



9/21/2017



# Teachers Going Green

*FY 2018 Annual Report*



[www.teachers-going-green.com](http://www.teachers-going-green.com)

# Teachers Going Green

## FY 2018 Annual Report



David Sobel's work in place-based education provides one of the founding premises of Teachers Going Green (TGG) –expanding the classroom beyond school walls to connect students with community. TGG has developed a three-pronged approach to enhance the likelihood of teachers to take their students outdoors and use place-based approaches to enhance student learning. The three strategies to increase teachers' abilities and confidence are:

1. **Quality resources** that can be accessed online and are aligned with state and national guidelines,
2. **Professional development experiences** that include workshops, coaching, Teaching Kits, newsletters and ongoing technical support, and
3. **Field experiences** that take place outside the classroom

The personal connections that coaches make with educators and groups across the state are critical to the expansion and continued use of the resources available on the TGG website. This report focuses on the products developed in 2017, the work performed and the outcomes of those efforts. Following are some of the highlights of 2017 that will be further discussed in the body of the report.

### 2017 Highlights

- **New and enhanced partnerships** with Story County Conservation, Neal Smith National Wildlife Refuge, Master Gardeners, 21<sup>st</sup> Century Schools and multiple school districts exposed additional Iowa schools to Teachers Growing Green resources.
- **The knowledge demonstrated by coaches is consistently rated high** by workshop participants. The mean rating of coaches' knowledge was 4.96 on a 5-point scale.
- **Over 200 communities in Iowa visited the TGG website** and returning visitors typically increased the number of pages they visited. Of the 2,873 visitors, 70.7% were new.
- **Use of web-based technology as an alternative delivery method** for workshops. More than 60 pre-service students from William Penn College gave high ratings to the workshop.
- **New Pollinator Teaching Kits** were distributed to teachers from Collins-Maxwell and Roland Story Districts.
- **Recognition nationally as a resource** as reflected in the invitation to present sessions at both the 2016 and 2017 North American Association for Environmental Education Conference.
- **Successful outreach** resulted in training provided to pre-service education students, expanding reach to non-public and pre-school and home school audiences.

### Recommendations

- Continue to **develop strategies** of the three-pronged approach (quality resources, coaching, field experiences) to meet changing needs of educators.
- **Update the TGG website** to improve accessibility, ease of adding resources and ability to efficiently gather data about lesson usage.
- Provide sufficient resources to **increase outreach that coaches provide** to connect with teachers and other community partners. Consider outreach to minority populations, libraries and science teacher associations for new partnerships.
- Develop Survey Monkey Evaluation for Teaching Kits so that link can be sent when kits are returned.



## TGG REACHES YOUNG PEOPLE, EDUCATORS AND THE COMMUNITY

*"...come join summer camp, because it is better than being at home." -Harding Student*

TGG uses a variety of approaches to reach educators, the community and, ultimately, young lowans in order to engage them in their surroundings and to become better stewards of our natural resources. Over time, TGG has continued to diversify its major products and delivery methods and is constantly evolving to meet the needs of students, schools and communities.

To better capture the historical development of TGG, a TGG Timeline was developed that captures the Activities, Products, Partners and Funders for each year of the program beginning in 2009 and extending through 2017. This timeline can be found as Appendix A. Evaluation tools were also strengthened to capture participant feedback on the quality of workshops and to help identify strengths and areas for improvement. The evaluation tools are attached as Appendices B and C.

