling our plastic, volunteering for trash pickup along beaches, roadsides, etc.)?

- Learn about air and water pollution and how to reduce.
- Learn how to pack a waste free lunch bag. Start doing this.
- Learn how to help your family reduce personal mail including circulars, coupons, magazines, and credit card offers.
- Watch parts of the "No Impact Man" documentary and talk about the movie as it relates to reducing carbon footprints.
- Learn about the overpopulation of companion animals and the importance of spaying/neutering your pets.
- Discuss the less common types of pollution (light, noise, visual) and how these affect your everyday life. Think of steps we can take to target the sources of these pollutants in order to lessen their negative impact in our communities.
- Discuss the importance of clean water on both local and a global level. Learn about how climate change and climate instability affects people's ability to have access to clean water for drinking, cooking, and growing food.

Section 3: Community Service Project Ideas

- Create a lecture series at school and broader community (invite science, technology, engineering, art and math (STEAM) professionals and others to speak).
- Arrange guided nearby school nature walks after school.
- Work to decrease use of plastic bags by convincing grocery stores and retailers to pay customers 5 or 10 cents back for every recyclable bag they use at check-out or conversely charging for each plastic bag someone uses.
- Arrange for school/community clean-ups of beaches/wetlands etc.
- Write articles and submit pictures for use in KEC digital library to raise eco-consciousness.
- Create and edit a short conservation film for use on KEC site.
- Work to change policies or laws regarding use of plastic bags (provide insight as to cities which have banned the use of plastic bags).
- Make and/or create partnership with people and/or entities to make owl nesting boxes for the community and other schools (can run like small business – contact KEC for plans).
- Conduct school energy audit with help from STEAM professionals and present suggestions to school to save energy.
- Create phone, computer and electrical recycling center at your school.
- Compost.
- Create gardens (water wise, food, butterfly etc.).
- Start chicken coop at school (can run like business and even sell eggs).
- Rain barrel systems to capture rain water for use.

- Stop use of plastic water bottles on campus.
- Start an orchard.
- Take guided club camping trips and filed trips.
- Participate in leadership training through KEC and its partners.
- Apply for a grant to sustain an eco-project important to the club.
- Participate in KEC's Fallen Fruit Project - start a fruit and/or vegetable exchange (get people to agree to allow their excess fruit or vegetables to be picked and swapped for the other, or donated to school children in need).
- Arrange for stores and malls that do not have recycling pick-up to have recycling pick-up and containers (i.e., some Starbucks).
- Get one teacher/science department/school to adopt some or all of EEI curriculum for use in your school.
- Zero waste from school lunches (compost, recycle etc.).
- Start program to recycle/reuse school books and uniforms.
- Find an area in need of more greenery and have a tree-planting day (helpful resources: arborday.org, tree-planting.com, and treemusketeers.com).
- Test the water and soil in your neighborhood in order to better understand the chemical composition of your environment and the water you drink.
- Organize a vacant lot cleanup in order to reduce the amount of litter as well as beautify a previously unsightly area.
- Help to remove non-native plant species from areas where their presence is taking over the nutrients, water, and life of native plant species (Contact the local Parks and Recreation Department to learn more about this).
- Participate in a beach cleanup (also could be lakes, rivers, parks, estuaries, or ponds). Contact Costal Commissions – in California they sponsor a statewide Coastal Cleanup.
- Help prevent erosion by planting greenery (suitable for the location) in places that are at risk.
- Label/clean gutters and drains. Think of innovative/creative ways to remind people about the dangers of dumping waste into their gutters and discourage them from doing so.
- Host locally-grown snack stands at school/community events (coordinate with local farmers).
- School your class on e-waste disposal (define it, explain it, brainstorm it).
- Become knowledgeable on sustainability principals and/or a particular issue or site and speak out to educate others.
- Protest polluters.
- Start an environmental campaign on www.change.org.
- Arrange community and/or school movie viewings and discussions related to increasing eco-consciousness.
- Make the area in your neighborhood or school a safe and clean place for outdoor play or exploration.
- Create a conservation film, sculpture, art program, song, play etc. to engage others in sustainability issues.

