

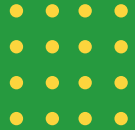
Project Prairie and GLOBE Student Research Symposium (SRS)

Monday, May 6, 2024

Toledo Zoo
Malawi Event Center
9:45 AM - 2:30 PM



Sponsored by: The Toledo Zoo's Project Prairie, The Northwest Ohio Center for Excellence in STEM Education (NWO) at Bowling Green State University's College of Education and Human Development, The University of Toledo's GLOBE Mission EARTH, Youth Learning As Citizen Environmental Scientists (YLACES), and The Ohio STEM Learning Network.



AGENDA

- 9:45 AM **Welcome, Healthy Snack, Poster setup, & Keynote:** Alex Burris, Toledo Zoo School and Community Programs Coordinator
- 10:45 AM **Poster Session A** - Team presentations: **Group A** presents; **Group B** peer review; **Group C** open zoo time in AFRICA
- 11:25 AM **Poster Session B** - Team presentations: **Group B** presents; **Group C** peer review; **Group A** open zoo time in AFRICA
- 12:05 PM **Poster Session C** - Team presentations: **Group C** presents; **Group A** peer review; **Group B** open zoo time in AFRICA
- 12:45 PM **Lunch with Keynote Speaker:** Dr. Jaret Daniels, University of Florida
Closing Remarks & Teacher and Student Evaluations
- 1:30 PM **Group Photo**
- 1:45 PM **Zoo Exhibits** Teachers/chaperones take student groups to zoo exhibits of interest.
- 2:30 PM **Return to Bus & Departure**

STUDENT PROJECTS, PRESENTERS, AND PRESENTATION GROUPS

BOWLING GREEN MIDDLE SCHOOL – Dan Stutzman

Names	Title/Topic	Group	Project	Table
Riley Gillispie, Karly Frankart, & Leah Hildebrand	Which direction in the Prairie is the Warmest and Coldest Each Month?	A	1	1
Kate Conway, Vince Rosebrock, Reid Foust, & Gabe Losoya	What are the Warmest and Coldest Temperatures in the Prairie Each Month?	A	2	3
Ava Brujic, Ashton Loomis, Sophia Milks, & Grayson Smith	What is the Warmest Soil Temperature in the Prairie Each Month?	A	3	5
Jaida Jones, Aden Anderson, Izzy Eschedor, & Becca Yarger	What Animals Call the Prairie Their Home?	A	4	6
Isaac Naus, Jack Byers, Andrew Anderson, & Declan Hubbard	Do Taller Plant Species Live Longer Than Shorter Plant Species?	A	5	7
Brooklyn Graber, Shawn Tyler Matthews, Lukas Wesley, & Keira Goberman	What are the Steps of Decomposition?	A	6	9

CHASE STEM ACADEMY – Sydney Pullano, Madelyn Miller,
& Prof. Michael Campbell

Names	Title/Topic	Group	Project	Table
Malan Witcher, Brody McCallister, Mahia Vega-Paulino, Italiya Wilson, & Vontez Watson	Surface Temperature of Varying Surfaces	A	7	10
John Butts, Yohance Williams, Alexus Lang, Kayden Allen, & Bry'Cionna Perkins	Surface Temperature of Varying Surfaces	A	8	11
Ne'Veah Deloney, Shirley Burns, Raven Neal, & Lily Gadie	What time of year do plants go dormant?	A	9	13
Timothy Hampton, Baldomero Gonzalez, Donte Williams, & Kediel Vega-Romero	What time of year do plants go dormant?	A	10	15
Lily Thompson, Davieair Watson, Jordan Alspet, Randy Dobson, Jayda Galloway, Devin Guerrero, & Jeremiah Williams		A	11	17

COY ELEMENTARY – Julie Kujawa & Danielle Laurell

Names	Title/Topic	Group	Project	Table
Odin Arellano, Daniel Morse, Theo Tellez, Mariah Bomyea, Jack Youngston, Santino Vasquez, Emmie Luce, & Khloe Szymanski	Which bird food do birds like better: Nut or Berry?	A	12	21
Marco Gardull, Bradley Bedrin, Charlie Westenberger, Kendyll Klein, Nadine Orra, Ilannah Scott, & Cruize Haynes	Which bird food do birds like better: Nut or Berry?	A	13	22
Lincoln Vargyas, Kameryn Brann, Arielle Stewart, Akollie Parnell, Kyleigh Owens, Cody Gnacke, Cayden Ornelas, & Leleana Serrano	Which bird food do birds like better: Nut or Berry?	A	14	25