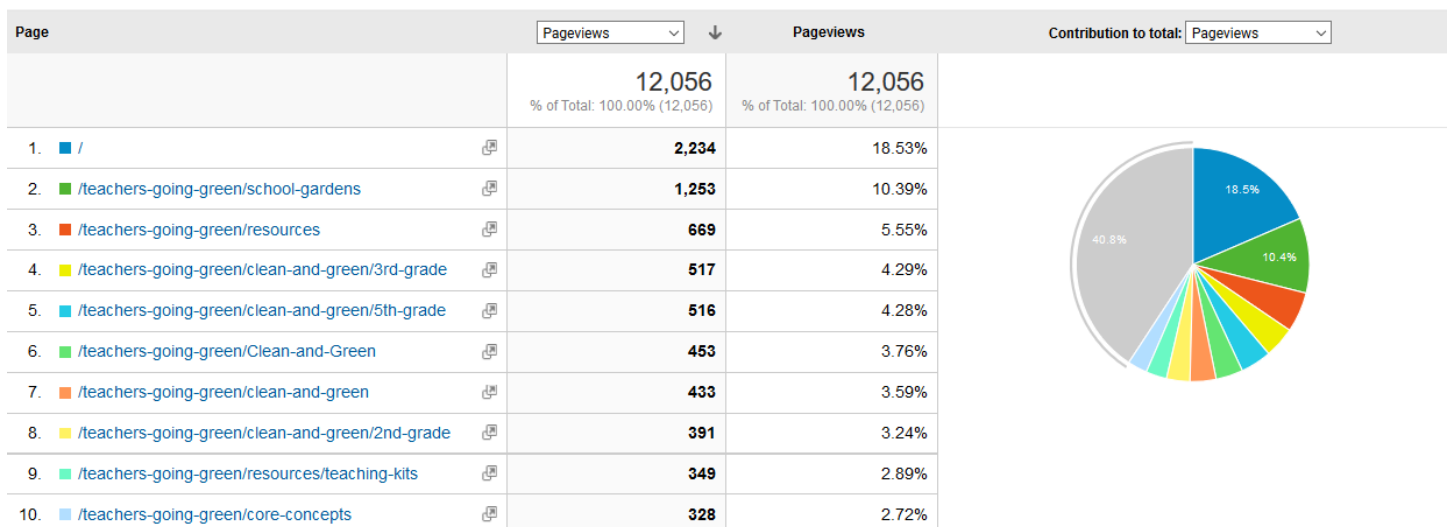
The Timeline demonstrates that TGG has diversified the funding, increased the number of partners, created many new products that match the interests of students and needs of educators and expanded the reach of the program in Iowa and nationwide through the website, trainings, presentations and the addition of coaching staff. Following are the major activities and products that were enhanced or provided in 2017 and outcomes.

### TGG Website

The greatest impact for reaching a large audience is achieved through the multitude of high-quality diverse Kindergarten -12<sup>th</sup> Grade lessons that are accessed globally through the TGG website. In 2017, TGG added six Pollinator lessons and hosted A Garden for Every School on the website. The logo was re-designed and a tri-fold brochure was developed to diversify outreach strategies.

The chart below provides information about the frequency of visits to individual website pages. The website was visited a total of 12,056 times. Item 1 in the chart is the page most frequently visited and represents the 2,234 users that go to the homepage. Items 2-10 represent individual pages of the website that are most frequently visited. For example, 1,253 users visited the School Gardens page (Item 2). The gray area of the pie chart represents all other pages (such as individual lessons) that were visited and that had fewer number of visits than the pages listed above in the Top Ten.

This data indicates that visitors are interested in School Gardens and other resources such as Lesson Plans (2nd, 3rd, and 5th grade lessons being the most popular), Teaching Kits and the TGG Core Concepts.



According to Google Analytics, the popularity of the TGG website continues to be accessed by new regions and communities in Iowa. Over 200 different communities accessed the website in 2016 and 2017 and 139 communities in 2017 alone. Of the 2,873 total users, 70.7% percent were new. Most communities that used the website in 2016 returned in 2017, and the number of visits increased from 2016. This is an indication that users come back each year and encourage others to use the site.

TGG use was heaviest in the Des Moines metro area in 2017. The ten communities in Iowa with the highest number of visits in 2017 also included West Des Moines, Ankeny, Ames, Cedar Falls, Waterloo, Cedar Rapids, Altoona, Wapello and Newton. Iowans that visited the site tended to view more pages and to stay on the site longer than visitors from other states and internationally. Iowans spend 4.13 minutes on the website compared with 2.49 minutes for all users. Iowans visit 3.75 pages on the website compared with 2.63 pages for all users.