Project T.G.I.F.: Turn Grease Into Fuel

Westerly Innovations Network / Westerly Middle School, Westerly, Rhode Island

This group of middle school students, who are passionate about community service, decided to do their part in tackling global warming by creating a sustainable project to collect the town's waste cooking oil, refine it into biofuel, and then distribute it.

The students presented their project to the local town council and convinced them to place a grease receptacle at the town's transfer station to collect waste cooking oil from residents. The group also convinced 64 local restaurants to donate their waste cooking oil, which is a by-product of fried food. To collect the waste oil from restaurants and the transfer station, the students collaborated with a local company to collect the waste oil and bring it to a biodiesel refinery where waste cooking oil is recycled into biofuel. Funds received from the refinery for the recycling of the waste oil were used to purchase Bioheat®, a biofuel, from a local distributor to give to local charities.

This project has been, and continues to be, a success for the environment and local families in need of heating assistance. To date, this project has collected over 36,000 gallons of waste oil and produced 30,000 gallons of biofuel a year, which eliminated 600,000 pounds of carbon dioxide from being released into the atmosphere. The students have donated 4,000 gallons of Bioheat® to local charities and helped 40 families with emergency heating assistance.

Another important part of the project is educating school children and local residents about energy alternatives. The students have made numerous presentations to the local elementary school and local residents to encourage them to participate in the T.G.I.F. project and to teach them about alternative energy sources, the town's recycling program, and global warming.

Steps to a More Sustainable School

Josh Rubin, Syosset, New York

When Josh entered Solomon Schechter High School of Long Island, he was surprised that there was no recycling program in his school. Paper, plastic and aluminum were constantly discarded into the trash to be hauled away to a landfill; however, the lack of recycling was not due to a lack of awareness. For almost 40 years, the environmental movement and the media have brought light to issues like air and water pollution, conservation, and deforestation. Locally, towns on Long Island have required residential recycling of newspapers, plastic containers, and aluminum containers. Al Gore's documentary film "An Inconvenient Truth" was a very popular film after its release in 2006, and yet so many people still found recycling and active conservation to be too inconvenient. Many were still skeptical and they did not believe that their personal actions or individual efforts would make a difference.

Josh investigated and he found a private company called Royal Recycling that was willing to pick up the school recyclables for free. The school now recycles paper, plastics, aluminum, and cardboard on a weekly

basis. In addition, the club led a successful boycott this year of the lunch program's disposable trays.

The club began with 8 charter members and has grown to include more than 50 students from a total population of 180 students. Teachers at the high school are active partners in the project and have helped to facilitate the collection of paper, bottles, ink cartridges and used battery drives. Each week, members of the club collect recycling bins from each classroom. In the past year alone, more than 7 tons of paper, cardboard, plastic, and aluminum collected from Solomon Schechter High School were recycled.

Josh's work with the club has shown that the school's efforts to recycle really does make a difference. Students, teachers, and administrators are more aware of how their actions can improve the environment. Working together, Josh and club members have taken measurable steps to increase recycling at the school and are actively promoting how to make their school as eco-friendly as possible.

Illick's Mill Project

Illick's Mill Partnership for Environmental Education, Bethlehem, PA

The Illick's Mill Partnership for Environmental Education is an innovative consortium that has transformed Illick's Mill in Bethlehem, Pennsylvania into a thriving community environmental center. Illick's Mill was a grist mill built in 1856 that was later abandoned. Junior and high school students and one dedicated teacher from Liberty High School launched the Illick's Mill Project (IMP) to finish the restoration of Illick's Mill into an environmental education center. With funding raised by IMP, the mill reopened in 2009 as a Stream Science and Environmental Education Center due to the hard work and dedication of many students. The mission of the center is to serve as a home for environmental action to preserve and protect the Monocacy Creek watershed and its abundant wildlife, and to provide a model of environmental sustainability and technology.

