



# 2023



**BioBlitzBG**  
BG Parks & Recreation • BGSU • NWO • Toledo Zoo • Xcite Learning



The Northwest Ohio Center of Excellence in STEM Education at Bowling Green State University's College of Education and Human Development, in partnership with the Toledo Zoo and Xcite Learning, held the third annual "BioBlitz BG" event on natural habitat prairies for local fourth and fifth graders from Bowling Green City schools and seventh graders from Washington Local School district

Below is a recap of our BioBlitz BG activities held this year. Please discuss and reflect on this information so that we can further deepen all learning. Our goals for the event were simple: **ENGAGE•LEARN•ACT!** It is our goal to engage students in exploration and investigation in nature in order to learn about both living and nonliving components of the local prairie ecosystem and what they and their families can proactively do to maintain its health. Finally, we wanted to inspire students to take action to help protect and preserve both local prairies and planet Earth.

Please send student and teacher feedback, both positive and growth feedback to: [nwo@bgsu.edu](mailto:nwo@bgsu.edu), with the subject line of BioBlitz BG Feedback. With your help, we can make this event even better in the years to come.

We'd like to thank the **BGSU College of Education and Human Development** as well as our local community sponsor **Lubrizol**, along with support from the **Bowling Green City Parks**, the **Toledo Zoo & Aquarium**, and **Xcite Learning** who made this event possible. We are very grateful for continued partnership and collaboration with our STEM Education community!

**Dr. Jodi Haney**, Professor Emerita, BGSU & Xcite Learning

**Mitch Magdich**, Curator of Education, The Toledo Zoo & Aquarium

**Alex Burris**, School and Community Programs Coordinator, The Toledo Zoo & Aquarium

**Dr. Emilio Duran**, Professor and Director, Northwest Ohio Center for Excellence in STEM Education, BGSU College of Education and Human Development

**Susan Stearns**, Assistant Director, Northwest Ohio Center for Excellence in STEM Education, BGSU College of Education and Human Development

**Jenna Pollock**, Education Program Manager, Northwest Ohio Center for Excellence in STEM Education, BGSU College of Education and Human Development

**Lisa Addis**, Creative Manager, Northwest Ohio Center for Excellence in STEM Education, BGSU College of Education and Human Development



# A RECAP OF BIOBLITZ BG 2023

## iNaturalist

Using the iNaturalist app, students made 71 recorded observations for Wintergarden Park representing 43 species. 10 observations were classified "Research Grade" which means there is community consensus on a precise identification. Lots of plants were identified along with a few spiders, insects, snails, and slugs. Though the BioBlitz is officially complete, the iNaturalist community will continue to verify observations. The hope is that 50% or more of the observations made during the 2023 Project Prairie BioBlitz will eventually be verified and receive "Research Grade".

Want to see our inventory? Go to <https://tinyurl.com/yrfz483z>

71 OBSERVATIONS 43 SPECIES 17 IDENTIFIERS 21 OBSERVERS TOLEDO ZOO & AQUARIUM Wintergarden Park Project PRAIRIE 2023 BioBlitz

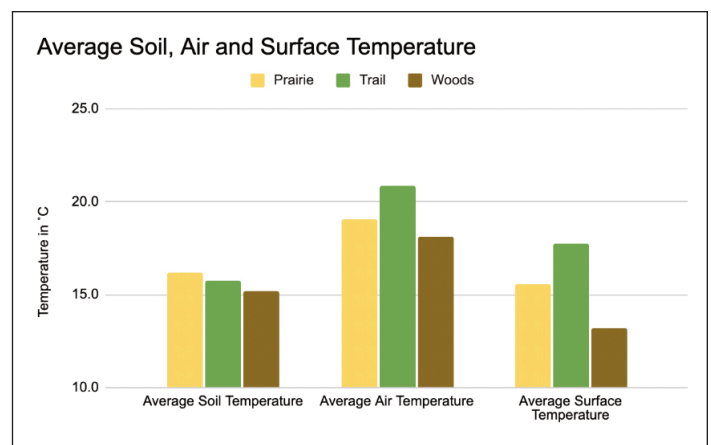
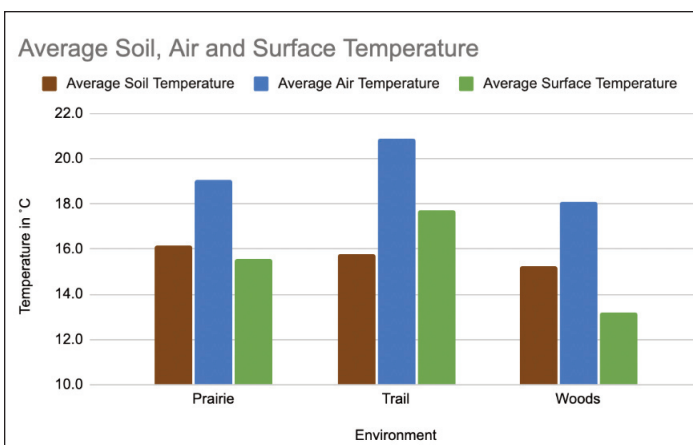
Map Grid List