## Coaching Services

In order to maintain and increase the important feature of personal outreach, TGG employed three professional educators as TGG coaches to bring the relevant resources to teachers and schools. TGG work in a variety of ways to dispel discomfort teachers have related to providing meaningful outdoor learning experiences to students. This personal outreach includes a combination of:

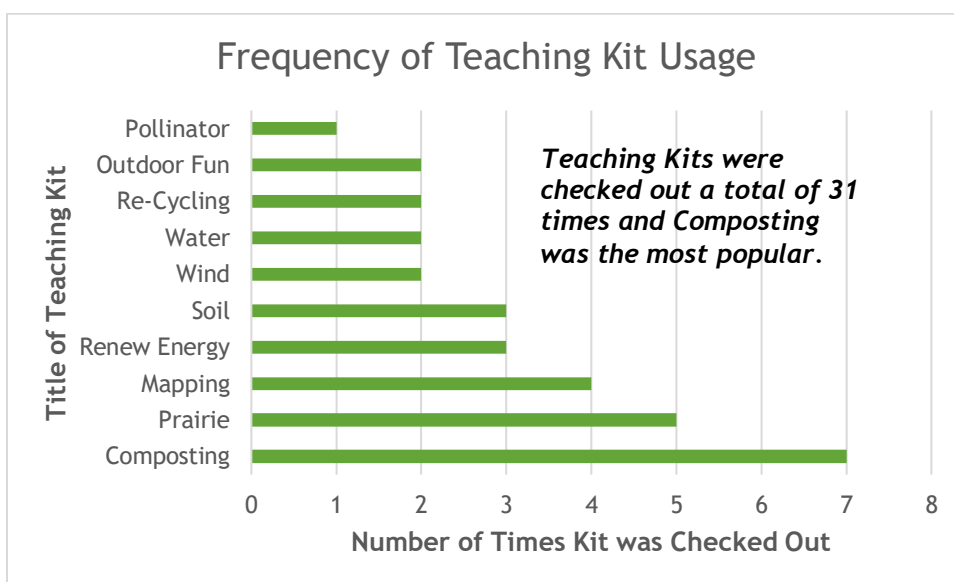
- Hands-on workshops for teachers
- Classroom demonstrations,
- Summer and after-school programs,
- Community activities and
- Teaching Kits.

Due to a delay in funding for FY 2017 the number of workshops offered, participants in workshops, and use of Teaching Kits was down for FY 2017.

### Teaching Kits

In partnership with Story County Conservation, new Pollinator Kits were developed for Roland-Story Elementary and Collins-Maxwell Elementary. In addition to workshops and field experiences, staff received Pollinator Kits to use in their classroom.

Ten different Teaching Kits can be checked out by teachers. The kits include everything that is needed to teach several lessons on topics such as renewable energy, recycling and composting. The following chart provides a list of Teaching Kit titles and the frequency with which they were utilized from August 2016 to July 2017.

