

Do you truly
know the
history of our
ecosystems at
WMAES?

CULTIVATING ENVIRONMENTAL AWARENESS AT WMAES

Presented
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THE PROBLEM

- NATIVE ECOSYSTEMS ON
OUR OWN CAMPUS HAVE
THEIR HISTORIES GO
UNKNOWN
- CULTURAL + ECOLOGICAL
HISTORY IS INVISIBLE

WHY WMAES IS THE PERFECT PLACE TO ADDRESS THIS

WEST MICHIGAN
ACADEMY OF
ENVIRONMENTAL
SCIENCE (WMAES)

01

Outdoor learning is part
of the school's mission

02

Prairie plantings, outdoor
amphitheater, garden
spaces

03

BUT: Their potential is under
because they lack that histo
knowledge

OUR INTERVIEW: LANDSCAPE ARCHITECT JAY WOMACK

STUDENTS SHOULD BE “IMMersed ALMOST IMMEDIATELY INTO NATURE,” AND THE LANDSCAPE NEEDS INTERPRETATION SO ITS MEANING ISN’T LOST.”

—JAY WOMMACK

- Mr. Womack confirmed that outdoor features are not reaching their full educational potential
- He also stressed the need for storytelling and visible cues
- His insights validated our solution:
- **Signage makes nature understandable and engaging**

OUR SOLUTION: EDUCATIONAL SIGNAGE

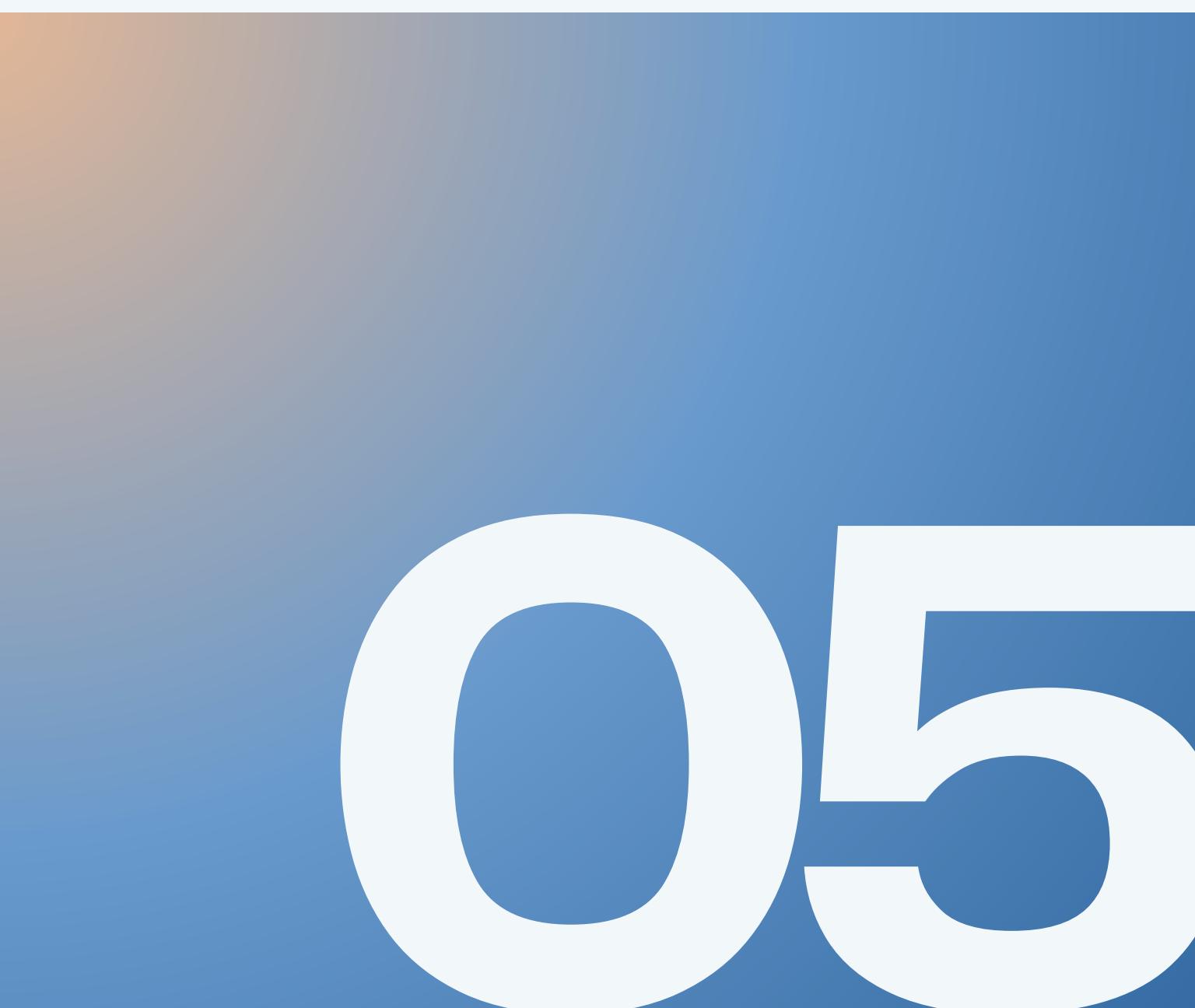
WE DESIGNED AND INSTALLED
FOUR INTERPRETIVE SIGNS THAT:

- 01** ■ Inform others about our environments
- 02** ■ Highlight connections cultural
- 03** ■ Promote hands-on learning
- 04** ■ Goal: Make the prairie and other environments meaningful every day.

THE EFFECT

EACH SIGN PROVIDES:

- Ecological education (prairie function, biodiversity)
- Cultural context (Indigenous history & knowledge)
- Sustainability guidance (habits, choices, stewardship)
- Outdoor learning support (teachers can use them instantly)



SIGN #1



06

SIGN #2

THIS IS A
PRIVATE PROPERTY

YOU ARE A PART OF THE ECOSYSTEM

WMAES
EST. 1994

WEST MICHIGAN ACADEMY OF
ENVIRONMENTAL SCIENCE

EVERY STEP YOU TAKE CONNECTS YOU TO
SOIL, AIR, AND LIFE

OUR ACTIONS, SMALL OR LARGE, SHAPE THE BALANCE OF OUR SHARED PLANET.

Prairies once covered over 170 million acres of North America – living networks of grass roots that reached up to 15 feet deep, holding soil and storing carbon, and nurturing biodiversity.

For thousands of years, Native American tribes such as the Lakota, Pawnee, and Potawatomi relied on these grasslands for food, medicine, and materials. Their sustainable lives honored and protected this balance with the land.

Today, Less than one-tenth of a percent of those original prairies remain. Our modern actions - from planting natives to reducing waste - can help restore this rare and endangered ecosystem.

By understanding the needs and relationships within the prairie, we reconnect with the web of life that sustains us all.



The diagram illustrates the extensive root systems of prairie grasses, showing dense networks of roots extending downwards from the ground surface. The roots are labeled with letters (a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z) corresponding to the labels on the surface above them. The diagram is framed in a white border.

07

SIGN #3

STAFF ONLY

EDUCATION IS ACTION

LEARNING ISN'T LIMITED TO THE CLASSROOM.

EVERY MINDFUL ACT-PLANTING, CONSERVING, RESTORING- IS AN EDUCATION IN ITSELF.

At WMAES, Learning expands beyond the walls of the classroom and into the landscape itself. Surrounded by native plants and open air, students connect theory with practice, gaining a deeper understanding of ecology, stewardship, and sustainability.

New outdoor learning spaces, such as the amphitheater, council ring, and garden classrooms, offer hands-on opportunities to explore science, art, and history surrounded by nature.

Inspired by conservationist Jens Jensen's philosophy, these spaces show that restoration begins with participation. Whether students are planting milkweed, saving seeds, or testing water quality, each act strengthens both ecosystems and understanding.

When we learn through action, we rebuild the world - and ourselves.

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Today, remain. O
Pawnee, a
living
hole
Prairie
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08

SIGN #4

CULTURE GROWS FROM NATURE

WEST MICHIGAN ACADEMY OF ENVIRONMENTAL SCIENCE

STORIES AND TRADITIONS ARE ROOTED IN NATURE

PROTECTING THE PRAIRIE PRESERVES NOT JUST LIFE, BUT IDENTITY.

For thousands of years, Prairies have inspired songs, stories, baskets, dances, and ceremonies that celebrate cycles of growth and renewal. The land itself was a classroom - a teacher of balance, respect, and connection.

When settlers plowed the prairie, nearly 99% of tall grass ecosystems vanished, but the stories, languages, and art born from those landscapes endure.

By protecting and restoring prairies, we safeguard not only the plants and animals that live here, but the cultural memory and wisdom that remind us who we are and where we come from.



009



EXPECTED OUTCOMES

HOW WE EXPECT THE SIGNS TO
AFFECT FUTURE TEACHING

- Students understand the prairie ecosystem
- Increased connection to land and local history
- Stronger sustainability habits across campus
- A foundation future classes can build on

CONCLUSION

THE PRAIRIE IS NOT
JUST SCENERY—IT'S A
STORY, A TEACHER, AND
A LIVING SYSTEM.

“WHEN WE INTERPRET THE
LANDSCAPE, WE UNDERSTAND IT.
WHEN WE UNDERSTAND IT, WE
CARE FOR IT.
AND WHEN WE CARE FOR IT, WE
PROTECT OUR FUTURE.”
—WENDELL BERRY