- Hen of the Woods** (*Grifola frondosa*) Research Grade 2 votes 2d
- American Pokeweed** (*Phytolacca americana*) Research Grade 3 votes 15d
- Dryad's Saddle** (*Cerioporus squamosus*) 1 vote 3d
- Common Bonnet** (*Mycena galericulata*) 1 vote 3d
- Davis's Cuckoo Sweat Bee** (*Sphexcoodes danielsi*) 1 vote 16d
- Transverse-banded Flower Fly** (*Eristalis transversa*) Research Grade 3 votes 16d
- Chinese Mantis** (*Tenodera sinensis*) Research Grade 2 votes 3d
- Bay Polypore** (*Picipes badius*) 1 vote 3d
- Fly Agaric** (*Amanita muscaria*) 2 votes 3d
- Red-spotted Purple** (*Limenitis arthemis astyanax*) Research Grade 2 votes 3d
- Oak Gall Wasps** (Tribe Cynipini) 1 vote 15d
- Obedient Plant** (*Physostegia virginiana*) 2 votes 15d
- Big Bluestem** (*Andropogon gerardii*) Research Grade 2 votes 15d
- False Foxgloves** (Genus *Agalinis*) 1 vote 15d
- Mountain Mint** (Genus *Pycnanthemum*) 1 vote 15d
- Eastern Garter Snake** (*Thamnophis sirtalis sirtalis*) Research Grade 2 votes 3d
- Common American Pokeweed** (*Phytolacca americana americana*) Research Grade 2 votes 3d
- Brown-eyed Susan** (*Rudbeckia triloba*) 2 votes 15d
- Partridge Pea** (*Chamaecrista fasciculata*) Research Grade 3 votes 16d
- Common Evening-Primrose** (*Oenothera biennis*) 1 vote 16d
- Wild Carrot** (*Daucus carota*) 1 vote 15d
- Silvery Bryum** (*Bryum argenteum*) 1 vote 15d
- Virgin Creepers** (Genus *Parthenocissus*) 1 vote 15d
- Jack-in-the-Pulpit** (*Arisaema triphyllum*) 1 vote 15d

## The GLOBE Program: Comparing Soil, Air, and Surface Temperatures of the Prairie, a Short-Grass Trail, and the Woods

We collected soil, air, and surface temperature measurements to compare the prairie to nearby places (the prairie's short grass trail and the woods). Here is a graph of the data collected. Discuss with your students what they think these results mean. Soil temperatures are typically close to one another, as the soil is a great insulator... even still, the prairie soil temperatures were slightly warmer than the trail or the woods. Perhaps the prairie's soil is more "alive" with microscopic organisms giving off their heat to the environment. The surface temperature of the prairie was significantly cooler than the nearby trail. Why? Tall prairie grasses give off their heat and shade the ground, helping to keep the environment cooler and more ideal for the plant and animal species living there. The prairie surface temperatures taken in full sun were warmer than the shaded forest, however. The prairie air temperatures were warmer than the woods but cooler than on the trail. Why? The prairie plants are living and photosynthesizing, releasing heat back into the air, thus keeping the surface cooler. A cooler surface is needed by the animals and plants residing there.

| BioBlitz BG 2023 |                               |                              |                                  |
|------------------|-------------------------------|------------------------------|----------------------------------|
|                  | Average Soil Temperature (°C) | Average Air Temperature (°C) | Average Surface Temperature (°C) |
| Prairie          | 16.2                          | 19.0                         | 15.6                             |
| Trail            | 15.8                          | 20.9                         | 17.7                             |
| Woods            | 15.2                          | 18.1                         | 13.2                             |



### What Are Seed Drops?

Students got messy and made Seed Drops by combining clay and wildflower seeds rolled into golf-ball sized 'drops'. These little balls of clay use a planting technique that is actually hundreds of years old. The clay protects the seeds from hungry insects and birds, while the soil provides organic matter and nutrients. When conditions are right (water, temperature, sunlight), the seed drops will break down and the seeds will germinate into flowering plants that will provide habitat and food for our important pollinator friends.

We used a Monarch Butterfly attracting (as well as other pollinators) wildflower seed mix and can't wait to see all of the Monarch Sanctuaries popping up northwest Ohio in the Spring!



### Easy Planting Instructions

Unlike most sowing techniques, Seed Drops should not actually be buried in soil. They need to be placed (or 'dropped') on the soil surface. These plants will grow best in full to partial sun – in a spot that receives at least 4 hours of sun daily. Seed Drops are usually marketed as "throw and grow" - so students were challenged to toss or sling-shot them in random spots to beautify their yard and community! Fall planting works best in our area due to our cold winters with snow cover. Seed Drops do not need to be watered in the Fall as the upcoming snow will help the clay break down, so the seeds are ready to grow when the ground warms up in the Spring.

### How to Make Seed Drops

1. Use your thumbs to flatten clay and make into a bowl

**NOTE:** Add water to clay if it is not easily molded

2. Add a teaspoon (5 cc scoop) of mixed native pollinator seeds appropriate for your region into the bowl with a little bit of potting soil

3. Pinch the bowl shut and roll into a ball. Roll the ball around in a few extra seeds and soil.

3. Put the Seed Drops in a paper bag (left open) and let them dry for several days

4. Simply drop them on bare soil (rake the soil up a bit if possible)

5. Next spring, watch for the seeds to germinate and grow

*"To Plant a Garden is to Believe in Tomorrow" - Audrey Hepburn*