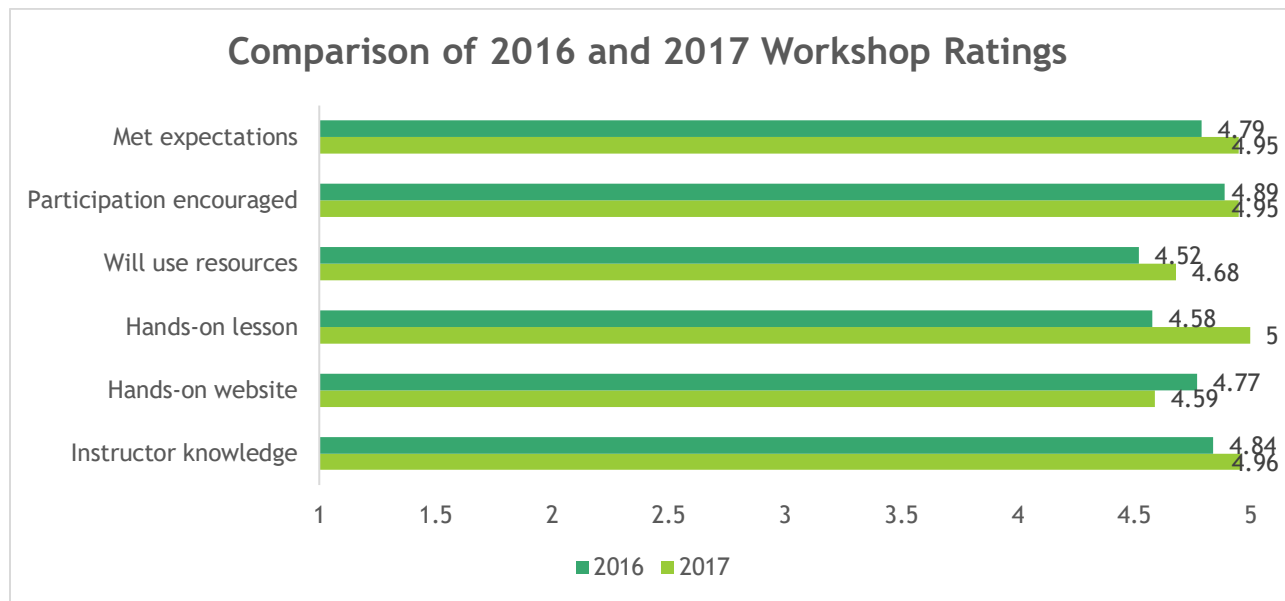


*The audience for Teaching Kits continues to grow. In addition to use in classrooms, kits were used for new teacher in-service, field experiences, in a school that supports students with mental health issues and summer programs. Non-public schools and parents also checked out kits.*

## Teacher Workshops

***“The teachers loved the training and are looking forward to the next training.”***

TGG also used Workshops to reach educators. Coaches facilitated TGG workshops for elementary teachers in Collins-Maxwell and Roland-Story school districts and for partners of the Neal Smith National Wildlife Refuge. Workshop participants were asked to rate their experience using the Workshop Evaluation attached in Appendix B. The chart on the following page provides a comparison of ratings from workshops conducted in 2016 with those conducted in 2017. With the exception of one category, “Hands-on experience with website” the average rating by participants of all categories was higher in 2017 than in 2016. Exploration of the website was not a focus of one of the workshops and the reason for the decline in the rating of that category. The chart also reflects that those participating in the workshops perceived that hands on experience with the lesson is provided, the instructors were knowledgeable, participation was encouraged, and the workshop met their expectations. All categories had an average rating above 4.5 on a 5-point scale with 5 being the highest possible rating.



In open-ended questions on the evaluation, participants commented on what resources were helpful to them, what lessons they were likely to use in their classrooms, what was most helpful about the training, and what they would recommend to improve the training. Similar to 2016, the Teaching Kits and Lessons were the most popular resources. Unlike 2016, there was wide variety in the lesson plans that participants thought they would use in their classroom. According to participant responses, the hands-on nature of the workshops and ability to explore the website are the most helpful features of the workshops. Participants also find the kits and lesson plans helpful because they have everything they need to teach the lessons. Suggestions for improvement included making a video to demonstrate a lesson and having more time to demonstrate/practice lessons and explore the website.



Coaches used on-line technology to reach teachers in schools involved with 21<sup>st</sup> Century Schools and pre-service teachers at William-Penn College. The following chart displays evaluation results for the William Penn web-based workshop. Over 85% of the 64 respondents to the survey provided positive responses to all survey items. The participants indicated that the strategies and resources shared were the most helpful aspects of the workshop. They reported that the pacing was somewhat challenging because of the technology-students' computers didn't always navigate as quickly as the coaches' computers. Participants also provided several useful suggestions for modifying activities.

