



Report to  
Tree Research and Education Endowment Fund  
2012 – 2013 Our LAND Activities



## Report to the Tree Research and Education Endowment Fund 2012 – 2013 Our LAND Activities

During the 2012 – 2013 academic school year, the Tree Research and Education Endowment Fund (“TREE Fund”) provided partial support of a new environmental education program implemented by The Greening of Detroit (“The Greening”) called “Our LAND” (Learn, Admire, Nurture, Dream), which aimed to provide 250 Detroit students in the 5<sup>th</sup> – 6<sup>th</sup> grades with programming to build the urban children’s connection with nature. The Greening is pleased to share the following report highlighting the program, and its successes and challenges in attaining its goals.

The Our LAND program was set to be conducted at ten schools and offer classroom sessions and field trips to Detroit’s largest park, Rouge Park. At 1,184 acres, Rouge Park contains a native prairie and grassland, wetland plant and animal habitats, forests, an interpretive tree trail, playscapes, picnic areas, and miles of pathways. Each field trip included both hands-on learning activities and unstructured time for students to explore and reflect, and field trips were held yearlong to allow participants to see seasonal changes in the park. Project activities, designed using curriculum from Michigan Environmental Education Curriculum, Earth Partnerships for Schools, and the U.S. Forest Service’s “Discover Your Forest,” encouraged teachers and students to engage in the same lessons at their school classrooms after their field experiences, helping students make connections between Rouge Park and their own neighborhood. A uniformed Forest Service educator also visited each classroom to help students connect their local environment with the national forests. In addition to these activities, students explored the impacts humans have on ecosystems and ways to improve these interactions by assisting in the planning and implementing of a service learning project (one per class) at Rouge Park, which included invasive species removal, a tree planting and a prairie planting. Finally, The Greening provided four take home activities to engage students’ families and gain interest and support for the stewardships projects at Rouge Park. Project staff met regularly with teachers to ensure a collaborative relationship, and provided training and resources to support projects and help teachers lead lessons in field.

### *Successes*

#### **Goal 1**

Our LAND will introduce children to the urban forest within their local park and help to cultivate students’ level of comfort in, connection to, and informed appreciation of the natural environment. The project will engage 250 students from 10 schools, providing 4 classroom visits and 4 field trip dates per school, with 2-4 lessons for each visit. Project staff also will meet with each teacher throughout the year, and provide 4-6 supplemental lessons for educators and families. The Greening will track the number of students participating in the project, and the number of visits to each classroom, lessons provided and field trips.



- **Outcome:** A total of 262 5<sup>th</sup> and 6<sup>th</sup> grade students from ten Detroit elementary school classrooms participated the Our LAND program.
- **Outcome:** Total of 40 classroom visits and 40 field trip dates (or 4 per participating school) completed
- **Outcome:** Students were provided with four supplemental lessons to complete at home with their families, all which coordinated with the GLCEs.
- **Outcome:** 23 new environmental education lessons were created and integrated into the participating schools' curriculum.
- **Outcome:** 100% of curriculum was aligned with the GLCEs and teachers reported that the program is supporting their need to raise test scores in multiple disciplines.
- **Outcome:** Each teacher was met with four times throughout the school year and feedback from those meetings was incorporated into the program.

## Goal 2

Our LAND will help Detroit youth understand their role in preserving ecosystems through their involvement in stewardship activities that support connections to forests and the natural environment, and raise their environmental awareness and responsibility. Students will have opportunities to plan and implement 4 stewardship projects at Rouge Park, and The Greening will engage 100 family members and other volunteers to assist in these projects. The Greening will track the number of students, teachers, parents, and other community members that participate in the stewardship projects.

- **Outcome:** Students participated in Rouge Rescue where they removed invasive species, planted native trees, installed park signage and removed trash from the park.
- **Outcome:** Friends of the Rouge also identified a portion of the park that was in need of reforestation, which enabled the students to participate in a reforestation project where they planted 135 native trees.
- **Outcome:** Stewardship day at Rouge Park completed on June 1<sup>st</sup>, 2013 at Rouge Park Appreciation Day.
- **Outcome:** 70 parents and family members participated in Rouge Park Appreciation Day on June 1<sup>st</sup>, 2013. Stewardship activities included invasive species removal, trash removal, tree plantings and sign installation.



### Goal 3

Our LAND will engage children in meaningful and sustained outdoor experiences, resulting in an increase in their awareness and understanding of the natural world and the benefits of forest and grassland ecosystems. To measure outcomes, The Greening will administer pre- and post-project surveys to students designed to measure changes in students' knowledge of project issues, in addition to changes in their awareness and perceptions of the natural environment, as well as their connections between the urban community and the larger environment. The Greening also will collect pre- and post-project surveys from participating teachers to track their perceptions of changes in their students' knowledge of project information and their environmental stewardship.

### 2013 Survey Results

<u>School</u>	<u>Pre Survey</u>	<u>Post Survey</u>
Ann Arbor Trail	41 Students	37 Students
Chrysler Elementary	21 Students	21 Students
Clippert Academy	86 Students	78 Students
Detroit International Academy	27 Students	28 Students
FLICS	64 Students	55 Students

Objective Questions: [Correct answers in blue](#)

#### True or False

- |  |                   |                   |
|--|-------------------|-------------------|
| 1. If all mosquitoes were killed, other wildlife would be affected.      | <a href="#">T</a> | F                 |
| 2. Animals could live without plants.                                    | T                 | <a href="#">F</a> |
| 3. A prairie is a grassland habitat for thousands of plants and animals. | <a href="#">T</a> | F                 |

#### Multiple-choice

4. Which list could be best combined to make a food chain?
  - a. Grass, bushes, trees
  - b. People, cows, horses
  - [c. Eagles, grass, rabbits](#)
  - d. Pigs, cows, chickens
5. As more people move into an animal's habitat, what will happen to the population of that animal?
  - a. There will be more animals.
  - [b. There will be fewer animals.](#)
  - c. The number of animals will not change.
  - d. There is no way to predict what will happen.
6. When a non-native wildlife species is introduced into an area, it usually...
  - a. Hurts all native species

- b. Helps all native species
  - c. Hurts some native species but helps others
  - d. Has no effect on native species
7. Which of the following is not part of a coyote's habitat?
- a. Water
  - b. Sunlight
  - c. The coyote's age
  - d. Other coyotes
  - e. Rabbits
8. If there were no light for years, which of the following things would die?
- a. Snakes
  - b. Birds
  - c. Weeds
  - d. Butterflies
  - e. All would die
9. What is a watershed?
- a. A shed that holds water
  - b. The drainage area of a river or stream
  - c. An aquatic community
  - d. A common nickname for surfers

### Subjective Questions

1	2	3	4	5
Strongly Disagree	Disagree	I'm not sure	Agree	Strongly Agree

- 10. Poisonous snakes and insects that could hurt people should be killed.
- 11. I know the names of many plants and animals that live in Detroit.
- 12. I am very interested in wild animals and plants.
- 13. Wildlife is valuable.
- 14. I would like to learn more about wildlife.
- 15. I like to visit parks, creeks and other natural areas.
- 16. I think other people should learn more about wildlife.
- 17. People should share the world with wildlife.
- 18. I like to watch birds for fun.
- 19. I feel responsible for what happens to the environment.
- 20. I would like a job working with wildlife when I grow up.
- 21. I feel like I can make a difference in my community.
- 22. I spend almost the whole day inside buildings or cars.