IMP students participate in a non-traditional classroom course at the local high school that emphasizes inquiry-based learning, with learning objectives based on community needs. During the yearlong course, the students organize events and membership drives, write grants, create presentations, engage in environmental work, and learn how to run a nonprofit organization and an environmental education center. This year's students have been recognized as the "new pioneers" of the center. In recent months, they have designed, built, and planted four native gardens, wrote a mission statement for the center, and are currently developing curriculum for courses taught at the center. Under their inspiring leadership and enthusiasm, the Illick's Mill Partnership for Environmental Education has evolved from a restoration effort to a site now focused on full-time environmental education and action.

Under the supervision of IMP students, along with members of the supporting consortium, the education center is now open to the public and hosts habitat preservation, bird watching, fly fishing, water quality monitoring, green technology efforts, and stream bank restoration. Through the committed efforts of students and others, Illick's Mill serves environmental groups across the Lehigh Valley, and in turn, has become an exciting center for environmental learning throughout the community.

Oak Hall School Biodiesel Project

Oak Hall School, Gainesville, Florida

The Oak Hall School Biodiesel Project began as a science fair project to collect and process used vegetable oil (UVO) into biodiesel fuel for the school's diesel-powered lawn equipment and eventually, school buses. With the dedication of several high school students, the project evolved into a plan to build a student-operated biodiesel facility on the school campus as an effort to pursue alternative energy sources and to encourage school-wide environmental stewardship.

Members of the Oak Hall School Biodiesel Project team obtained all necessary local and state regulatory approvals for biodiesel production; raised funds for the reactor, a facility to house the reactor and supplies to manufacture biodiesel; collected more than 250 gallons of UVO; and produced over 25 gallons of biodiesel. The students also wrote an instruction manual to encourage other schools to replicate the biodiesel project.

While identifying and satisfying governmental regulations regarding biodiesel manufacture, one of the team members discovered Florida Statute 206. This statute imposes a burdensome reporting requirement and tax that may inhibit other school administrators from launching school-based biodiesel activities. The students also learned that a school may petition to have this tax refunded based on its tax exempt status. The Oak Hall School Biodiesel Project team has sought legislative relief from Statute 206. The team has obtained commitments from a Florida State senator and several members of the Florida House of Representatives to sponsor an amendment to reduce this reporting and tax hurdle. The project team is preparing a presentation for the Florida House and Senate Committees in the 2010 legislative session in support of this initiative.

Based on the demonstrated success of the project at Oak Hall School, the students continue to promote the project's duplication in other schools and by youth organizations in Florida.

Recycle Because You Care

Dana Gattone, Angel Loizzo, and Maggie O'Brien, Addison, Illinois

The Recycle Because You Care (RBYC) Team was founded by three middle school students at St. Philip the Apostle School. When these three students in the Chicago suburb of Addison, Illinois, discovered that less than one fourth of the households in their neighborhood recycle, they decided to take action. Historically, the recycling rate in Addison was one of the worst in the Chicago area, primarily because of a lack of information about recycling. The teens learned that failing to recycle negatively affects the environment by increasing air and water pollutants, the greenhouse gas effect, and the amount of garbage that sits in landfills for decades. Students Dana Gattone, Angel Loizzo, and Maggie O'Brien believed that if they did not find a way to address the recycling challenge, some of the beautiful nature that people enjoy today may cease to exist for future generations. To focus their efforts, they decided to test the effectiveness of six different approaches to increase recycling among their neighbors. They tested these different approaches on seven neighborhood blocks. To improve recycling in their whole community,

RBYC employed the two most effective methods from their pilot tests: (1) distributing recycling bins and (2) disseminating information about recycling.