DEFIANCE ELEMENTARY – Julie Houck

Names	Title/Topic	Group	Project	Table
Mali Lillemon, Annabelle Houck, Lydia James, & Adalyn James	Clouds	A	18	30
Malaki Wieland, Gunnar Lillemon, & Blake Cikity	Surface Temperature	A	19	31

HAWKINS STEM ACADEMY – Roseann Lustic, Dan Godfrey,
Kristin Royer, Monica Cornell, Robin Huss, Cathy Harris, Carey Bryant,
Virginia Thompson, & Kelli Noykos

Names	Title/Topic	Group	Project	Table
Jenna Sansom, Jannah Mallah, Kira Lainey, Salaheddin Jansiz, & Damontae' Harold	Flower Species	A	20	32
David Hicks, Orlando Coley, Calvin Johnson, Abdullah Khorami, & Chase Shamp	Flower Change	A	21	33
Romeo Douglas, Kailyn Primas, Amro Jansees, Kelis Hopkins, & James Sosbe	Insects	A	22	35
Corinne Creecy, Mahje Smith-McCoy, Jasmine White, & Mar'Lynn Brown Johnson	Roots	A	23	36
Aniya Lindsey, Amya Angell, Julia Bryant, Ellynn Hendricks, & Nada Alghussein	Ladybugs vs. Bees	A	24	37
Domonick Willis, Kathleen Tucholski, Grace Morehart, & Gabby Schutt	Animals in Daytime vs. Nighttime	A	25	38
Blake Rosenbalm, Fiinn Soumphonphoktdy, Caleb Evearitt, Corey Hogan, & Karter Daniels	Birds vs. Mammals	A	26	40
Asher Waites, Koran Hopkins, David Sansom, Bradley Price, & Devin Seidowski	Insects	A	27	41
Haylie Davis, Jada Dakin-Camak, Brooklyn Powell, & Royalty Miller	Deer in the Prairie	A	28	42
Te'Liya Darrington, Lauren Harper, Otis Roarke, & Layla Taylor	Rabbits in the Prairie	A	29	43
Kashmere Holloway & A'aliyah Hayes	Soil	A	30	45
Jaxson York & Alan Lyons	Soil	A	31	46
Elijah Balogun, Julieann Schutt, Royce Brown, Kasen Angell, & Tyler Stanford	Conservation	A	32	48
Keriana Cortland, Journey Hughes, Allie Grimes, & Kalise Lewis	Surface Temperature and Land Cover	A	33	49
Cameron Peterson, Cairo Robinson, Austin Tovar, & James Willhauck	Surface Temperature and Land Cover	A	34	51
Patrick White, Rowan Heer, Zainab Alzryqi, & Raevin Barringer	Clouds	A	35	52
Jemma White, Ava Sullivan, & Zion Booth	Soil Temperature	B	36	2
Ayden Averitt, Truth Wiley, Levi Waites, & Za'Kiya Williams	Green Down	B	37	3
Aubrey Keister, Arick Essig, Tre'Lynne Darrington, & Jaxon Hatfield	Soil Conductivity	B	38	4
Equelle Jackson & Rylen Stafford	Native vs. Invasive Plants in the Prairie	B	39	6
ZahMia Simpson, Addison Kowalewski, Justine Metzler-Wattley, & Jezreil Scott	Plants in the Prairie	B	40	8
Nevaeh Wilson & Zanyeah Mills	Dissolved Oxygen in Water	B	41	10
Amira Delao & Hunter Gilliland	pH of Water	B	42	12

HULL PRAIRIE INTERMEDIATE – Amy Boros

Names	Title/Topic	Group	Project	Table
Lucy Feyes, Aly Ebert, & Miah Dario	Air Temperature	B	44	14
Delaney Floyd, Sofia Castrillon-Gomez, Julia Nagle, & Norah Piland	Soil Temperature	B	45	16
Xander Pershing, Keegan Zechman, & Alex Scasny	Soil and Surface Temperature	B	46	17
Lina Burnett, Isabella Almandoz, Cole Aemisegger, & Brynn Burkey	Surface and Air Temperature	B	47	18
Gracie Smith, Lillian Barkholz, Lexi VonDeylon, & Claire Schneider	Soil Temperature	B	48	20
Gauri Pandav, Brooklyn Lindow, & Kaylynn Baltz	Surface Temperature	B	49	21
Avnitha Rajesh & Gabriella Struffolino	Soil and Surface Temperature	B	50	22
Bentley Ray, Dima Ishkatem, Lily Demecs, & Katie Chen	Surface Temperature	B	51	24

