



**CASE WESTERN RESERVE  
UNIVERSITY**

COLLEGE OF ARTS AND SCIENCES  
& Case School of Engineering

**The Leonard Gelfand STEM Center  
AND**



**Ohio and Erie Canal Reservation – Canalway Center  
Present**

**Environmental Heroes 2015-16**



**An After School Citizen Science Program  
for Middle & High School Students (minimum age: 12)  
Get Close! Dig In! Get Wet! Get Real! Go Wild!  
Apply now! Free!**

# **Environmental Heroes!**

**Engage in Real Research, Adventure, Exploration!**

**Where: Ohio and Erie Canal Reservation  
4524 East 49<sup>th</sup> Street  
Cuyahoga Hts., Ohio 44125**

**Move Your Research Findings to Citizen Action!  
Make a Difference!**

## **Be a Hero!**

**Begin Your Quest: Monday, August 3, 2015  
Environmental Hero Summer Research & Orientation  
at Canalway Center  
Ohio and Erie Canal Reservation  
Weekdays, August 3 – August 14, 2015  
9:30a.m. – 2:30p.m.**



**Meet Tuesdays After School 4:00p.m. – 6:00p.m.  
Throughout the Year**

**Beginning Tuesday, September 8, 2015**

**Apply now for this FREE After School Program**

**Completed Applications Due June 27, 2015**

**Arrangements will be made to interview eligible applicants.**

# Environmental Heroes

**Have you got what it takes to be an Environmental Hero?  
Check this out!**

This unique collaboration of the Cleveland Metroparks and The Leonard Gelfand STEM Center at Case Western Reserve University will use the necessary tools and resources to build a skilled corps of 12-19 year old youth to effectively demonstrate the ability to understand complex environmental issues through hands on science and to use that understanding to contribute to the body of research and to support efforts to preserve and protect our own local environmental assets.



On becoming a .....  
**Hero**

**Explore and learn about the Ohio and Erie Canal Reservation**

**Step into the past to understand the present**

**Learn from experts**

**Visit stakeholder organizations: e.g. Regional Sewer District**

**Develop your research questions around the following investigation: What factors impact the abundance and distribution of amphibians and reptiles in the Ohio & Erie Canal Reservation?**

**Make predictions**

**Build your observation skills**

**Learn methods of research**

**Conduct Field Research with research quality tools: electronic probeware, field equipment**

**Get your hands in it, on it, around it: dig, dip, net, examine: plants, critters, water**

**Use GPS tools, field guides, maps**

**Capture the moments: photograph it, video tape it**

**Put all the research data together, analyze it, present results and recommendations**

**Make New Friends**

**Make a Difference**



**Check Here:**

**I CAN DO THIS! AND, I CAN BE AN ENVIRONMENTAL HERO!**

# Environmental Heroes

The Leonard Gelfand STEM Center-Case Western Reserve University and The Cleveland Metroparks present **Environmental Heroes**, an engaging after school citizen science program for middle and high school aged youth interested in science and exploration. Inspired by the work of individuals and groups around the region and around the country with a commitment to protecting our environment and preserving and conserving parks and natural places, the Environmental Heroes Program was born.

Youth involved will conduct real science with naturalists, researchers, and educators invested in efforts to understand, restore and protect habitats in the Cleveland Metroparks system. Using cutting edge technology, select youth will: conduct field research along the Ohio and Erie Canal Reservation waterways; collect and analyze data; and present their findings.

Beginning August 3, 2015, select youth will participate in a two week long (Aug.3 through August 14, weekdays) summer research instruction in the Ohio and Erie Canal Reservation. Participants will be introduced to research underway in the Metroparks focused on projects specific to the Ohio and Erie Canal Reservation. Each day, these citizen scientists will trek outside to develop and practice their observational skills, learn about habitats, riparian areas, and more. Methods of research will be introduced. More than that....this developing group of **Environmental Heroes** will actively engage in research...get close, dig in, get wet, get real, go wild. And have fun!



# Application Statement of Understanding

*Please read this section carefully and, if agree, sign in the space provided below.*

**Commitment:** Participants are asked to make a **two year commitment** to the research and will be expected to complete assignments outside of the weekly after school sessions. Those assignments will be related to the research or related to preparation for presentations and/or special programs. **Required reading:** a weekly memo summarizing the week's work and plans for upcoming weeks. **Note:** As individuals move through high school, higher level research activities may be assigned.