The RBYC Team began working with Addison's Public Works staff and Allied Waste, the local waste hauler, and they continue to do so today. They also met with the Mayor of Addison to report their findings and to get his support. Working with St. Philip the Apostle School, the students implemented a new recycling program, and shared their successes with the public school administration. Allied Waste used the results of their pilot tests in a grant proposal to obtain recycling bins for everyone in the Village of Addison. The Illinois Department of Commerce and Economic Opportunity (DCEO) awarded the grant, and the RBYC, together with Allied Waste, invested $90,000 in the project. The RBYC team created a public service announcement and arranged to have it played on a local cable television station. At the request of the local library, Dana, Angel, and Maggie also developed and conducted a class on recycling. This motivated group of teens helped prevent 85 tons of garbage from entering landfills in October 2009, which equates to more than 2 million pounds per year in Addison alone. They hope to spread the message beyond the Village of Addison to Chicago-area mayors and get recycling legislation passed in the State of Illinois.

The Vision is Green

Sarah Jo Lambert, Lubbock, Texas

Sarah Jo Lambert, a 16-year-old from Lubbock, Texas, developed "The Vision is Green" project to fulfill her Girl Scout Gold Award requirements and help educate children about living green. Her goal was to help young children realize that living in a "green" friendly world is possible.

One aspect of Sarah's project involved designing and building an environmental education center made entirely out of green earth-friendly materials. Her goal was to develop a center where environmental education could occur and would continue for many years. The building used the Compressed Earth Block (CEB) method of construction, incorporating MegablockTM. The blocks were 10 feet long, 18 inches wide and weighed about 1 ton each. To accomplish the building project, Sarah recruited help from students at Texas Tech University, the owners of EarthCo Building Systems, two structural engineers, a landscape architect, and others in the community. To raise funding for the project, Sarah also solicited sponsorship from American Clay, Inc., Home Depot, Lowes, Stanley Tools, Grainger Company, as well as numerous individuals and volunteers.

Lorax Lodge, the new environmental education center, is located in a beautiful part of West Texas called the Caprock, overlooking a Girl Scout camp. To allow visitors to experience the beautiful site and learn about native plants and wildlife, Sarah identified the local vegetation and planned a new nature trail. The "Rattler Trail" includes a map and a curriculum guide. The second aspect of the project involved developing a curriculum guide for the center with hands-on activities to teach visitors about the environment. Sarah identified activities that would help the kids visiting the center to think about things they could do to start living with greener attitudes.

To date, approximately 1,300 people have visited Lorax Lodge, including visitors from 14 different states. The environmental education center has had a profound learning impact on various education groups. For example, 14 undergraduate and graduate students majoring in sustainable construction and engineering at Texas Tech University have adopted Lorax Lodge to use as their pilot program

for an energy audit. Additionally, representatives of the Science Technology Engineering and Math (STEM) program at Texas Tech University have arranged to use Lorax Lodge as a model for sustainable construction. It is anticipated that 400 STEAM students per year will visit and conduct research at Lorax Lodge.

The final component of Sarah's project involved issuing a "Green Challenge" for other Girl Scouts around the world. In issuing the challenge, Sarah asked girls to learn about the environment and instill similar green ideas about environmental awareness and education in their communities.

Warning about Warming

Pavane Gorrepati, Bettendorf, Iowa

The goal was simple: inspire others to protect the environment. With that goal in mind, Pavane Gorrepati developed a campaign to increase environmental awareness locally and nationally, to inspire conservation efforts by young people, to promote sustainability, and to advance environmental education.

During the first part of the project, Pavane looked at new ways to conserve energy. Fuel cells were once considered to be a new and innovative method of energy production. By current standards, however, fuel cells may soon become a primary energy source for the future. To learn more, and share information about fuel cells with others in her community, Pavane researched the benefits and disadvantages of fuel cells. She analyzed the capabilities of different fuel cell systems and identified ways to increase efficiency of the fuel cells by balancing the costs and benefits. At local, national, and international science fairs, Pavane presented her research and shared her ideas and knowledge with many scientists and experts.

Pavane's project helped to identify alternative energy sources best suited for the cars of tomorrow and may contribute to the development of fuel cells that can be mass-produced. Pavane hopes that affordable fuel cells will serve as a major generator of energy in the future.