1	2	3	4
Not at all	Little	Pretty Well	Very Well

- 23. Make observations about the world around me.

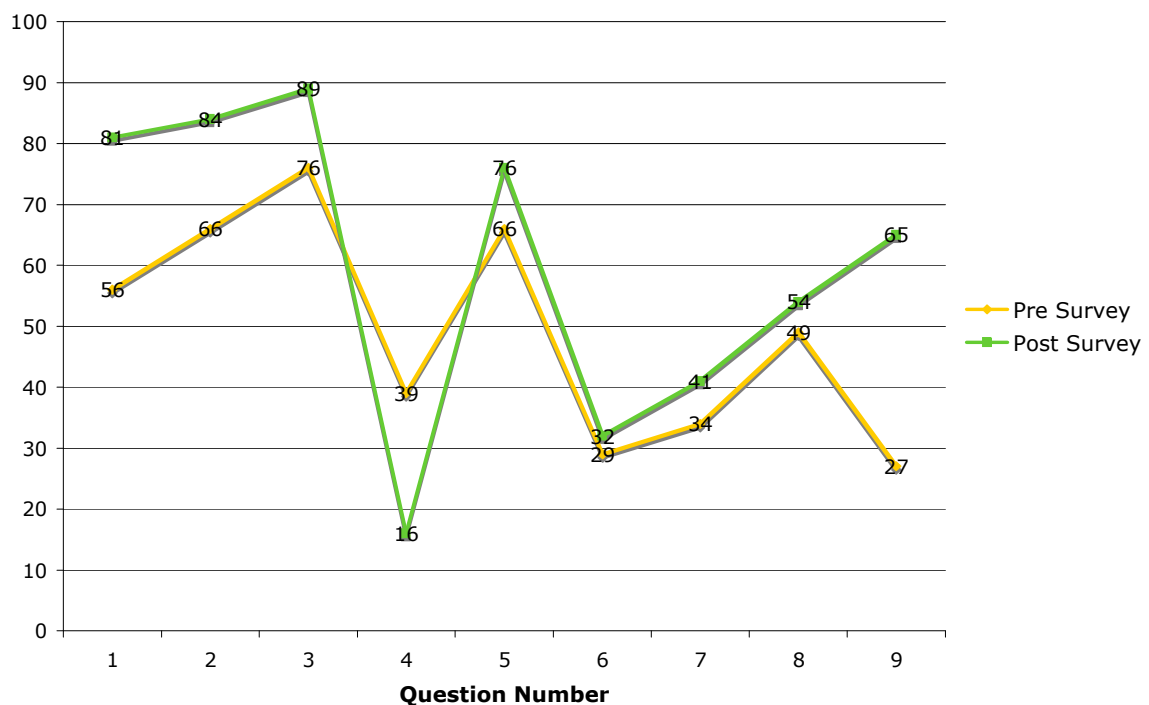
24. Make a reasonable guess about why something happens in nature.
25. Ask questions to find out more information.
26. Work with others in a team or in small groups.
27. Use field equipment to gather information or data.
28. Share my ideas with others.

#### Post Survey Program Evaluation Questions

- What did you like best about the Our LAND program?
- What would you like to change?
- Any other comments?

#### Ann Arbor Trail

**Ann Arbor Trail 2013 Survey: Questions 1-9**



Post Survey scores improved on every question with the exception of question #4.

#### Post Survey program evaluation questions: Common responses

##### **What did you like best?**

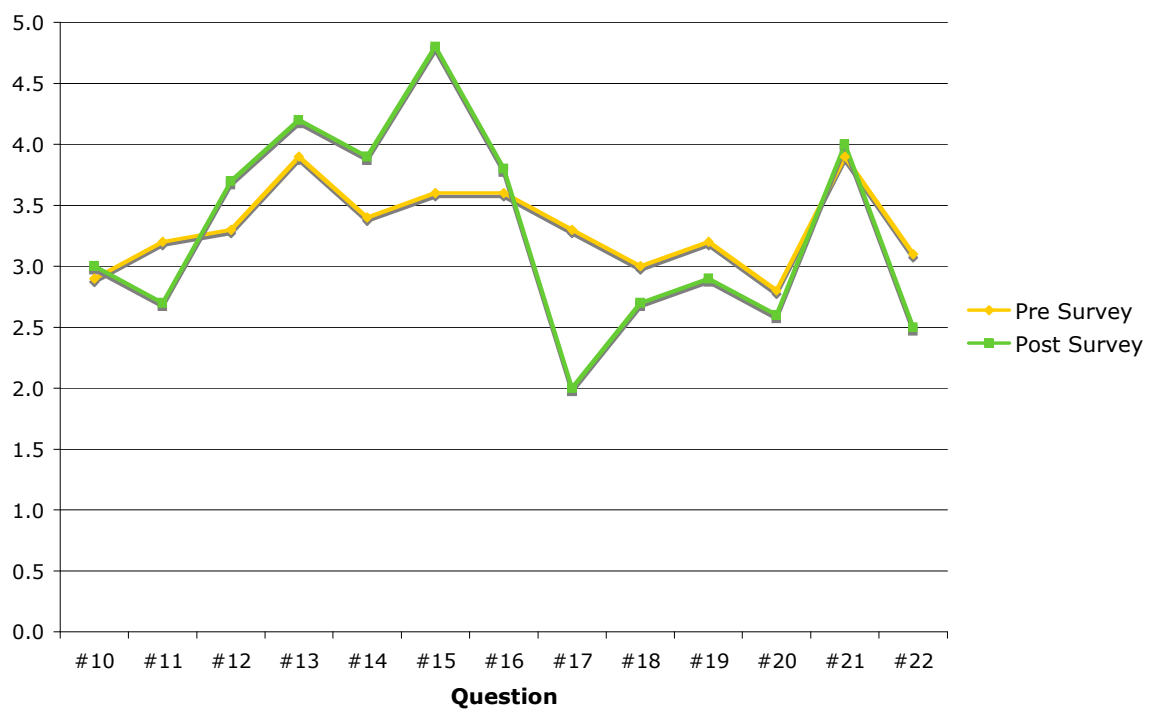
- Seeing the snake and learning about wildlife and nature