Environmental Heroes should be in good health and physically fit with an eagerness and will to hike to research sites. At minimum, applicants should not be afraid of water, insects, animals, plants, boats, getting wet and dirty, or the out of doors. If mom, dad, grandma, or anyone else is forcing you to enlist, this is not the program for you! Participants must demonstrate that they are **self-motivated** to conduct the research.

Throughout the program, regular communication will be expected weekly via e-mail and/or other secured electronic resources (e.g. designated web site, conference calls). Participants are expected to respond to communications and exchange information among participants around this program and the research.

Computer skills in Microsoft Office software packages helpful in compiling reports and building research plans. Internet and library research skills are welcomed and will be developed over the program period.

Some activities will be photographed or video taped and used in presentations and promotional materials for the Cleveland Metroparks and Case Western Reserve University.

Environmental Heroes will be Ambassadors of the program, disseminating information and experiences to a variety of audiences.

It is the policy of the Cleveland Metroparks and Case Western Reserve University not to discriminate on the basis of race, color, age, sexual preference, political affiliation, religion, marital status, national origin, handicap or disability in its programs and activities. No person shall be denied consideration solely because of any impairment that is unrelated to the ability to engage in activities involved in the program for which application is made.

The unlawful distribution, manufacture, possession, sale, dispensation, or use of illicit drugs and alcohol while engaged in the Environmental Heroes program is strictly prohibited. The illegal use of drugs and alcohol is inconsistent with the behavior expected of Environmental Heroes.

Possessing weapons of any kind (guns, martial arts weaponry, etc.) or explosives (including fireworks) while participating in the program is cause for immediate dismissal.

Anyone who engages in illegal behavior that is in violation of US Federal, State or Local laws of any kind while in this program shall be held accountable for their actions and potentially dismissed from the program. 5

The Cleveland Metroparks and Case Western Reserve University reserve the rights to change the scope of the program, including but not limited to the research site(s), the number of participants, and the program's timeline.

It is understood that individuals participate in many activities both in and outside of a traditional or nontraditional school setting. In considering this program, applicants are asked to honor the stated commitment, not over commit themselves to other programs, but to carefully choose how they prefer their out of school time be spent. Please do not apply if you cannot participate regularly.

For more information, please call Kathryn Kwiatkowski, Director, Math and Science Programs, The Leonard Gelfand STEM Center, Case Western Reserve University, 216-368-5075, or e-mail: [kmk21@case.edu](mailto:kmk21@case.edu) . Thank you!

I \_\_\_\_\_ have read the above and understand my responsibilities if selected as an Environmental Hero participant. I agree to contribute as a member of the overall team which includes fellow Environmental Heroes, staff of Case Western Reserve University and Cleveland Metroparks, and area professionals and experts.

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Parent/Guardian

\_\_\_\_\_  
Date

**Although an interest in science is most valuable for this program, we are also looking for students with diverse interests that may include but not be limited to art, history, political science, and technology.** Heroes will work in teams and must demonstrate their ability to get along with and work with others safely and effectively.



# Application Instructions

All applicants must complete the application material described below and submit the completed documents, by June 27, 2015, to:

**K. Kwiatkowski**  
The Leonard Gelfand STEM Center  
Case Western Reserve University  
Guilford House 412  
10900 Euclid Avenue  
Cleveland, Ohio 44106-7158  
Electronic submissions are also acceptable:  
e-mail [kmk21@case.edu](mailto:kmk21@case.edu) or fax: 216-368-5465

Interviews will be arranged for eligible applicants. Only six new applicants will be selected for the 2015-2016 period.

Applications must be completed in blue or black pen or typed. Please print clearly.

Two short essays: On separate sheets of paper, and included in the application packet, please submit two typed 300-350 word essays in Times New Roman or Times font no smaller than a font size of twelve (12). Please indicate the number of words at the bottom of each essay page. The topics for each essay are as follows:

1. Describe any area of science that you find exciting. Please be sure to tell why it is exciting or interesting.
2. Because Environmental Heroes generally have a variety of interests, hobbies, skills, and experiences in and out of a school setting, please share what you would be able to contribute to the program.

Signed Hold Harmless Agreement  
Signed and Completed Application Statement of Understanding  
List of all extracurricular activities and leadership positions.