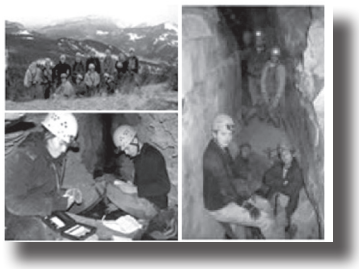
After concluding her research, Pavane expanded the "Warning about Warming" theme from the science project into an outreach effort that focused on community involvement to inspire youth to conserve, encourage sustainability, and promote environmental education. Applying her knowledge and research, Pavane started her school's first Environmental Club, which included a core group of middle and high school students who were focused on educating the school community about environmental issues. As president of the Environmental Club, Pavane initiated a recycling drive and launched a campaign called "Green Bags" that involved students, teachers, parents, and administrators from her school. Under her leadership, the Environmental Club collected and recycled aluminum cans to raise funds and purchase "green" grocery bags. The "green" bags were distributed to families in the community to highlight the positive effects that using reusable grocery bags can have on the environment by reducing the amount of non-biodegradable waste. The bags were custom-made and many families placed orders for additional bags. As a part of this effort, Pavane promoted environmental awareness and education within her local community.

Conserving the Hollowed Ground

Bigfork High School Cave Club, Bigfork, Montana

Student members of the Bigfork High School Cave Club have been committed to conserving cave resources since the club began in 2007. Through study and exploration of caves, they realized that cave environments are unlike anything above ground. Caves can be totally dark and isolated from surface weather, and they can contain items of incredible scientific value such as archeological artifacts or the bones of extinct animals. Through direct observation, the students also learned that caves can support the growth of unusual mineral formations and provide a home for bats and other interesting animals. Sadly, the students also realized that many caves, especially those on nearby public lands, are being damaged by human visitors.

In 2009, the Cave Club members initiated the "Conserving the Hollowed Ground" Project to help public land managers restore heavily vandalized caves and conserve other caves that are still in good shape. The group focused on four types of conservation: (1) graffiti and trash removal; (2) cave resource monitoring; (3) Global Information Systems (GIS) computer modeling of monitoring data; and (4) a non-collective study of aquatic cave invertebrates.



Students removed graffiti and trash from four caves on nearby public lands, and coordinated graffiti removal work with land management agencies so they would not accidentally remove anything that was historic or prehistoric. Graffiti was removed from over 1,500 square feet of cave walls and ceilings. Next, they established resource monitoring in two caves in Glacier National Park. Both caves, discovered in 2007, contained very fragile features. The students conducted visitor impact point (VIP) mapping, photo monitoring, and temperature monitoring. After completing fieldwork, students prepared maps, cataloged photos, and wrote reports, including recommendations to help managers protect the caves. The club members also computerized their monitoring data using GIS to organize and locate field data onto maps. The fourth aspect of the project involved a noncollective survey of aquatic cave invertebrates in Glacier National Park. Before this study, surveys for these animals involved collecting and killing specimens. The students set out to develop methods to identify cave invertebrates by photographing them in the cave, and are gathering data to show how seasonal variations in water flow, water chemistry, and other factors affect invertebrate populations. The Cave Club's studies will provide park managers with valuable information to help conserve cave invertebrates, and other fragile cave resources, in park caves.

Bigfork High School Cave Club's "Conserving the Hollowed Ground" Project and related conservation efforts have been well received and supported at the local and national level. Sponsors include: Charlotte Mountain Foundation, Glacier Park Fund, Environmental Sciences Research Institute, Best Buy for Business, and Gonzo Guano Gear. The student project also would not have been possible without the enthusiasm and collaboration of National Park and Forest Service personnel.

Project Jatropha

Adarsha Shivakumar, Apoorva Rangan, and Callie Roberts, Pleasant Hill and Martinez, California

The Project Jatropha Team promotes the cultivation of Jatropha curcas, a perennial shrub with oil-rich seeds, as an ecologically friendly and economically

sustainable source of alternative fuel production. To date, the work of Project Jatropha has supported the planting of 13,000 seedlings by more than 50 farm families in Southern India.