- Planting trees
- Going outside and doing experiments and activities
- Learning how to help the environment

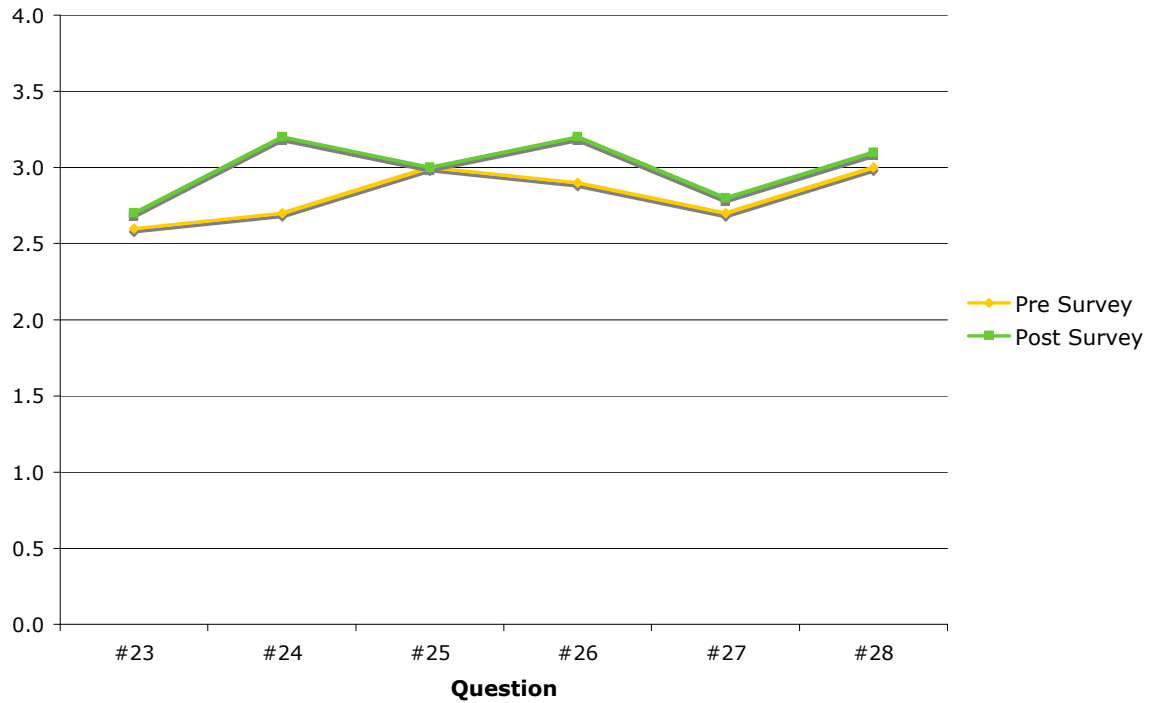
#### What would you change (about the program)?

- Nothing
- More activities
- Many students responded by describing changes they would like to make about the world in general. For example: less pollution and protecting the environment.

#### Ann Arbor Trail 2013 Survey Questions 10-22

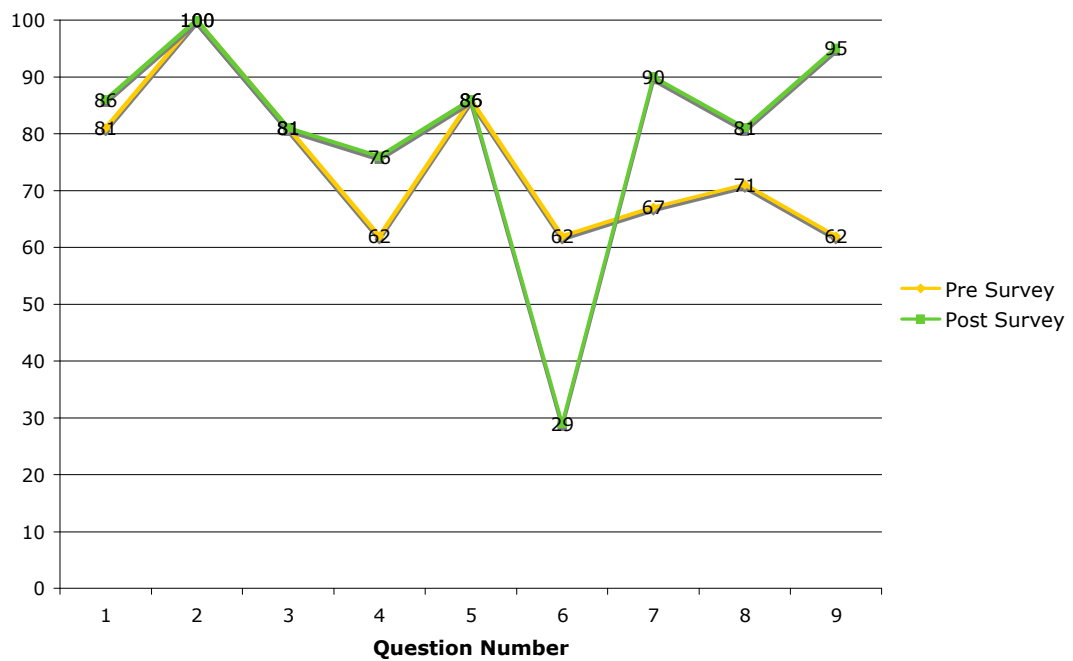


### Ann Arbor Trail 2013 Survey: Questions 23-28



### Chrysler

#### Chrysler 2013 Survey: Questions 1-9





Post Survey scores remained the same or improved on every question with the exception of #6.

