



MINNESOTA ZOO

Connecting people, animals, and the natural world to save wildlife

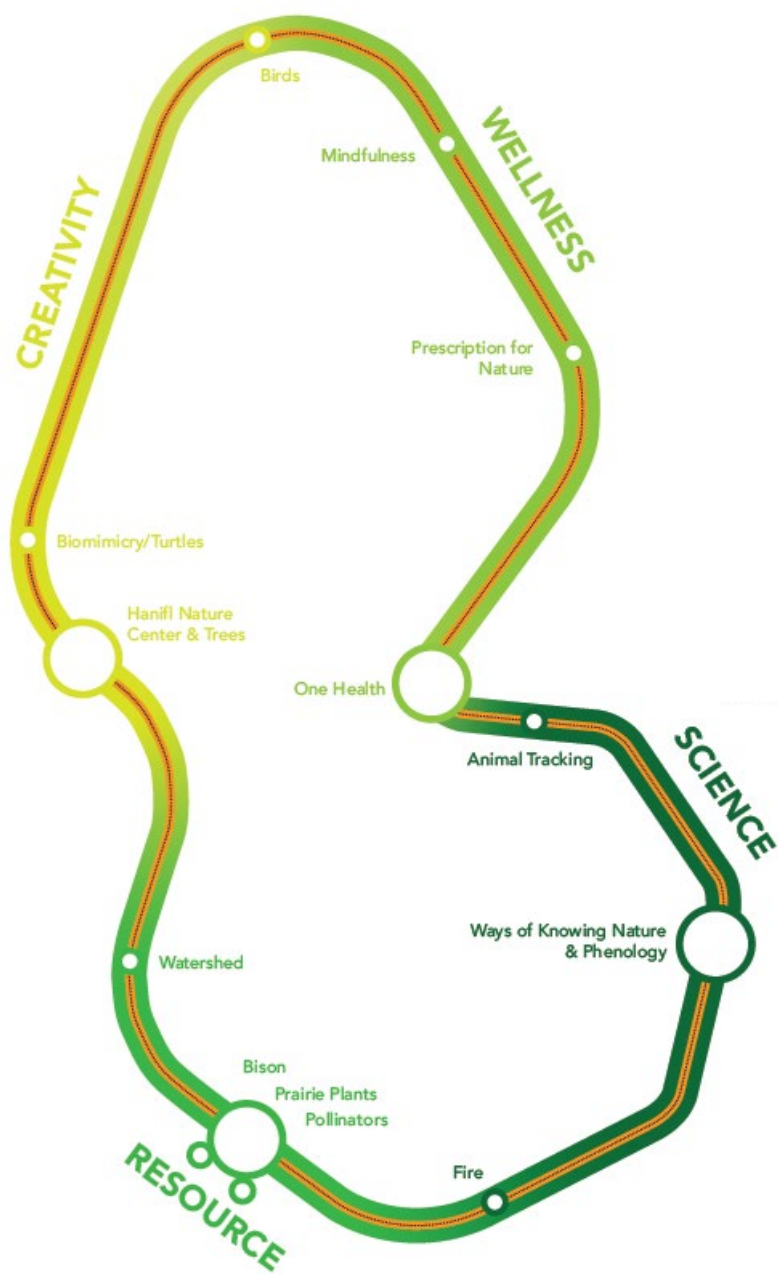


MINNESOTA ZOO

Treetop Trail

Quick Reference
Guide for Educators

Treetop Trail by Science Zone

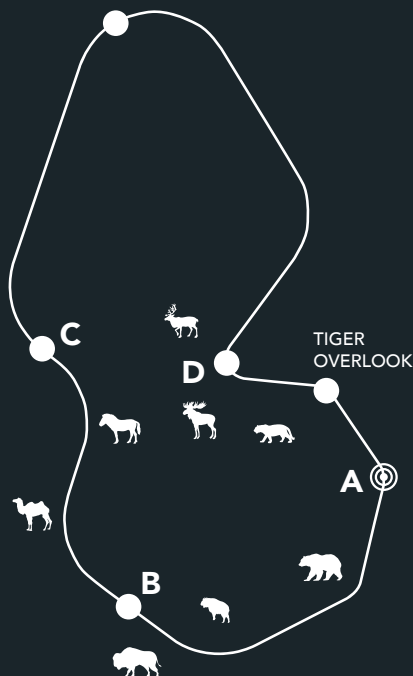




TREETOP TRAIL

AT THE MINNESOTA ZOO

REFLECTION
OVERLOOK



LANDINGS

- A. TREETOP TRAILHEAD
- B. BISON LANDING
- C. HANIFL NATURE CENTER
- D. MOOSE LANDING

ANIMALS

-  BROWN BEAR
-  TAKIN
-  BISON
-  BACTRIAN CAMEL
-  ASIAN WILD HORSE
-  CARIBOU
-  MOOSE
-  AMUR TIGER

TREETOP TRAIL
MADE POSSIBLE BY

**K.A.H.R. FOUNDATION AND
STATE OF MINNESOTA**

Interpretive Overview

Guiding Principles

1. Connect people to the natural world.
2. Showcase Minnesota's regional landscapes.
3. Instill a new or expanded dedication to conservation.
4. Meet people where they are in their journey to connect with nature.
5. Support programmed and self-guided education along the Treetop Trail.
6. Enhance the unique character of Trail segments.

Ways of Knowing Nature

- | | |
|---------------|------------------------|
| 1. Science | Nature <i>teaches</i> |
| 2. Resource | Nature <i>provides</i> |
| 3. Wellness | Nature <i>heals</i> |
| 4. Recreation | Nature <i>connects</i> |
| 5. Creativity | Nature <i>inspires</i> |

Minnesota Zoo Facts

- The Minnesota Zoo opened to the public in May 1978
- Located on 485 acres in Apple Valley, Minnesota
- Home to more than 4,500 animals and 505 species



Inside Hanifl Nature Center

Things to Know

- No restrooms on the Trail (only at Treetop Trailhead, Hanifl Nature Center, and Moose Landing).
- No garbage or recycling receptacles on the Trail.
- Return of items lost over the side cannot be guaranteed.
- Due to the recycled composite decking, you may experience static along the metal railings, like what you'd experience on many playground structures.