	STRONGLY DISAGREE (1)	DISAGREE (2)	AGREE (3)	STRONGLY AGREE (4)	N/A	TOTAL	WEIGHTED AVERAGE
▼ The workshop instructor was knowledgeable about the topics presented.	7.81% 5	0.00% 0	7.81% 5	84.38% 54	0.00% 0	64	3.69
▼ I could see myself using these resources in a classroom.	7.81% 5	0.00% 0	18.75% 12	73.44% 47	0.00% 0	64	3.58
▼ I am more likely to try other TGG lessons.	9.38% 6	1.56% 1	26.56% 17	60.94% 39	1.56% 1	64	3.41
▼ The workshop met my expectations.	7.94% 5	1.59% 1	26.98% 17	60.32% 38	3.17% 2	63	3.44

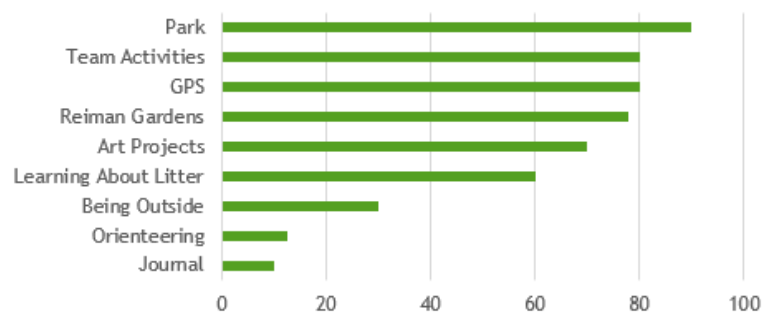
Next Step Adventure created F2S Garden Lessons for Des Moines Public Schools through a separate project, and added those lessons to the website. Next Step educators also conducted multiple workshops on school gardening for schools and other organizations and promoted TGG through all of these activities.

### Student Camps and Workshops

TGG coaches taught a 10-day summer camp in Des Moines for 17 Harding Middle School students. The campers learned and worked in teams, spent time outdoors and learned about litter. They had hands-on experience with orienteering, using handheld GPS units, and keeping a journal. They took a trip to Reiman gardens where they enjoyed the sculpture exhibit "Washed Ashore." The chart below shows the percentage of students who gave the highest rating, *I Love It!*, to each of the activities. Fifteen of 17 enrolled students (88%) completed the program and had an attendance rate of 77%.

TGG coaches participate in a number of community events for students, including I'll Make Me a World in Iowa. Lessons on composting were presented to groups of students attending this event. Following the lesson, students were provided with a piece of paper with a picture of a banana peel, a landfill and a compost pile. They were asked to identify whether the landfill or the compost pile would create the quickest decomposition of the banana peel and to write a brief explanation of why. Of the 60 students that submitted responses, 83% (50 students) correctly identified composting as the quickest method of decomposition.

Percent of Students Responding, "I Love It!"



## APPENDICES

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*Appendix A: Teachers Going Green Development Timeline*