#### Post Survey program evaluation questions: Common responses

##### **What did you like best?**

- Learning about nature, wildlife, and habitats
- Adaptation activities
- Scavenger Hunt activity and Senses Trust Walk activity
- Planting trees
- Field trips and going outside

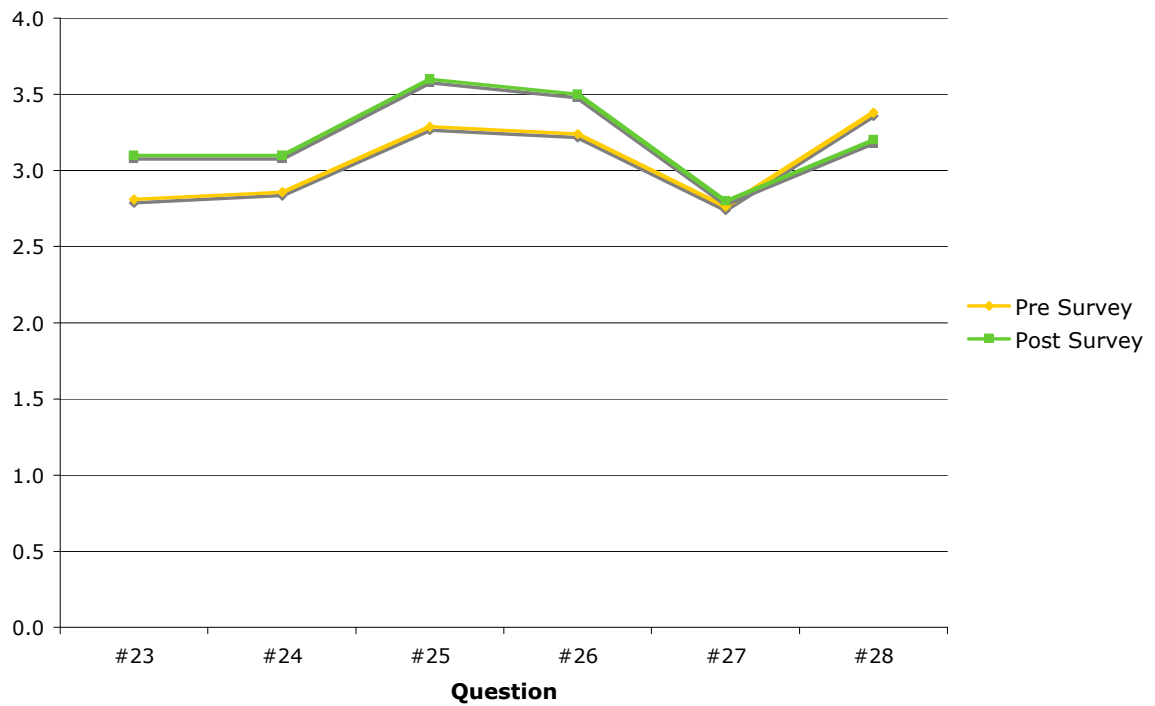
##### **What would you change (about the program)?**

- The field trip dates (it was too rainy or cold)
- Nothing
- Some students expressed a desire to change the environment by eliminating pollution and protecting wildlife

#### **Chrysler 2013 Survey: Questions 10-22**

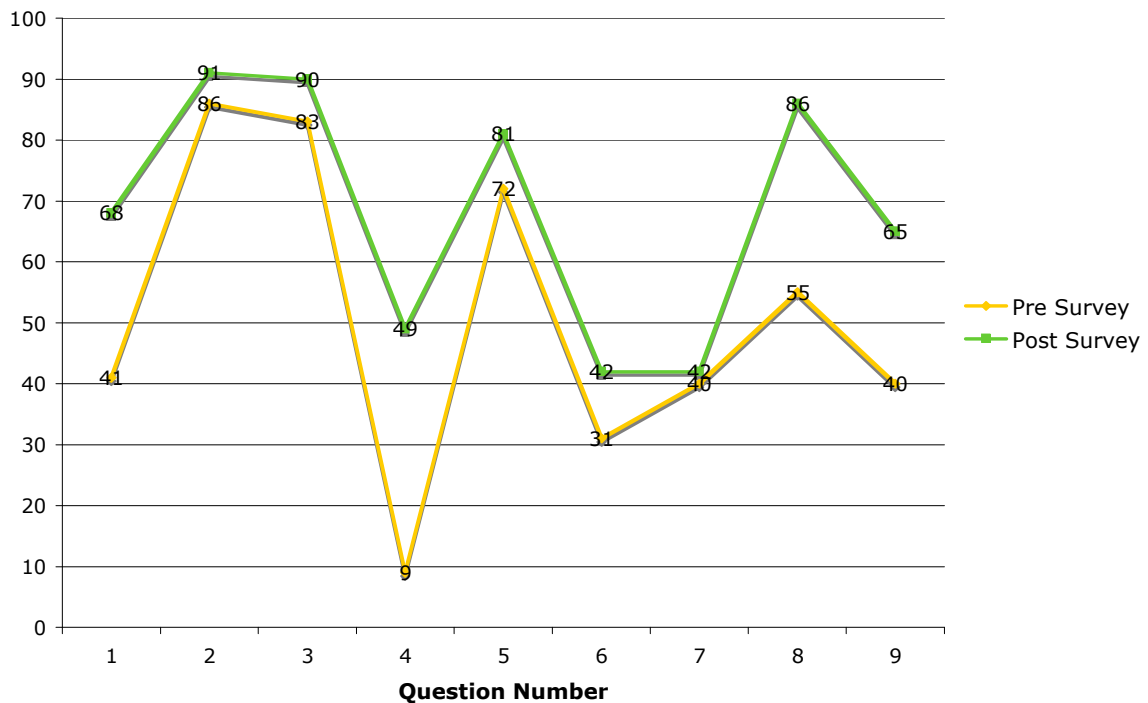


### Chrysler 2013 Survey: Questions 23-28



Clippert

### Clippert 2013 Survey: Questions 1-9



Post Survey scores improved on every question.