KENWOOD ELEMENTARY – Erin Failor

Names	Title/Topic	Group	Project	Table
Owen Snyder, Paige Failor, Dylan Pool, & Emma Matthews	Animal Activity	B	52	25
Emerson Belleville, Jase Leo, Allyson Downey, & Kenyon Wonderly	Black Eyed Susan	B	53	26
Nolan Nelson, Raylan Simon, Brayden Gibson, Daric Morrison, & Sam Tracy	Pollinators	B	54	28
Carson Heilmeier, Anabel Wulff, Charleigh Buchhop, & Sophia Starkey	Water	B	55	29

MARSHALL STEMM ACADEMY – Amy Poland & Melissa Pullano

Names	Title/Topic	Group	Project	Table
Gabe Occiphinti, Jayden Talley, Ryan Nichols, & Amari Hopkins	Surface	B	56	31
Amya Lipkins, Zoey Shoup, Mari Pinkston, & Amir Gordon	Air	B	57	34
Timothy Bays, Zury Hackett, McKenliegh Ellis, & Loyal Williams	Soil	B	58	35
McKenzi Moore, Sophia Johnson, DeNiyah Davis, & Ally Terry	Air	B	59	37
Serena Byard, Adon Osley, & Marisella Calderon	Surface	B	60	39
King Ballez, Matthew Bays, Zoriya Pinkston, & Katie Valentine-Bell	What mammals can we find in the prairie?	B	61	40
Alejandro Munoz, Jose' Limon, Sofia Byard, & David Martinez	What temperature do plants go dormant or have live growth?	B	62	41
Jaelyn Wright, Jada Clark, Trinity Rubel, & Mikaa'il Watkins	How many crickets and grasshoppers are in the lawn and the prairie?	B	63	43
Kalani Moll, Ava Larsen, A'dion Garrett, & Damacio Lopez	What temperature do grasshoppers and crickets come out?	B	64	44
Siera Meredith, McKenna Jones, & Skyelin Rubel	Are there more birds in the prairie garden or the garden?	B	65	45

MARSHALL STEM ACADEMY – Yolanda Sholl

Names	Title/Topic	Group	Project	Table
Aaliyah Sneed, Elyse Middleton, Jumarianna Williams, & Jeanette Hernandez-Sanchez	Does solar panel placement matter for collecting energy?	B	66	47
Emily Klempner, Derric Buckson, Chloe Throckmorton, & Koren Osley	Surface Temperature	B	67	48
Cortnie Johnson, Bella Montoya, Brian Jackson, & Angelo Martinez	Soil Temperature	B	68	49
Jamiere Stiger, Gabriel Vasquez, Maxwell Stevens, & Noah Rodriguez	Air Temperature	B	69	50
Zevian Martinez & Jayden Rush	Surface Temperature	B	70	51

McGREGOR ELEMENTARY – Bethany Petras & Amy Re

Names	Title/Topic	Group	Project	Table
Lauren Bigelow, CynCere Fisher, Audrey Genot, Jocelyn Thomas, & Addison Watkins	How is the moisture of the soil different in the prairie versus the lawn?	C	71	1
James Clapper, Ryland Kelly, Max Konczal, Amelia Leroux, & Greyson Smith	What kinds of plants grow in the prairie?	C	72	2
Nahla Bannister, Kaydence Nail, DaJuan Parker, Jordan Parker, & Keegan Vangelder	Is there a greater variety of insects or mammals in the prairie?	C	73	4
Elleri Buchholz, Darryn Martens, Abel Negrin, Seraphina Welling, & Rashad Smith	Do we find more carnivores, omnivores or herbivores on the prairie?	C	74	5

ST. PATRICK OF HEATHERDOWNS – Lindsey Miller

Names	Title/Topic	Group	Project	Table
Jack Aiken, Eli Borton, King Huffman, Markus Reed, & Cameron Shine	In which month do we find the most grasshoppers?	C	75	7
Brooklynn Garth, Sophia Marsh, Alaina Moore, Layla Whitman, & Malia Whitman	In which month do we find the most grasshoppers?	C	76	8
Khloe Opaczewski, Sarai Royster, A'Morie Springs, & Jayla Taylor	In which month do we find the most grasshoppers?	C	77	9
Kelly Abunaw, Isabella Ogunfayo, Kaleigh Pennington, Lorenzo Vasquez, & Marquan Ware	In which month do we find the most grasshoppers?	C	78	11
Olive Hansen, Sadie Marsh, Ben Nicholas, & Archer Thomas	In which month do we find the most grasshoppers?	C	79	12