Adarsha and Apoorva got the idea for this project while visiting their grandfather's farm in Karnataka's Hunsur County, India. There, they became aware that poor farmers need an alternative to cultivating tobacco for income because tobacco production in rural India requires ongoing wood fires to cure the leaves which contributes to greenhouse gases and deforestation. To address the problem, they conducted research and learned that the biofuel produced from the Jatropha seeds provides an alternative source of energy. The biofuel can power diesel engines, vehicles and equipment like irrigation pumps, and produces cleaner exhaust emissions than traditional fuels. Mature Jatropha curcas shrubs efficiently absorb carbon dioxide, which provides an additional environmental benefit. The shrub can grow with fewer agronomic inputs than other crops and it is recognized for its abilities to rejuvenate infertile soil and to prevent erosion. In turn, farmers benefit from the income generated by the new crop, without sacrificing land used to produce food crops.

In 2008, Adarsha and Apoorva, along with Callie Roberts, founded Project Jatropha to supply Jatropha seedlings to farmers in India. They manage the project by visiting India during summer and winter breaks from school and by telephone from the U.S. during the year. Participants in the project are provided training in agronomics for the new crop and financial relief while the plants mature. Upon harvest, the project purchases the seeds back from farmers at market price.

With the aid of a non-governmental organization and a plant biotechnology company in India, the team conducted outreach activities for individual farmers and women's self-help groups in Hunsur County. Local residents in Hunsur County were educated about Project Jatropha through town-hall meetings, a presentation at Rotary International, and a press conference in the City of Mysore. In the U.S., Project Jatropha team members collaborated with high school and middle school student leaders, teachers, environmentalists, nonprofit organizations, and city council members. To spread awareness of climate change and sustainable fuel, Adarsha, Apoorva, and Callie gave numerous presentations in the San Francisco Bay Area, wrote articles for magazines, blogs and newspapers, and conducted interviews with local television and other media. Project Jatropha also established a partnership in the U.S. with Sirona Cares Foundation, a sustainable fuel and living project.

The goals of the project are to decrease the dependence of developing countries on fossil fuels, to mitigate global climate change, and to alleviate poverty for rural farmers around the world. The project was implemented successfully because the three members of Project Jatropha believed one simple thing: "Have an idea? Just go do it," says Adarsha.

No More Trash Talk: Let's Clean Up Our Act

EcoLogical, Homer, Alaska

A group of junior high students in Homer, Alaska, formed EcoLogical to reduce local waste when they learned that their local landfill would be full by 2013. The group partnered with the Kenai Peninsula Borough School District and the Homer Middle School Site Council to reduce the weekly waste volume generated at the Homer Middle School.

Within 30 days, the girls convinced Kenai Peninsula Borough Waste Management to recycle tin

cans, and they proposed eliminating the use of Styrofoam trays at their school cafeteria. The group has helped reduce the use of the non-recyclable Styrofoam trays; the school is now using reusable plastic trays and has set up a recycling area in the lunchroom. After the first week, the school reduced the amount of trash disposed in the landfill from eight bags of trash per week to only four, cutting waste by 50 percent. In 3 weeks, the average recycling went from 36 pounds per week to 120 pounds per week. After a year, EcoLogical estimated that it prevented 2,000 Styrofoam trays from being tossed in the local landfill.

The EcoLogical group also wanted to create awareness in the community about reducing, reusing, and recycling. The youth distributed information through local newspaper and radio interviews, YouTube, Facebook, and a fashion show. Their "Trash into Fashion" show was attended by more than 120 local recycling designers, models, and audience members. This approach made recycling fun for all ages. Local artists designed dresses made out of bread bags, newspapers, magazines, plastic sacks, and even juice pouches. The students worked with local governmental organizations to provide space for the fashion show, with the school board to encourage district-wide recycling, and with local environmental organizations to promote reducing, reusing, and recycling.