#### Post Survey program evaluation questions: Common responses

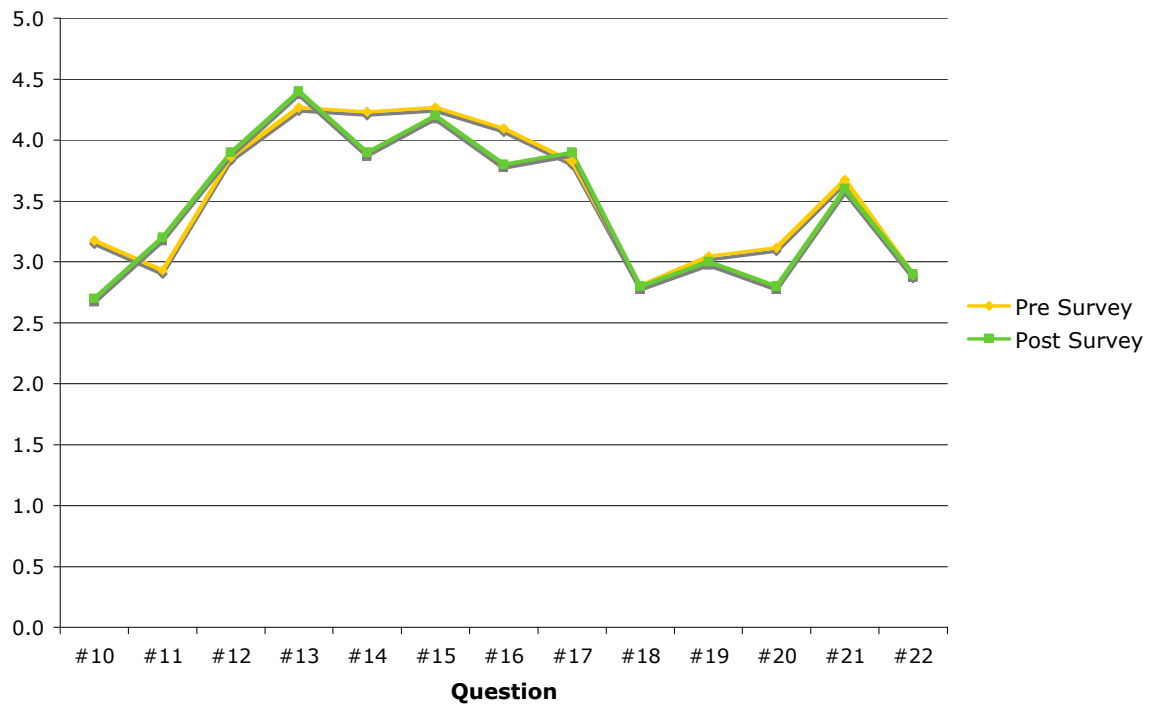
##### **What did you like best?**

- The experiments
- Planting trees
- Exploring nature and learning about wildlife and the environment
- Soil activities
- The field trips, hiking in the forest and being outside

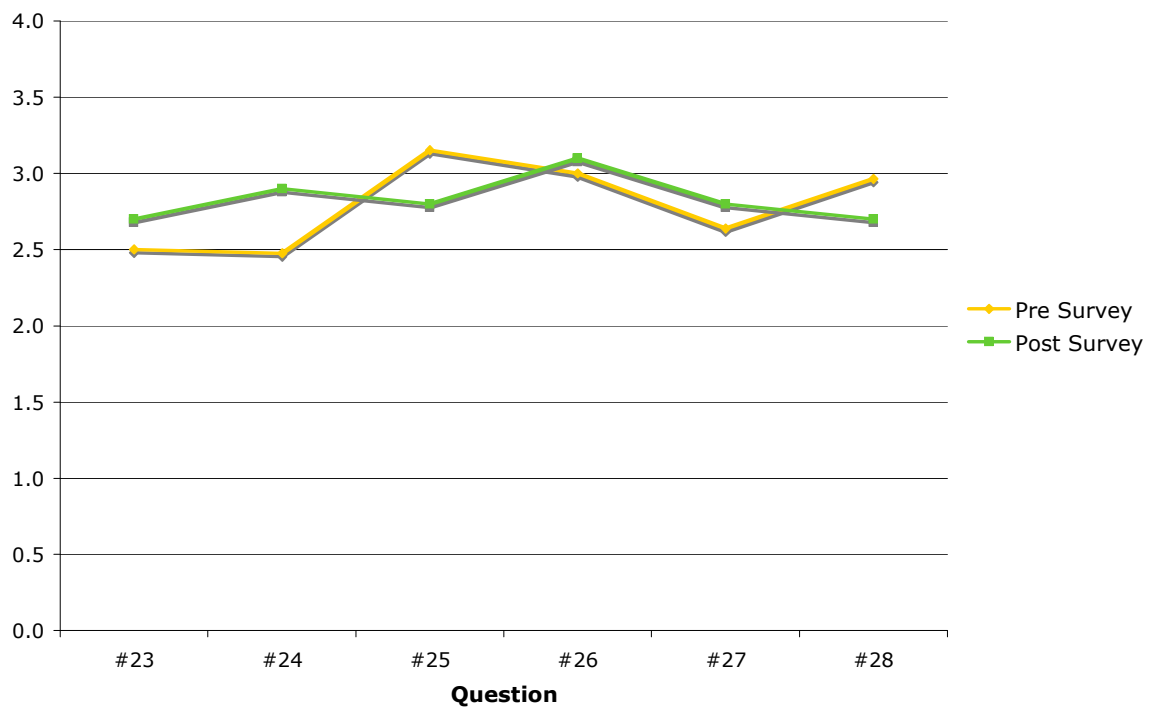
##### **What would you change (about the program)?**

- More field trips, games and activities (less lecture)
- Nothing
- The field trip schedule
- Some students wrote about getting rid of pollution

### Clippert 2013 Survey: Questions 10-22

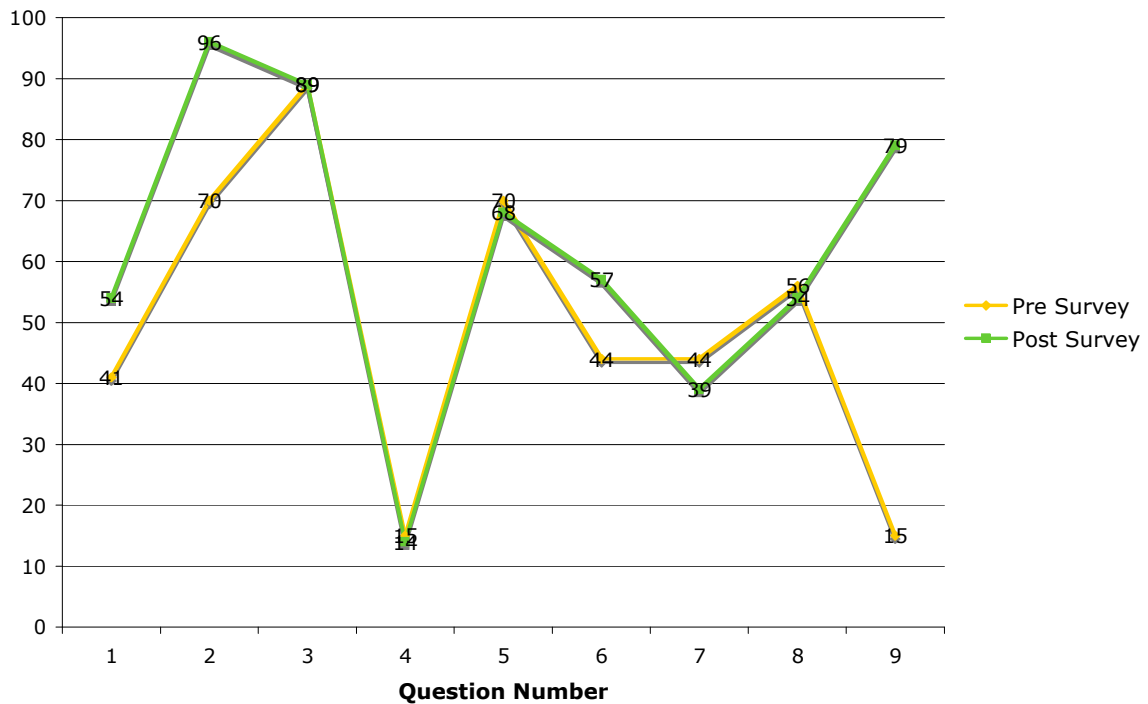


### Clippert 2013 Survey: Questions 23-28



## Detroit International Academy

### **DIA 2013 Survey: Questions 1-9**



Post Survey scores fell by 2% on question #5 and #8. Scores fell by 1% on question #4. On all other questions Post Survey scores remained the same or improved.