NATURAL SCIENCE TECHNOLOGY CENTER – Steve Oswanski & Bryan Ellis

Names	Title/Topic	Group	Project	Table
Ben Floyd	Studying abiotic factors in Hill Ditch	C	80	14
Cole Hustwayte & Lio (Tara) Ireland	Will a leg defect be passed to the baby Quail?	C	81	15
Ramila Hereford	Studying the health of Macroinvertebrates in Hill Creek Ditch	C	82	16
Cody Britton	Checking the effect the creek project has on the invertebrates	C	83	18
Kamron Tajblik	Hill Creek Ditch & Forest Health After Construction	C	84	19
Jayden Johnson	Studying macroinvertebrates in the Hill Ditch	C	85	20
Sarah Gulch & Miranda McKelvy	Macroinvertebrates recovery due to effects of the Hill Ditch restoration project	C	86	23
Nick Knepper	How does clear cutting the riparian buffer of hill creek ditch affect the turbidity of the creel before and after the new development.	C	87	24
Alisa Sauerwein & Isabel Nagel	Water Health in the Hill Creek Ditch	C	88	26
Hayven Faust & Jasmine Snyder	Seeing if the Restoration project for Hill Creek Ditch has an effect on biodiversity	C	89	27
DayVeonna Smith & Natalie Carisle	Effects of Restoration of Hill Ditch	C	90	28
Madison Adams, Kate Brewer, & Honesty Miller	Monoculture vs. Polyculture	C	91	29
Jane Driggs & Angel Gilbertson	Coral Cultivation in the Greenhouse	C	92	30
Abigail Myers & Emily Hubbel	Self-sustaining aquaponics systems	C	93	32
Shawna Thomas	Strawberries and mushrooms	C	94	33
Kenny Hubbell & Megan Mast	IPM with lizards	C	95	34
Sierra Smith	Mushrooms growing in polluted soils	C	96	36
Jeremiah Clark & Zayden Collins	Does personality affect food choices, and vice versa?	C	97	38
Leeayjia Plodzic	Study of the affects of nature	C	98	39

TOLEDO TECHNOLOGY ACADEMY – Laura Kubiak

Names	Title/Topic	Group	Project	Table
CeeJay Criss	Air Temperature and solar irradiance in relation to solar panel output	C	99	42
Donnie Garrison & Ayden Drew	Finding correlation between wind efficiency and barometric pressure	C	100	44
Alex Marino & Kei Fry	Solar panel impact on soil temperature and moisture	C	101	45
Carlito Okey & Eddie Rorigi	Humidity levels and wind turbine performance	C	102	47
Daemon Perreault & Manuel Seephan	Exploring cloud cover & wind energy efficiency	C	103	50
Xavier Thomas & LaMar Johnson	Effects of Wind direction and speed on wind turbine efficiency	C	104	52

About Project PRAIRIE: (PRAiries that InvigoRate Inquiry LEarning initiative),

A Wild Toledo Prairie Initiative

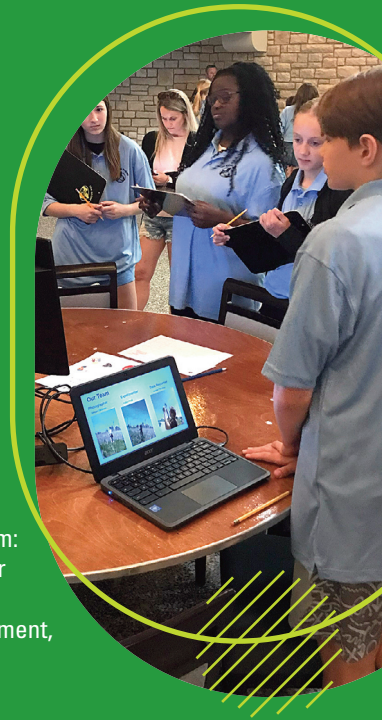
Project PRAIRIE extends the Wild Toledo prairie initiative into local classrooms by utilizing the native prairie installations as living labs.

It is an inquiry-based education program that trains students and their teachers to use native prairie habitats for citizen science projects that contribute to a larger body of global research to make a difference in the natural world.

Toledo Zoo conservation staff installs native prairies on the property of participating schools while Zoo education staff trains teachers and students to use the prairies for citizen science, inquiry learning projects and follows up with related classroom programming.

About GLOBE:

The Global Learning and Observations to Benefit the Environment (GLOBE) Program is a worldwide hands-on, science and education program focusing on the environment, now active in over 120 countries worldwide. It works to promote the teaching and learning of science, enhance environmental literacy and stewardship, and promote scientific discovery. Students and teachers collect data and perform research in collaboration with scientists from numerous international agencies, and their work is made accessible through the GLOBE website.



This student research was supported by funds received from: The Toledo Zoo’s Project Prairie, The Northwest Ohio Center for Excellence in STEM Education (NWO) at Bowling Green State University’s College of Education and Human Development, The University of Toledo’s GLOBE Mission EARTH, Youth Learning As Citizen Environmental Scientists (YLACES), and The Ohio STEM Learning Network.