*Appendix B: Teachers Going Green Workshop Evaluation*

*Appendix C: Teachers Going Green William Penn Online Evaluation*

*Appendix D: Harding Summer Program Evaluation*

## Appendix A ACTIVITY TIMELINE

YEAR	ACTIVITY	PRODUCTS	PARTNERS*	FUNDERS*
2009	<ul style="list-style-type: none"> <li>Begin work on educational program</li> <li>Work with Steering Committee in eastern Iowa</li> <li>Develop lessons for Kindergarten-2nd Grades</li> </ul>	<ul style="list-style-type: none"> <li>Matrix aligning lessons with Iowa Core</li> <li>Lessons</li> </ul>	Steering Committee: <ul style="list-style-type: none"> <li>Waste Commission of Scott County</li> <li>Scott County Conservation</li> <li>Davenport Schools</li> <li>Davenport Parks and Recreation</li> </ul>	<ul style="list-style-type: none"> <li>Keep Iowa Beautiful</li> <li>Waste Commission of Scott County</li> </ul>
2010-2011	<ul style="list-style-type: none"> <li>Develop lessons for 3rd-5th Grades</li> <li>Promote program regionally and through state-wide events</li> <li>Collaborate on promoting and providing service learning programming statewide</li> </ul>	<ul style="list-style-type: none"> <li>Matrix aligning 3rd Grade lessons with Iowa Core</li> <li>Lessons</li> <li>Service Learning Survey</li> </ul>	<ul style="list-style-type: none"> <li>Iowa Afterschool Alliance</li> <li>Iowa Association of Naturalists</li> <li>Iowa Coalition for the Integration of Service Learning (ICISL)</li> <li>Iowa Conservation Education Assn</li> <li>Mississippi Bend AEA</li> <li>Wells Fargo Green Team</li> </ul>	<ul style="list-style-type: none"> <li>Keep Iowa Beautiful</li> <li>Iowa Department of Natural Resources SWAP funds</li> </ul>
2012	<ul style="list-style-type: none"> <li>Develop Teachers-Going-Green.com</li> <li>Conduct state-wide service learning survey with middle and high schools</li> <li>Teachers-Going-Green.com (TGG.com) goes live</li> <li>Develop service learning programs for 6th-8th grades</li> <li>Beautiful Iowa School awards to schools and afterschool programs for service learning projects</li> <li>Align lessons with Common Core for Reading</li> </ul>	<ul style="list-style-type: none"> <li>Revised Matrix and lessons</li> <li>Statewide service learning survey</li> <li>Service Learning for 6 – 8th grades</li> <li>Beautiful Iowa School Awards</li> <li>Afterschool service learning</li> </ul>	<ul style="list-style-type: none"> <li>Character Counts</li> <li>Science Center of Iowa</li> <li>Iowa State University</li> <li>Iowa High School Athletic Association</li> </ul>	<ul style="list-style-type: none"> <li>Keep Iowa Beautiful</li> <li>Iowa DNR SWAP funds</li> </ul>
2013	<ul style="list-style-type: none"> <li>Incorporate School Gardens into Curriculum</li> <li>Implement Two for One Program at Iowa Hall of Pride</li> <li>Align lessons with Common Core for Mathematics</li> </ul>	<ul style="list-style-type: none"> <li>Revised Matrix and lessons</li> <li>Service Learning &amp; Garden Units</li> </ul>	<ul style="list-style-type: none"> <li>Reiman Gardens</li> <li>Iowa Hall of Pride</li> <li>Des Moines Public Schools</li> </ul>	<ul style="list-style-type: none"> <li>Keep Iowa Beautiful</li> <li>Iowa DNR SWAP funds</li> </ul>