### Post Survey program evaluation questions: Common responses

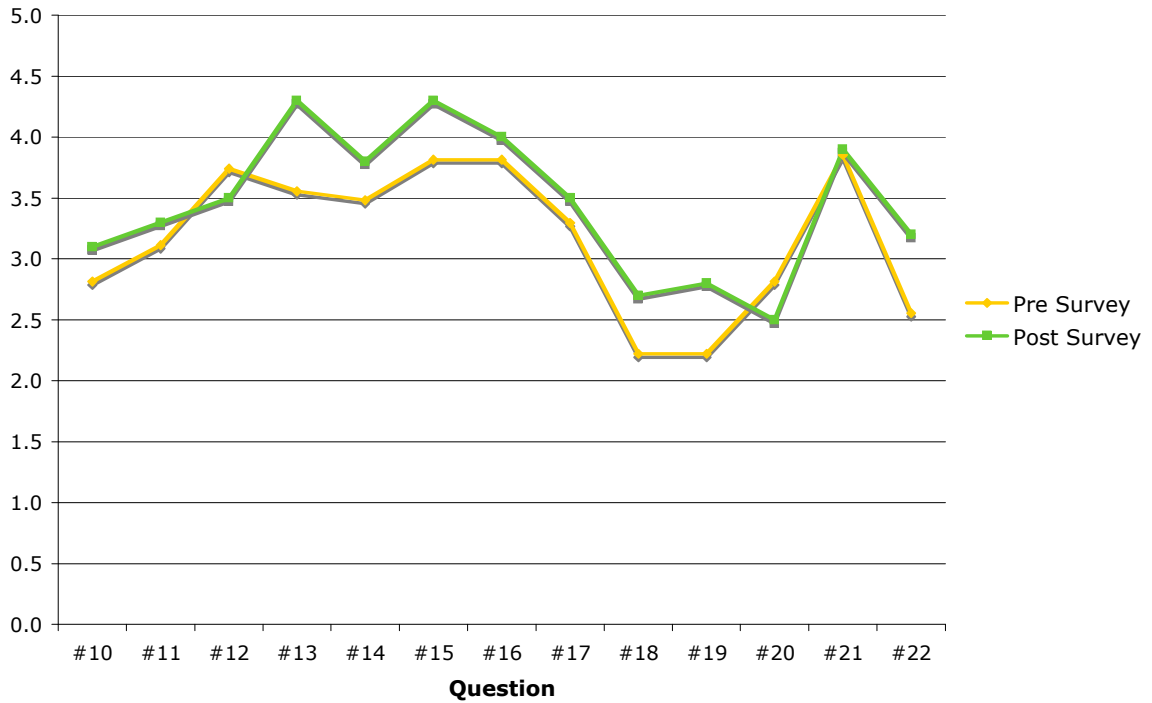
#### **What did you like best?**

- Planting trees
- Soils activities
- Learning how to help the environment
- The field trips
- Learning about nature

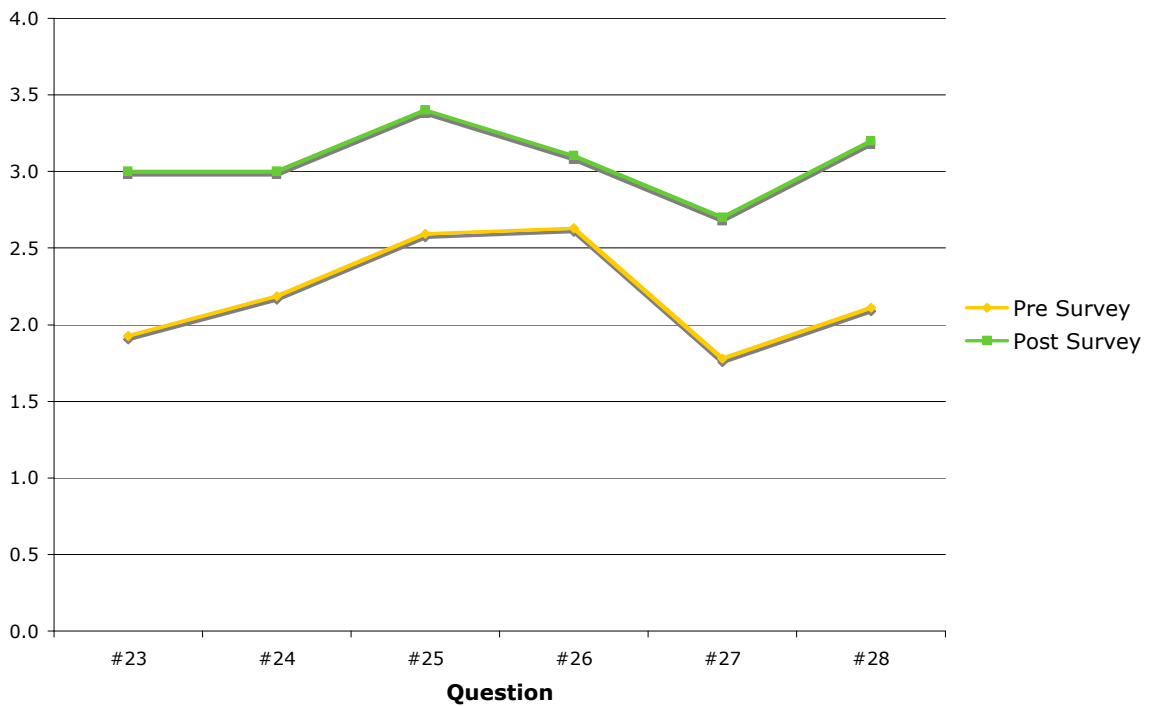
#### **What would you change (about the program)?**

- Nothing
- No winter field trips
- Have a snack break during the field trips
- Several students expressed the desire to reduce trash and pollution