# Environmental Heroes Interest Questionnaire

The Environmental Heroes program invites middle and high school level students (minimum age: 12) with diverse interests to participate in this citizen science program. Please indicate which items in the list below are in your top ten areas of interest. Please rank them in your order of preference from 1-10, with 1 being the most interesting, 10 not a top interest. Your rankings will not determine whether or not you participate. It is only one way of getting to know the diverse interests of participants. You may add any other interest(s) not listed, but you believe valuable, on the blank lines below. Thank you!

Art

Geography

Astronomy

Geology

Biology

Journalism

Chemistry

Mathematics

Computer Science

Medicine

Construction Trades

Music

Engineering

Social Sciences

Exploration

Writing

Other key interests:

---

---

---

---

---

---

---

---

## List of All Extracurricular Activities and Leadership Positions

Student's Name: \_\_\_\_\_

Last

First

Middle

School Or Organization Name: \_\_\_\_\_

---

**Activity or Leadership Position & Description AND  
Duration of Activity or Service (e.g. weekly, Jan 2013-June 2014):**

**Volunteer** \_\_\_\_\_ **Appointed** \_\_\_\_\_ **Elected** \_\_\_\_\_

\*\*\*\*\*

School Or Organization Name: \_\_\_\_\_

---

**Activity or Leadership Position & Description :**

**Volunteer** \_\_\_\_\_ **Appointed** \_\_\_\_\_ **Elected** \_\_\_\_\_

\*\*\*\*\*

School Or Organization Name: \_\_\_\_\_

---

**Activity or Leadership Position & Description AND  
Duration of Activity or Service (e.g. weekly, Jan 2011-June 2012):**

**Volunteer** \_\_\_\_\_ **Appointed** \_\_\_\_\_ **Elected** \_\_\_\_\_

\*\*\*\*\*

School Or Organization Name: \_\_\_\_\_

---

**Activity or Leadership Position & Description AND  
Duration of Activity or Service (e.g. weekly, Jan 2010-June 2011):**

**Volunteer** \_\_\_\_\_ **Appointed** \_\_\_\_\_ **Elected** \_\_\_\_\_

**List of All Extracurricular Activities and Leadership Positions**

School Or Organization Name: \_\_\_\_\_

Activity or Leadership Position & Description AND  
Duration of Activity or Service (e.g. weekly, Jan 2010-June 2010):

Volunteer \_\_\_\_\_ Appointed \_\_\_\_\_ Elected \_\_\_\_\_  
\*\*\*\*\*

School Or Organization Name: \_\_\_\_\_

Activity or Leadership Position & Description AND  
Duration of Activity or Service (e.g. weekly, Jan 2009-June 2009):

Volunteer \_\_\_\_\_ Appointed \_\_\_\_\_ Elected \_\_\_\_\_  
\*\*\*\*\*

School Or Organization Name: \_\_\_\_\_

Activity or Leadership Position & Description AND  
Duration of Activity or Service (e.g. weekly, Jan 2009-June 2009):

Volunteer \_\_\_\_\_ Appointed \_\_\_\_\_ Elected \_\_\_\_\_  
\*\*\*\*\*

School Or Organization Name: \_\_\_\_\_

Activity or Leadership Position & Description AND  
Duration of Activity or Service (e.g. weekly, Jan 2009-June 2009):

Volunteer \_\_\_\_\_ Appointed \_\_\_\_\_ Elected \_\_\_\_\_  
-----

These pages may be duplicated if necessary.

Case Western Reserve University

Hold Harmless Agreement and Release

I, \_\_\_\_\_, certify that I am the parent and/or legal guardian of (Please print name of parent/guardian)

\_\_\_\_\_ who is registered to participate in the following activity: Environmental Heroes, offered by the Leonard Gelfand STEM Center -Case Western Reserve University and The Cleveland Metroparks-Ohio & Erie Canal Reservation. This after school program begins Tuesday, September 8, 2015, with pre-program weeks of research preparation and orientation, August 3 – August 14, 2015.

I declare and recognize that it is in the above named minor’s best interest, as well as that of other participants, to follow the suggestions, guidelines, and/or rules of the program and the program leaders, coordinators and/or supervisors and that my participation in this activity is entirely voluntary or is at the direction or request of persons or entities not associated with Case or the Cleveland Metroparks.