Recently, the Kenai Peninsula Borough dedicated $20,000 to increase recycling in the town of Homer. The team continues to work with the school district warehouse to encourage the availability of recyclable products for all district schools

Tips to Successfully Initiate Public Awareness Campaigns:

- Research your issue. It's important to know as much about your issue as possible in order to make the most persuasive argument. Be prepared to back up what you say with credible facts and figures.
- Be clear about your goals and objectives. What attitudes, behaviors, and/or policies do you seek to change?
- Develop your message. Focus on the core ideas you want to get across. Make it relevant and accessible to those you seek to reach.
- Identify your audience and get to know them. Concentrate on a specific segment of the population and understand the knowledge and attitudes they bring.
- Get important people on your side. Engage prominent individuals in the community (e.g., journalists, government officials, business and NGO leaders) as advisors and spokespeople.
- Use the media to spread your message. Develop a plan for reaching out to the media and be creative in getting their attention.
- Match your medium to your message. Find a link between your message and the medium you use to get it across. For example if your goal is to reduce carbon emissions, organize bike trips.
- Focus on the positive. While it's important to educate the public about the severity of today's environmental ills, people are more apt to resonate with positive solutions.
- Be creative. Youth-led projects benefit from injecting fun into their activities, whether they use street theatre, arts activities, contests, or cartoons in their approach

Section 5: Eco Websites, Newsletters, Blogs, Journals & Magazines

WEBSITES

The Audubon Society, http://www.audubon.org/

Birch Aquarium: http://aquarium.ucsd.edu/

Discovery Channel: http://dsc.discovery.com/

Ecological Society of America: http://www.esa.org/

Endangered Animals List: http://www.earthsendangered.com/

Endangered Species Program: http://www.fws.gov/endangered/

EPA, US Environmental Protection Agency: http://www.epa.gov/students/

Geography World: http://geographyworldonline.com/

Global Stewards – Environmental tips and sustainable solutions for a healthy planet: http://globalstewards.org/index.htm

Good Is… Website: http://www.good.is/category/environment/

Green/Earth Issues for Kids: http://www.childrenoftheearth.org/Navy%20Pages/earth_issues.htm

Inhabitant: http://inhabitat.com/

International Polar Year: http://www.us-ipy.org/

KidsEcoClub: www.KidsEcoClub.org

Life Goggles: Green reviews, news and interviews: http://lifegoggles.com/

National Geographic: http://environment.nationalgeographic.com/environment/

National Institute of Environmental Health Sciences: http://kids.niehs.nih.gov/links.htm

Natural Resource Defense Council: http://www.nrdc.org/reference/kids.asp

NOAA, National Oceanic and Atmosphereic Administration, http://www.noaa.gov/

Ollie's World – An Interactive Sustainability Resource: http://www.olliesworld.com/

San Diego Audubon Society, http://sandiegoaudubon.org/

San Diego Children and Nature Collaborative, http://sdchildrenandnature.org/home

San Diego Children's Discovery Museum, http://sdcdm.org/

Scholastic Science Exploration: http://teacher.scholastic.com/activities/explorations/

Scripps Institute of Oceanography: http://explorations.ucsd.edu/

Treehugger: http://www.treehugger.com/

NEWSLETTERS

US Environmental Protection Agency Newsletters: http://www.epa.gov/epahome/publications.htm

Ecology Action: http://www.growbiointensive.org/newsletters.htm

BLOGS

Ecological Problems: http://ecological-problems.blogspot.com/

Kids for Saving Earth: http://kidsforsavingearth.blogspot.com/

Earth Family Gadgets: http://www.ecogeek.org/

Environmental Law Issues Blog: http://lawprofessors.typepad.com/environmental_law/

New Scientist Environmental Blog: http://www.newscientist.com/blogs/shortsharpscience/

Green Car Congress – Blog about technology, news, and politics relating to the green industry: http://www.greencarcongress.com/

