KEEN Outdoor Fridays — Curriculum Framework

Ages: 8–11
Time: Fridays, 9:00 AM–1:00 PM
Location: YCIC / Pond to Pines Outdoor Learning Campus and surrounding Central Washington landscapes

Core learning model

9:00–9:20 — Arrival & Nature Check-In
Weather, observations, questions, journals.

9:20–10:15 — Field Investigation
Explore the month's topic through direct observation.

10:15–10:30 — Snack / Movement Break

10:30–11:45 — Project / Investigation
Experiment, collect data, build something, solve a problem, or conduct a field study.

11:45–12:15 — Lunch / Outdoor Free Exploration

12:15–1:00 — Reflection & Field Journal
What did we discover? What surprised us? What questions remain?

September — Canyon Ecology & Field Science

Big Question

How does this place work?

Start the year by teaching kids how to be field scientists.

Students learn to observe the canyon as an ecosystem and begin developing the basic tools they'll use throughout the year.

Investigations

- What is an ecosystem?
- What lives here?
- How do plants survive in shrub-steppe?
- Where do animals find food, water, and shelter?
- How are living things connected?

Field Activities

- Canyon habitat exploration
- Soil observations
- Plant identification
- Wildlife sign survey
- Temperature/weather measurements
- Habitat mapping
- Biodiversity inventory

Long-Term Project

Create a KEEN Canyon Field Map.

Students establish observation points around the YCIC campus and begin collecting information that they can revisit throughout the year.

Skills

Observation • field notes • mapping • species identification • scientific questions • data collection

October — Habitat Restoration

Big Question

What makes a habitat healthy—and how can we help?

This is where Outdoor Fridays connects directly to KEEN's restoration work.

Students investigate the difference between healthy and degraded habitat and learn why native plants matter.

Investigations

- Native vs. invasive plants
- What is habitat?
- Why do ecosystems change?
- How do invasive species affect native species?
- What does restoration look like?

Field Activities

- Habitat assessment
- Native plant identification
- Invasive species investigation
- Soil observations
- Native seed exploration
- Planting/restoration activities where appropriate

Project

Adopt-a-Habitat Plot

Students establish a small observation/restoration area and monitor it throughout the year.

They can document:

- Plant species
- Ground cover
- Wildlife
- Seasonal changes
- Restoration progress

November — Wildlife Tracking & Investigation

Big Question

How can we learn about animals without seeing them?

This month turns students into wildlife detectives.

Investigations

- Tracks
- Scat
- Feeding signs
- Burrows
- Feathers
- Calls
- Trails
- Camera traps

Activities

- Track identification
- Wildlife mystery challenges
- Track casting
- Camera trap demonstrations
- Wildlife survey
- Bird observation
- Habitat mapping

Project

Who Lives Here? Wildlife Survey

Students create a cumulative list of wildlife observed or documented at YCIC.

December — Winter Ecology & Outdoor Skills

Big Question

How do living things survive winter—and how can we safely spend time outside?

December becomes a combination of ecology and practical outdoor skills.

Ecology

- Animal adaptations
- Winter survival
- Dormancy
- Food availability
- Seasonal behavior

Outdoor Skills

- Layering
- Staying warm
- Fire safety
- Knots
- Shelter building
- Navigation
- Leave No Trace
- Winter safety

Signature Activity

Winter Survival Challenge

Teams receive limited materials and must design a shelter or solve a series of outdoor challenges.

January — Climate & Shrub-Steppe Resilience

Big Question

How do plants, animals, and people adapt to a changing climate?

This is where students begin connecting local observations to larger environmental issues.

Investigations

- Weather vs. climate
- Temperature
- Precipitation
- Drought
- Water availability
- Plant adaptations
- Climate resilience

Activities

- Weather monitoring
- Microclimate investigation
- Soil moisture testing
- Plant adaptation observations
- Climate data activities

Project

Our Canyon Climate Log

Students maintain a simple weather/environmental dataset throughout the year.

February — Water & Wetland Science

Big Question

What makes water healthy?

This could become one of the strongest Outdoor Fridays units because of your wetland work at YCIC.

Investigations

- Watersheds
- Wetlands
- Water movement
- Water quality
- Aquatic habitat
- Human impacts

Field Activities

- Water sampling
- Temperature
- pH
- Turbidity
- Macroinvertebrate exploration
- Wetland mapping
- Watershed models

Project

YCIC Water Watch

Students establish recurring water observations and compare results over time.

March — Community Science

Big Question

Can kids help scientists understand the environment?

This month introduces students to authentic citizen/community science.

Students learn:

- What community science is
- Why scientists need long-term data
- How observations become useful information
- How to collect reliable data
- Why consistency matters

Possible Investigations

- Birds
- Pollinators
- Plants
- Wildlife
- Weather
- Water
- Phenology

Project

Students complete a **KEEN Community Science Survey** and contribute their observations to an appropriate community-science project when feasible.

April — Native Plants & Restoration

Big Question

How can we help a landscape recover?

Return to the habitat restoration project from October.

Students can now compare what they've learned with what they're seeing in the field.

Activities

- Native plant identification
- Seed collection concepts
- Propagation
- Planting
- Pollinator relationships
- Restoration planning
- Invasive species management

Project

Restore a Small Place

Students work together on an actual habitat improvement project at YCIC, where appropriate.

May — Wildlife Monitoring & Young Naturalist Challenge

Big Question

What have we learned about this place?

The final month brings the year together.

Students return to their observation sites and compare their data from throughout the year.

Activities

- Wildlife surveys
- Biodiversity inventory
- Habitat assessment
- Weather comparison
- Plant observations
- Review of water data
- Field mapping

Final Project

The KEEN Young Field Scientist Challenge

Teams receive a real-world environmental question and must:

1. Ask a question
2. Develop a hypothesis
3. Design an investigation
4. Collect data
5. Analyze what they found
6. Present their conclusions

Then celebrate with a **Field Scientist Showcase** for families.

The Three Long-Term Projects

I would actually make the entire Outdoor Fridays curriculum revolve around **three cumulative projects**, similar to what we did for Nature Academy.

🔬 1. The Canyon Field Study

Students progressively build their understanding of YCIC's ecosystems through:

- Habitat mapping
- Species observations
- Wildlife surveys
- Weather data
- Water observations
- Seasonal comparisons

Outcome: A student-created **KEEN Canyon Field Guide & Map**.

🌱 2. The Restoration Project

Students investigate habitat health and participate in appropriate restoration activities.

They learn:

Observe → Assess → Plan → Restore → Monitor

Outcome: Students contribute to an actual KEEN habitat restoration project and document changes over time.

💧 3. The Environmental Monitoring Project

Students collect recurring environmental observations throughout the year.

Potential datasets:

- Weather
- Water
- Wildlife
- Plants
- Phenology
- Biodiversity

Outcome: A year-end **KEEN Environmental Report** created by the students.

The Skills Progression

This is important because it gives parents something tangible to understand.

Fall

I can observe the natural world.

Early Winter

I can use tools and outdoor skills to investigate it.

Winter

I can collect information and recognize patterns.

Spring

I can conduct my own investigation.

End of Year

I can use evidence to explain what I discovered.

Washington Standards Connection

The curriculum can reinforce concepts in:

- Life Science
- Earth & Space Science
- Physical Science
- Environmental & Sustainability Education

- Scientific Practices
- Engineering/design
- Data collection and analysis

The Overall Outdoor Fridays Philosophy

Don't teach kids about the environment when you can let them investigate it.

And every month should answer four questions:

What are we exploring?
What question are we investigating?
What are we actually doing outside?
What are we contributing or creating?