- The Treetop Trail was designed to expand and contract as weather conditions change. Because of the design, it's natural to feel slight vibrations along the Trail.
- The overall Trail capacity is set at 11,633 people, the number that can exit safely at one time given the number of exits
- Structurally, the Trail is designed to support 60 lbs./square foot on the main path, and 100 lbs./square foot in areas where people gather (bump-outs) or exit. In total, the Trail can support 19,036 people at once.



Treetop Trail from across Main Lake

Treetop Trail Basic Facts

- Longest elevated pedestrian loop in the world (1.25 miles)
- Repurposed the former Monorail track
- 22 bump-outs, with at least one bench each.
- Height above the ground varies; the highest is 32 feet

Monorail Facts

- When the Monorail (or Sky Trail) opened in 1979, it was a signature piece of the Minnesota Zoo
- The Monorail ran for 34 years and was decommissioned in 2013



Green Features

- Decking made from post-consumer and post-industrial recycled plastic. This material has a much longer longevity than wood. Unlike wood, it doesn't need to be treated with chemicals that leak into the ground below.
- All wood is Ash Arbor Wood, manufactured locally in Duluth, MN. Minnesota is losing many ash trees due to invasive insects. Arbor Wood is thermally-modified to seal it for longevity. It will last much longer than regular lumber.
- All glass is bird-safe glass (some with lines or dots visible to humans and some with UV patterns only visible to birds).
- Most construction done from atop; little disruption at ground level.

While not part of the Treetop Trail project, there are green (vegetated) roofs visible from Trail, including the Education & Event Center, and a building within Russia's Grizzly Coast