Lazy Environmentalist - A blog about easy green living: http://www.lazyenvironmentalist.com/

Alternative Consumer - Environmentally friendly products: http://www.alternativeconsumer.com/

Green Options - General Enviro-blog: http://www.greenoptions.com/

Haute Nature - Reuse, reclaim, and reimagine: http://hautenature.com/

Ecorazzi –Celebrity Green Blog: http://www.ecorazzi.com/

JOURNALS & MAGAZINES

Issues in Ecology (Published by the Ecological Society of America): http://www.esa.org/science_resources/issues_ecology.php

Natural Life Magazine - Inspiring natural family: http://www.naturallifemagazine.com/

Scholastic Classroom Magazines: http://teacher.scholastic.com/products/classmags.asp

The Solutions Journal: http://www.thesolutionsjournal.com/

Movies

“Crude: The Real Price of Oil”
“Rarely have such conflicts been examined with the depth and power of Joe Berlinger’s documentary Crude. These real characters and events play out on the screen like a sprawling legal thriller.” - Stephen Holden, The New York Times The Age of Stupid – about a man living in the devastated future world of 2055, looking at old footage and asking: why didn’t we stop climate change when we had the chance?

“Dirt!”
The Movie tells the amazing and little known story of the relationship between humans and living dirt.

“End of the Line”
The first major feature documentary film revealing the impact of overfishing on our oceans.

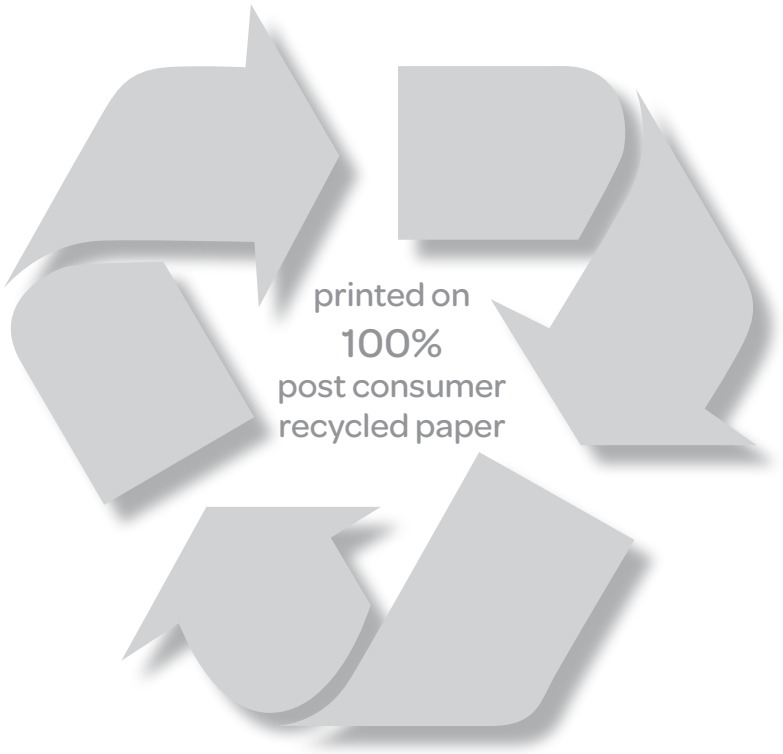
“Food, Inc.”
You’ll never look at dinner the same way.

“The Cove”
A powerful film about the slaughter of more than 20,000 dolphins and porpoises off the coast of Japan every year, and how their meat, containing toxic levels of mercury, is sold as food in Japan and other parts of Asia, often labeled as whale meat.

“The Garden”
From the ashes of the LA riots arose a lush 14–acre community garden. Now bulldozers threaten its future. Academy Award Nominee for Best Documentary!

“Tapped”
an unflinching examination of the big business of bottled water.

“Vanishing of the Bees”
A 2009 documentary film regarding the sudden disappearance of honey bees from beehives around the world, caused by the poorly understood phenomenon known as Colony Collapse Disorder or CCD.



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