## Appendix A ACTIVITY TIMELINE

YEAR	ACTIVITY	PRODUCTS	PARTNERS*	FUNDERS*
2014	<ul style="list-style-type: none"> <li>TGG pop-up survey</li> <li>Beautiful Iowa School awards</li> <li>Presented information to Children and Family Urban Movement, Des Moines Public Schools, Drake University, Iowa Department of Education, Iowa Nonprofit Summit, Community School Partnerships, Home School Parents, Greater Des Moines Neighborhood Conference, World Food Festival</li> <li>Trained middle school educators at Moulton Extended Learning Center, Indianola and Johnston</li> <li>Presentation for After School Alliance</li> <li>Initial efforts for TGG inclusion as a recommended Iowa STEM program</li> <li>Co-sponsored School Gardens 101 with Reiman Gardens</li> </ul>	<ul style="list-style-type: none"> <li>Litter Letters</li> <li>New lessons on Iowa's First People and archeological sites, conservation, counseling, gardening and STEM K-5, Wellness (elementary), Service Learning (middle and high school)</li> <li>Service Learning Facilitator Guides for grades 6 - 8</li> </ul>	<ul style="list-style-type: none"> <li>Metropolitan Planning Organization</li> <li>Drake University</li> <li>Sixth Avenue Corridor</li> <li>Healthiest State Initiative</li> <li>Dale Henning</li> </ul>	<ul style="list-style-type: none"> <li>Keep Iowa Beautiful</li> <li>Iowa DNR SWAP funds</li> </ul>
2015	<ul style="list-style-type: none"> <li>Revise Matrix aligning all lessons with Next Generation Science Standards</li> <li>Getting Kids Outdoors program</li> <li>Develop and deliver field experiences</li> <li>Develop and deliver field experiences in summer and afterschool programs in Des Moines</li> <li>Litter Letter Project, Des Moines' east side</li> <li>Middle School service learning</li> <li>School Garden 101 planning</li> <li>Garden for Every School development</li> <li>Develop classroom teaching kits on Soil, Water, Mapping, Art, Outdoor Fun, Composting &amp; Recycling, Team Building</li> <li>Capital View Elementary (DMPS) 4<sup>th</sup> grade students</li> <li>McCombs Summer Program</li> </ul>	<ul style="list-style-type: none"> <li>Revised matrix and lessons</li> <li>Classroom lesson delivery</li> <li>Summer programming</li> <li>Professional development Workshops</li> <li>Classroom teaching kits</li> <li>Facebook Page</li> <li>November E-newsletter</li> </ul>	<ul style="list-style-type: none"> <li>Governor's STEM Initiative</li> <li>Ankeny Schools and Community</li> <li>Southeast Polk Schools</li> <li>Waukee Schools</li> <li>Viva East Bank</li> <li>United Way</li> <li>Polk County Conservation</li> <li>Science Center of Iowa</li> <li>Des Moines Bicycle Collective</li> <li>Ft. Des Moines Park</li> <li>Metro Kids Care</li> <li>State Public Policy Group (SPPG)</li> <li>United Way of Central Iowa</li> <li>Metro Waste Alliance Learning Cntr</li> <li>South Central Iowa STEM Hub</li> <li>Linn County Waste Agency</li> </ul>	<ul style="list-style-type: none"> <li>Keep Iowa Beautiful</li> <li>Iowa DNR SWAP funds</li> <li>Prairie Meadows</li> <li>Principal Foundation</li> <li>REAP CEP</li> <li>Hy-Vee</li> </ul>

\*Partnerships and funders are ongoing and shown only in the year that they first collaborated with TGG.

## Appendix A ACTIVITY TIMELINE

YEAR	ACTIVITY	PRODUCTS	PARTNERS*	FUNDERS*
2015-16 (cont.)	<ul style="list-style-type: none"> <li>Hiring of two additional coaches to expand TGG reach in Iowa</li> <li>Hiring of program evaluator</li> </ul>			

## Appendix A ACTIVITY TIMELINE

YEAR	ACTIVITY	PRODUCTS	PARTNERS*	FUNDERS*
2016-17	<ul style="list-style-type: none"> <li>Information about TGG and website presented to 12 Drake students enrolled in Introduction to English Language Learning, August, 2016</li> <li>Newsletters distributed to over 300 individuals, Fall 2016 and Pollinator newsletter</li> <li>TGG webinar presented through After School Alliance to 21<sup>st</sup> Century schools grantees, Oct. 2016</li> <li>Presentation and attendance at North American Association for Environmental Education, 2016 and 2017</li> <li>I'll Make Me a World booth, Jan. 2017</li> <li>Collins-Maxwell teacher workshops (2) and field experiences (10) Jan. - May 2017</li> <li>Garden for Every School in partnership with ISU Extension and Master Gardeners, Feb. 2017</li> <li>Southeast Polk use of elementary TGG lessons and Toolkit and assistance coordinating visit to Environmental Learning Center, Spring 2017</li> <li>STEM Festival, Waukee, Feb. 2017</li> <li>Roland-Story Elementary teacher workshop, Spring 2017</li> <li>William Penn distance learning workshop</li> <li>Hiatt Service Day, Spring 2017</li> <li>TGG Mini-Workshop, Neal Smith Wildlife Refuge Center Outdoor Classroom, Summer 2017</li> </ul>	<ul style="list-style-type: none"> <li>Pollinator Project Lessons</li> <li>Pollinator Tool Kit</li> <li>F2S Garden Lessons for DMPS and TGG Website</li> <li>Outdoor Classroom Toolkit</li> <li>TGG Brochure</li> <li>TGG Logo re-design</li> <li>TGG Website re-design</li> </ul>	<ul style="list-style-type: none"> <li>Story County Conservation</li> <li>Collins-Maxwell School District</li> <li>Master Gardeners</li> <li>I'll Make Me a World in Iowa</li> <li>Ankeny, St. Paul Pre-School</li> <li>Madison County 4-H</li> <li>Prairie Rivers of Iowa</li> <li>Miami's Institute for the Environment and Sustainability (used TGG lessons as a resource in development of a children's education program)</li> <li>Roland-Story School District</li> <li>Waukee School District</li> </ul>	<ul style="list-style-type: none"> <li>Dahl Trust</li> </ul>