Science Zone Highlights

Location	Element	Notes
Phenology (Treetop Trailhead)	Aspen Tree	Engraved mural of an aspen branch in different seasons (left to right: spring, summer, fall, winter). Aspen is a keystone species.
Fire	Posts and bench	Ash Arbor Wood: its Shou Sugi Ban fire finish represents the fire delineation line seen after forest and prairie fires. Shorter boards represent fire in a prairie environment. Taller boards represent fire in forests. Shou Sugi Ban is a Japanese wood-firing technique that seals wood. It's commonly seen in Japanese gardens. The quote highlights a historic perspective on fire.
Wildlife Tracking (Tiger Lair)	General	Wildlife tracking is essential to many animal conservation projects. Animals can be tracked via natural signs or high-tech equipment. Community members can get involved in tracking for research, too.
	Bullsnake sculpture	Can be tracked via shed snake skins. PIT (Passive Integrated Transponder) tags are increasingly being used to study reptiles such as Bullsnakes. These are the same microchips that people use for their pets. Bullsnakes are a species of special concern in Minnesota.
	Northern Long-Eared Bat sculpture	Can be tracked via audible vocalizations using a bat detector, GPS, and telemetry. Northern Long-Eared Bats are found onsite at the Zoo. They are a nationally endangered species and are listed as a species of special concern in Minnesota.
	Monarch Butterfly sculpture	Can be tracked via wing stickers. Can be tracked with GPS over short distances. Migratory Monarchs are classified as endangered.

Resource Zone Highlights

Location	Element	Notes
Bottom of Bison Landing	Lenticular sculpture of Bison	This feature will include ambient prairie audio including the sound of a bison stampede; prairie sounds were recorded at Frontenac State Park in Minnesota. A lenticular sculpture tells the story of bison as a natural resource that was nearly lost and is now being regained. As you walk the Northern Trail, you see the Bison in profile. When standing directly in front of the statue, it's "lost." As you pass it along the Northern Trail, you will see the Bison "returning" if you look back at the statue.
Prairie Plants	Engraved	This feature includes a life-sized, engraved Little Bluestem on a Corten steel panel. Little Bluestem is one of the prairie seeds included in the prairie restoration area around the Bison Landing ramp. If the roots were shown, they would stretch across the 12-foot deck!
Pollinators	Engraved	All 3 species depend on prairie habitat. Dakota Skipper: listed as endangered in Minnesota and threatened nationally. This is one of the butterflies in the Zoo's Prairie Butterfly Conservation Program. American Bumble Bee: listed as vulnerable nationally Regal Fritillary: listed as vulnerable nationally

Creativity Zone Highlights

Location	Element	Notes
Hanifl Nature Center (walkway)	Interactive, kinetic forest sculpture	The metal disks represent leaves and the wood represents the branches of a tree. Metal disks will pick up on changing colors of the surrounding forest. Will move slightly in the wind or with human touch.
Hanifl Nature Center (inside)	Hanging tree	The upside-down hanging tree in the grand staircase is a real White Oak, which is a Minnesota tree species. There are tree ring decals on the floor and wall. Ambient forest sounds play over audio speakers. Rotating art exhibition.
Biomimicry	Blanding's Turtle sculpture	This interpretive touch point features a life-size, cantilevered sculpture of a Blanding's Turtle. Blanding's Turtles are listed as endangered nationally. In Minnesota, they are a threatened species. They are easily recognized by their smooth, high-domed shell, combined with a bright yellow chin and neck. This turtle needs a mix of ponds and marshes with dry upland areas nearby. This species benefits from the Minnesota Zoo's freshwater turtle conservation work in Minnesota.
Birds (Reflection Overlook)	Bird Blind & binoculars	Spending time observing birds can inspire us.
	Bird cutouts	The great-horned owl and sandhill crane sculptures demonstrate how bird calls can be used to identify birds. The wood duck and yellow-rumped warbler sculptures convey how the patterns and colors of birds can be used to identify birds.



Prescription for Nature Bumpout

Wellness Zone Highlights

Location	Element	Notes
Mindfulness	Glass portal and frame	The Mindfulness touchpoint is in the Wellness Zone. It highlights the documented benefits to our emotional and mental health of being in nature.
Prescription for Nature	Stumps	The Prescription for Nature touchpoint is in the Wellness Zone. It features stumps at different heights for seating and stepping. Prescription for Nature highlights the documented benefits to our physical health of being in nature.
One Health	Panels at base of Moose Landing	Routed Corten steel panels depict a northern Minnesota scene reminiscent of the Boundary Waters Canoe Area and Wilderness. One Health is the intersection of human health, habitat health, and animal health. Dr. Laura Kahn is a physician and co-founder of the One Health Initiative.