An Ecological Learning Center and Trail Enhancement in Ransom and Richland Counties of North Dakota

Hannah Roach
“IN EVERY WALK WITH NATURE, ONE RECEIVES FAR MORE THAN HE SEeks.”

-JOHN MUIR
National Grassland
Unfarmed/ Undisturbed Grassland
Farmland
Public vs. Public Land in North Dakota

Sheyenne National Grasslands
Total Public Land: 70,180 acres
Total Private Land: 64,769 acres
Woodland and Grassland Conservation Zones

~One of the last patches of “virgin” prairie in North Dakota

~Has become endangered with only 1 percent remaining

**REASONS FOR ENDANGERMENT:**
~Increased farmland
~Urban expansion
~Reduction in CRP land
The Grasslands provide a diverse habitat for several plants and animals. Other animals and insects like bats, bees, flies, moths, beetles, other birds, and other butterflies are pollinators that help the regrowth of native plants.
Some Issues with the Site

- Extremely Limited Signage for the Grasslands in Nearby Towns and on Roads
- Old Trailhead

5 mile buffer
So why should we care about ecosystems like the tallgrass prairie in the Sheyenne National Grasslands?
## Case Study Comparison

### Top Elements of Environmental Learning Centers

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*Plaza Space, Community Link, Museum/Learning Displays, Outdoor Classroom*
THE SHEYENNE NATIONAL GRASSLANDS CONSIST OF FIVE MAJOR ECOLOGICAL REGIONS

~Dry Prairie
~Wet Prairie
~Oak Savanna/ Forest
~Choppy Sandhills
~River Terrace/ Riparian
SHRUBLAND ROLLING HILLS

Preservation
Recreation
GRASSLANDS
DRY AND WET
Creating and slightly modifying the existing environment to take into account the psychology of environmental learning, an ecological learning center can cater to more than a single class of learning, making people exponentially more likely to have positive attitudes and behaviors towards the environment, especially the critical habitat of the tallgrass prairie, all while providing natural spaces for recreation.
DESIGN CONCEPTS

INTEGRATE

CELEBRATE

INNOVATIVE

IMMERSION INTO NATURE

PERMEABLE

ACCESSIBLE
Sheyenne River
Highway 27
Railroad
Highway 18
Choppy Sandhills/Shrubland
Savanna/Forest
Prairie (Dry)
Prairie (Wet)
River Terrace/Riparian
Fire Tower
Walking Trail
Snowshoe Trail (Winter)
Wildlife Blind
Kayak Launch
Lookout
Horse Trail
New Wayfinding Signs
~Provide map of where one is and information about the ecological region in which he or she is

Winter Snowhoe Trail
*Groomed Cross Country Ski Trail 20 feet from Snowshoe Trail
PARKING AND ENTRANCE

- Wood
- Metal
- Etched Glass
- Stone
ENTRANCE
ENTRANCE PLAZA
The Amphitheater

Log stools are provided in the amphitheater for nature talks or resting.

The material changes to wood that slopes down 1 foot to allow a space for gathering or guides to start teaching.

Lights are located under the overhead structures.
GRASSLAND OVERLOOK
THE BUILDING WALKWAY AND OVERLOOK
THE FIRE TOWERS
IN THE FOREST
THE WETLAND AND AQUARIUM WALL
LOOK DEEP INTO NATURE, AND THEN YOU WILL UNDERSTAND EVERYTHING BETTER.”

-ALBERT EINSTEIN