\*Partnerships and funders are ongoing and shown only in the year that they first collaborated with TGG.

## Appendix A ACTIVITY TIMELINE

	<ul style="list-style-type: none"><li>• Harding Middle School Summer Camp, Summer 2017</li><li>• Re-Cycling and Composting lessons for Madison County 4-H</li></ul>			
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## Appendix B: Teachers Going Green Workshop Evaluation

**TOPIC:**

**INSTRUCTORS(S)**

**DATE:**

Directions: Fill in the answers below and return to the instructor to win a prize! **If you do not finish today, please use the enclosed envelope to mail your answers back.** We promise it will be worth your time. 😊

1. What is the rationale behind Clean and Green?
  
2. Where can you find the “Core Concepts” for your grade level?
  
3. List one “Resource” you want to explore further.
  
4. List the name of one TGG lesson plan that would fit into what you already teach.
  
5. What was most helpful to you?
  
6. What one suggestion do you have that would improve this workshop?

Please rate the following items, on a scale of **1** (Strongly Disagree) to **5** (Strongly Agree) by circling the rating that best fits your perceptions. Thank you for your feedback as it is used to help shape future presentations and activities.

STATEMENT	Low						High
1. The workshop instructor was knowledgeable about the topics presented.	NA	1	2	3	4	5	
2. I had hands-on experience with the website.	NA	1	2	3	4	5	
3. I had hands-on experience with one of the lessons.	NA	1	2	3	4	5	
4. I will use the resources that were introduced in the workshop in my classroom.	NA	1	2	3	4	5	
5. The facilitators encouraged participation from the audience.	NA	1	2	3	4	5	
6. The workshop met my expectations.	NA	1	2	3	4	5	

## APPENDIX C

### William Penn Webinar Workshop Evaluation

Please give us your honest answers on a few questions so we can make Teachers Going Green workshops even better!

1. What was most helpful to you during this workshop?

2. What one suggestion do you have that would improve this workshop?

3. What would you do differently if you presented the lesson to your students?

4. Please rate the following items, on a scale of Strongly Disagree to Strongly Agree, by checking the rating that best fits your perceptions. Thank you for your feedback as it is used to help shape future presentations and activities.

	Strongly Disagree	Disagree	Agree	Strongly Agree	N/A
The workshop instructor was knowledgeable about the topics presented.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could see myself using these resources in a classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am more likely to try other TGG lessons.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The workshop met my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

## APPENDIX D

### HARDING 2017 SUMMER PROGRAM

1. What did you like best about camp?
2. What would make camp better?
3. What would you tell your friends about camp?
4. What will you remember about camp?
5. What is one new thing that you learned at camp?
6. How did you feel about learning to use a GPS system?

I loved it!

It was OK

YUK

7. How did you feel about learning about orienteering?

I loved it!

It was OK

YUK

8. How did you feel about being outside?

I loved it!

It was OK

YUK

9. How did you feel about going to the park?

I loved it!

It was OK

YUK

10. How did you feel about learning about litter?

I loved it!

It was OK

YUK

## Appendix A ACTIVITY TIMELINE

11. How did you feel about art projects?

- I loved it!
- It was OK
- YUK

12. How did you feel about the trip to Reiman Gardens?

- I loved it!
- It was OK
- YUK

13. How did you feel about writing a journal?

- I loved it!
- It was OK
- YUK

14. How did you feel about activities you did as part of a team?

- I loved it!
- It was OK
- YUK