### DIA 2013 Survey: Questions 10-22

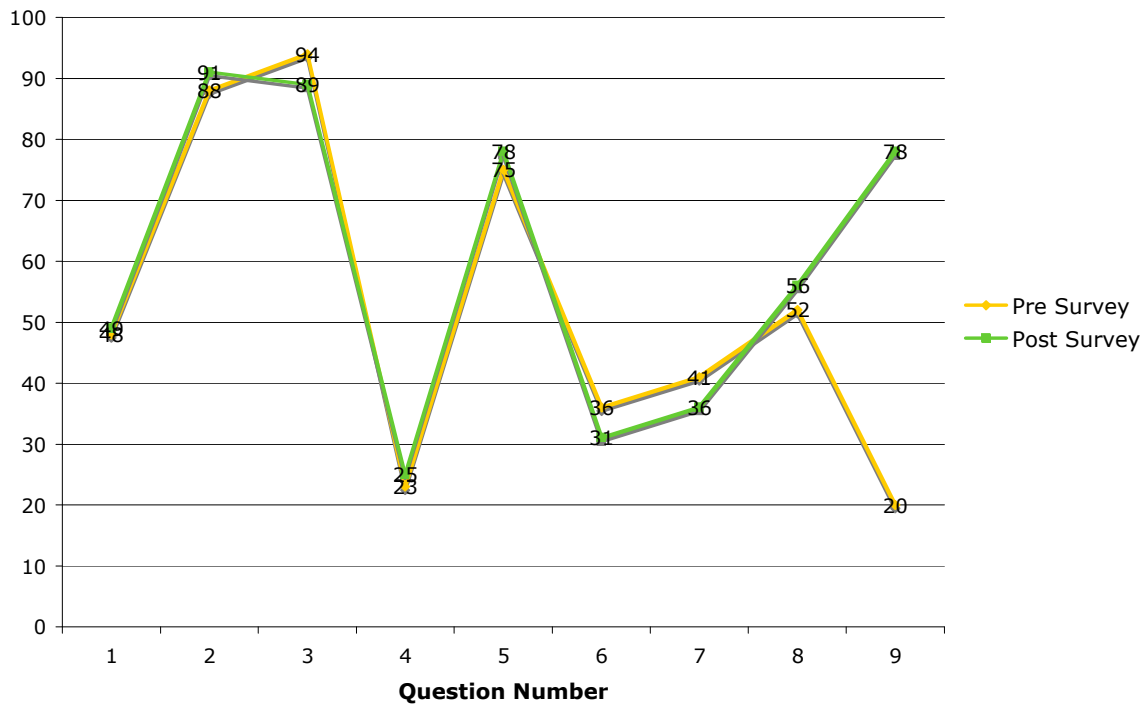


### DIA 2013 Survey: Questions 23-28



## FLICS

### **FLICS 2013 Survey: Questions 1-9**



Post Survey scores fell by 5% on question #3, #6, and #7. Scores on all other questions improved.

#### Post Survey program evaluation questions: Common responses

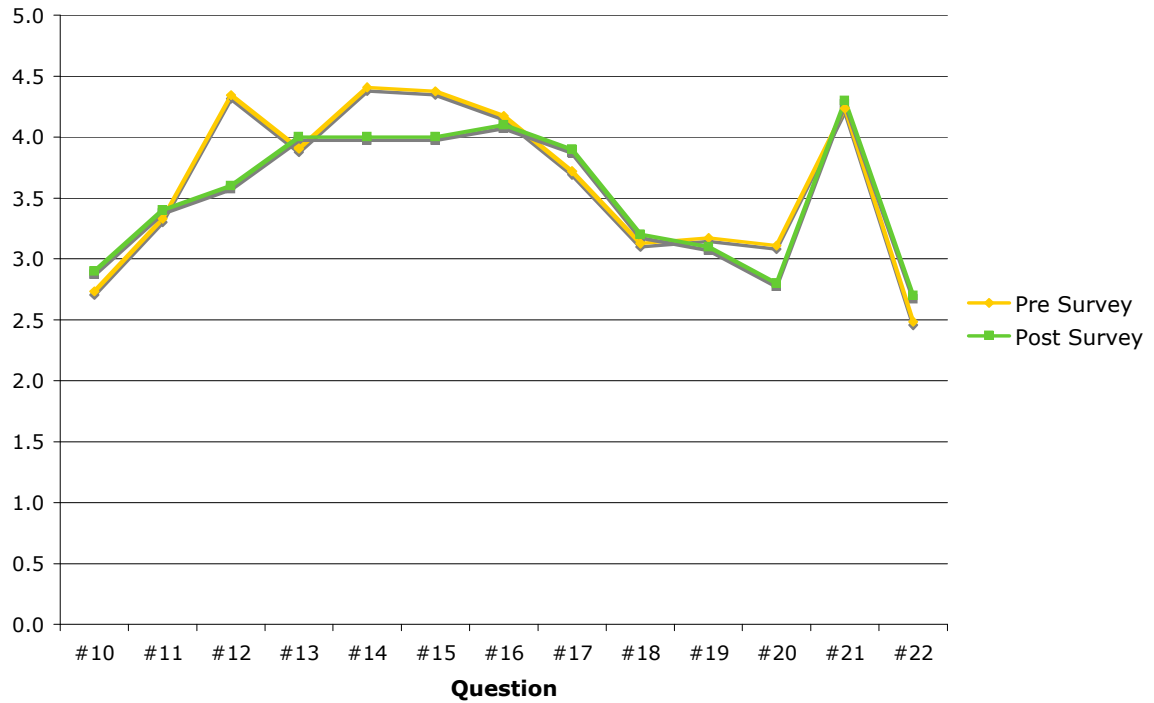
##### **What did you like best?**

- Planting trees
- Exploring nature and wildlife
- Adaptation activities
- Learning about watersheds and pollution
- The outdoor games and activities