I understand that participating in this activity may involve exposure to risks, including the loss of life, serious loss of limb, or loss of property. Also, I understand that the consumption of alcohol and/or use of drugs are strictly prohibited and could result in the above named minor’s dismissal from further participation in the program. If I have any questions about the nature of the program, its risks or hazards, I have contacted the activity’s coordinator and/or supervisors and have discussed those questions with him/her to my satisfaction.

I understand that any Case or Metroparks personnel or agents also participating in this activity are not necessarily medically trained to care for any physical or medical problems that may occur during this experience. I further understand that Case or the Metroparks does not carry medical or liability insurance for the above named minor while he/she is participating in this activity. By placing my signature below, I acknowledge to Case and the Metroparks that I have adequate medical and hospitalization insurance for any injuries that the above named minor may incur as a result of participating in this activity.

NOW, THEREFORE, in consideration for the above named minor’s participation in this activity, agree to hold the supervisor(s), coordinator(s) of this activity, Case, the Cleveland Metroparks, its Board of Trustees, agents, officers, employees, and student or adult volunteers harmless for any and all direct, indirect, special or consequential damages, or costs, legal or otherwise, which the above named minor may incur as a result of his/her participation in this activity(ies), even if due to the negligence of Case, The Cleveland Metroparks, or any person serving in the above identified capacities.

I have read the above terms of this Agreement/Release, and I understand and voluntarily agree to the terms and conditions. This Agreement/Release shall be binding upon the heirs, administrators, executors, and assigns of the undersigned. I further agree to indemnify Case Western Reserve University and the Cleveland Metroparks, its agents, officers, and employees against any action brought against Case and/or The Cleveland Metroparks by the above named participant, including, but not limited to an action brought by him or her upon reaching the age of majority. I warrant that I am authorized to execute this Agreement and Release on behalf of the above named minor. All participants must sign below. If participant is under 18 years of age, a parent signature is also required.

\_\_\_\_\_ Date: \_\_\_\_\_
Signature of Participant

\_\_\_\_\_ Date: \_\_\_\_\_
Signature of Parent/Guardian

Address: \_\_\_\_\_

# ENVIRONMENTAL HEROES 2015-2016

## Emergency Medical Authorization Form

**PURPOSE :** To enable parents and guardians to authorize the provision of emergency treatment for children who become ill or injured while participating in Environmental Heroes 2015-2016 when parents or guardians cannot be reached.

### PLEASE COMPLETE ALL

Participant Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Home Phone \_\_\_\_\_

Cell Phone \_\_\_\_\_

Birth Date \_\_\_\_\_

### RESIDENTIAL PARENT OR GUARDIAN

Mother's Name \_\_\_\_\_ Daytime Phone \_\_\_\_\_

Father's Name \_\_\_\_\_ Daytime Phone \_\_\_\_\_

Legal Guardian or Other's Name \_\_\_\_\_

Daytime Phone \_\_\_\_\_

Name of Relative or Childcare Provider:

\_\_\_\_\_ Relationship \_\_\_\_\_

Address \_\_\_\_\_ Phone \_\_\_\_\_

### PLEASE COMPLETE ALL

*Part I or Part II MUST BE COMPLETED*

**PART I – TO GRANT CONSENT**

I hereby give consent for the following medical care providers and local hospital to be called :

Doctor \_\_\_\_\_ Phone \_\_\_\_\_

Dentist \_\_\_\_\_ Phone \_\_\_\_\_

Medical Specialist \_\_\_\_\_ Phone \_\_\_\_\_

Local Hospital \_\_\_\_\_ Phone \_\_\_\_\_

Emergency Room

In the event reasonable attempts to contact me have been unsuccessful, I hereby give my consent for

- (1) the administration of any treatment deemed necessary by above named doctor, or in the event that the designated preferred practitioner is not available, by another licensed physician or dentist; and
- (2) the transfer of the child to any hospital reasonably accessible.

This authorization does not cover major surgery unless the medical opinions of two other licensed physicians or dentists, concurring in the necessity for such surgery, are obtained prior to the performance of such surgery.

Facts concerning the child’s medical history, including allergies, medications being taken, and any physical impairments to which a physician should be alerted:

---

---

---

Date \_\_\_\_\_

Signature of Parent or Guardian \_\_\_\_\_

Address

---

---

**PART II – REFUSAL TO CONSENT (Do not complete if you completed Part I)\***

I do not give my consent for emergency medical treatment of my child. In the event of illness or injury requiring emergency treatment, I wish no action be taken.

Date \_\_\_\_\_

Signature of Parent or Guardian \_\_\_\_\_

Address

\_\_\_\_\_

\_\_\_\_\_

\*Note : Case or the Metroparks may exercise the right to refuse to accept a student whose parents have not given consent for medical treatment.

# Environmental Heroes

**Orientation: August 3–14, 2015 , 9:30a.m. – 2:30p.m.**

**After School: Tuesdays Beginning September 8, 2015**

To fully experience this adventure, we hope and expect that participants will engage in all of the planned activities. Should an individual's ability to participate in specific activities be limited due to health or religious reasons, please advise staff as soon as possible.

Program Consent: This after school experience is entirely voluntary. Participants will be asked to work in teams and are asked to accept responsibility for sharing in the work assigned to a team. It is hoped that working together will result in successfully accomplishing the research and reporting tasks. To ensure that each participant has a positive experience, each participant is asked to agree to abide by a number of rules and codes of conduct.

## **Honor Code:**

The honor code establishes standards and expectations for student behavior and reflects the commitment to have a safe and enjoyable learning experience.

In order to create a safe and successful experience, I agree to:

- Always act with honesty and personal integrity
- Always treat all other participants, staff, experts, park visitors, and program guests with respect, regardless of their age, gender, ability, religion, race, or sexual orientation
- Always treat all facilities and property with respect and care
- Always observe all program rules and cooperate with staff

The program staff agrees to honor this code, too!

Director: \_\_\_\_\_  
Kathryn M. Kwiatkowski, Date: \_\_\_\_\_

Participant Name \_\_\_\_\_  
Please print: First Name, Middle Initial, Last Name

Participant Signature \_\_\_\_\_ Date: \_\_\_\_\_

Parent or Guardian Signature \_\_\_\_\_ Date: \_\_\_\_\_

Your signature above indicates that you fully understand the Honor Code and pledge to uphold its principles to the best of your ability while a participant in the Environmental Heroes Program.

# Environmental Heroes

## General Behavior and Discipline Policies:

The goal of any program is to have fun and learn in a healthy and safe environment. In order to ensure each participant's safety and enjoyment as much as is reasonably possible, we ask everyone to adhere to the following, on site and off site, while participating in program activities:

- Refrain from using foul, abusive, or offensive language at all times
- Keep pagers, cell phones, and other electronic devices off throughout the scheduled program
- Refrain from carrying or using weapons of any kind, explosives (includes fireworks of any kind), illegal drugs or alcohol
- Refrain from treating other participants, staff, and/or guests rudely
- Fighting, assault, violence, and/or physical intimidation (bullying) will result in dismissal from the program.
- Tampering with fire equipment or theft of or causing damage to University or Park's property or the property of any of the sites visited will result in dismissal and financial penalty.
- To accomplish a variety of tasks during this program, students will be using computers with access to the internet. Participants are to refrain from mining for or navigating on sites identified as inappropriate for youth.

Participants will be warned about any infraction. Parents will be called for the most serious infractions.

## Program Provisions:

Participants will be provided snacks during the after school program. Please advise camp staff of any food allergies or restrictions.

Participants are asked to dress appropriately for the weather. Should the weather be severe on days where outdoor events are scheduled, adjustments may be made in the schedule of events.

Parent or Guardian

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

I understand that photos will be taken of campers throughout the camp period and that some of those photos will be placed on Case's web site and used in future promotional materials.

Student

Signature \_\_\_\_\_ Date: \_\_\_\_\_

Parent or Guardian

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Please return completed applications,  
by June 27, 2015 to:**

**Attn: K. Kwiatkowski  
Case Western Reserve University  
The Leonard Gelfand STEM Center  
Guilford House Suite 412  
10900 Euclid Avenue  
Cleveland, Ohio 44106-7158**

Participation in **Environmental Heroes** is voluntary and open to middle and high school aged students (minimum age 12) regardless of race, creed, or gender.

Space is limited. Each application request will be honored in the order received and with all qualifications met.

Please contact Kathryn Kwiatkowski at **(216)368-5075**, or e-mail: **kmk21@case.edu** for more information. **All registrants will receive confirmation notices.**

**This form may be duplicated.**