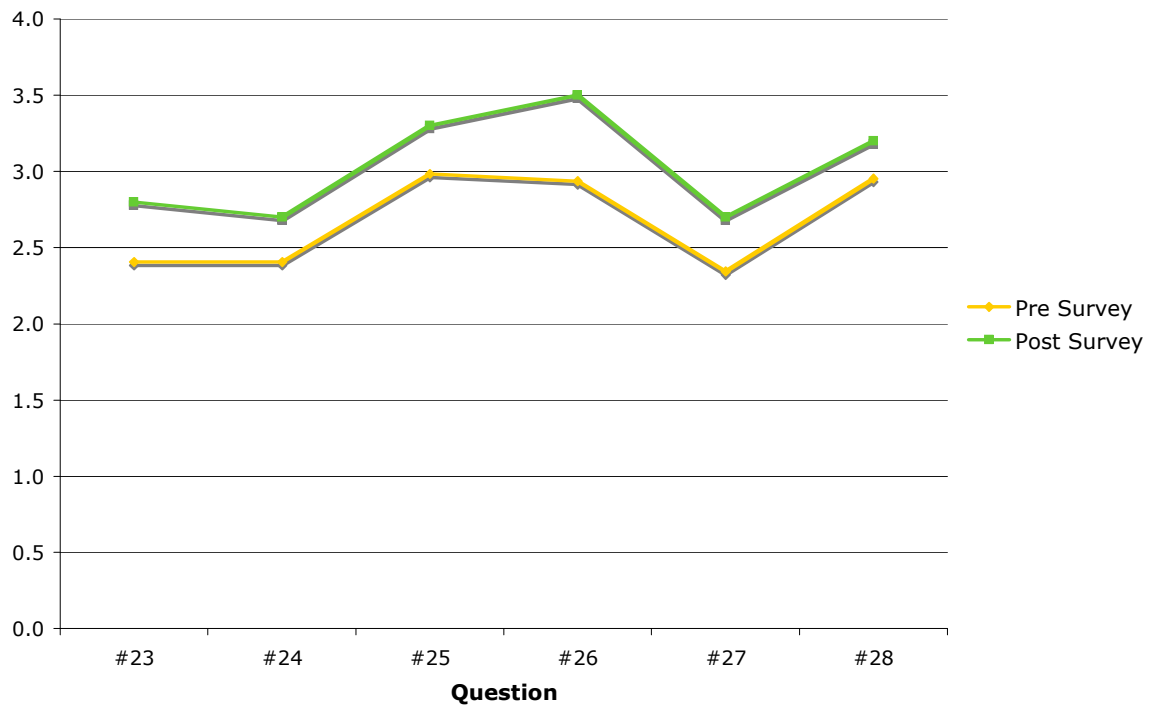
##### **What would you change (about the program)?**

- Spend more time at Rouge Park and see the river better
- Nothing
- See more animals and wildlife
- Have the field trips in warmer weather
- Many students wrote that they want to stop pollution and littering.

### FLICS 2013 Survey: Questions 10-22



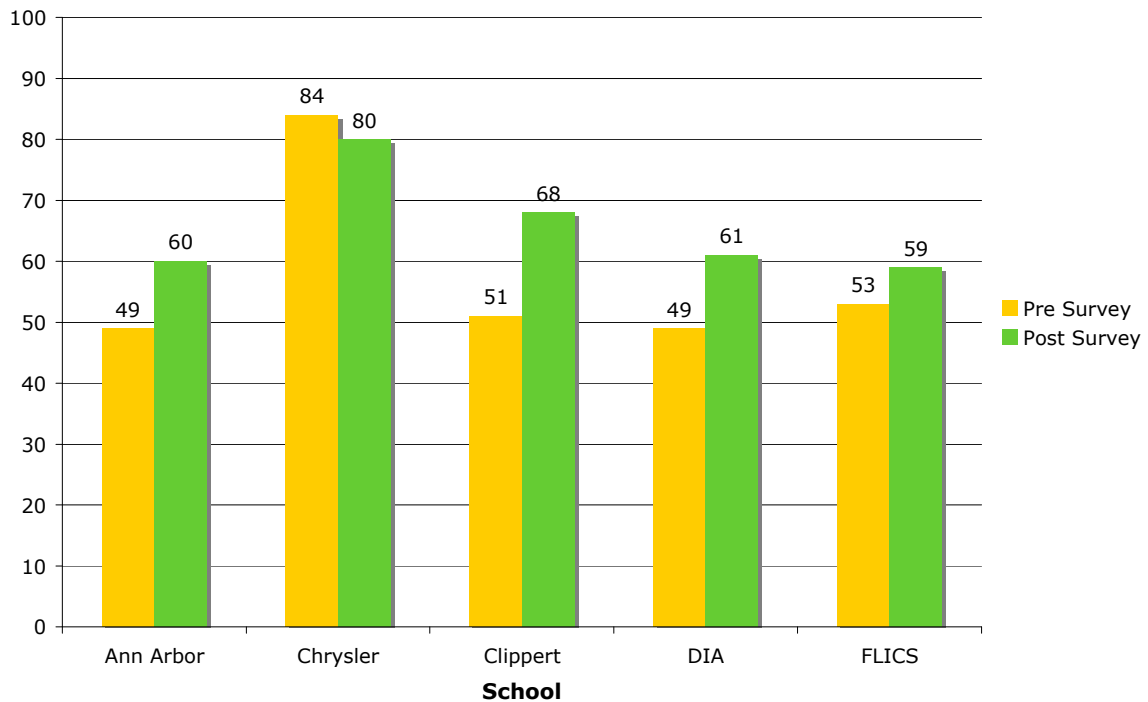
### FLICS 2013 Survey: Questions 23-28





## Comparison of Schools

### 2013 Survey Results: Objective Questions



Although Chrysler Elementary scored the highest on both the Pre and Post Survey objective questions, they were the only school whose overall score did not improve (4% decline). This is due to a significant drop in the percent correct on question #6. Scores on all the other questions improved. 13 of the 21 students answered *a.* for this question (Post Survey). There was probably some confusion about the term “non-native” species. Students most likely thought this synonymous with “invasive” species. We had discussed the harmful effects of invasive species in several lessons and activities throughout the program.

Clippert Academy showed the most improvement. Their overall score on the Post Survey objective questions was 17% higher than their Pre Survey score. They were also the only school to improve on every survey question.

## ***Challenges***

The 2012 – 2013 Our LAND program started later than anticipated due to the resignation of its program manager. Once the position was filled however, the new program manager was able to begin working towards the program goals beginning in November 2012. The Greening's experienced and capable staff supported the program through the transition. That coupled with The Greening's strong relationship with Detroit Public Schools set it apart from other organizations providing environmental education programming. Ultimately, the program manager was successful and was recognized for her level of service by the U.S. Forest Service.

## ***Conclusion***

Our LAND reached economically disadvantaged youth in 2012 – 2013, who often face barriers to academic success and struggle in science learning. Last year, only 60% of Detroit's 5<sup>th</sup> grade students met or exceeded the science portion of standardized tests. These students also have few opportunities to spend time outdoors and have little exposure to nature. Despite its proximity to Detroit residents, most of the city's youth have never had the opportunity to explore the incredible forest and natural environment at Rouge Park. Some participants' behavior has clearly changed following the program as they've shared they'd never litter again, or that they will be visiting the park during the summer with their families to show them the trees that were planted by their class. By educating and exposing the students to the natural habitat in the park we are not only raising awareness in the next generation of stewards, but deliberately drawing in their families and mentors as well to participate as active members of the community in their open space and areas of recreation.

In addition to continued collaboration with Detroit Public Schools to empower its youth and inspire environmental stewardship, Our LAND project activities were conducted in partnership with the U.S. Forest Service, the City of Detroit Recreation Department, parent-teacher groups, and community organizations including the Friends of the Rouge and Friends of Rouge Park. The stellar work done in its pilot year has attracted interest from additional partners, which The Greening is currently exploring.