

# BACKPACK THE PARKS

Expeditions in Education



# Backpack the Parks!



At Expeditions in Education, we believe that learning extends far beyond the classroom walls. That's why we're thrilled to introduce our "Backpack the Parks" initiative, designed to ignite students' curiosity and love for the great outdoors while fostering a deeper understanding of our national parks.

With "Backpack the Parks," educators have the unique opportunity to curate and pack 8 engaging activities into backpacks, making it easier than ever for students to check out and explore the wonders of our national parks. From hands-on science experiments to wildlife scavenger hunts, each activity is carefully crafted to immerse students in the beauty, history, and natural wonders of these treasured landscapes.

Join us in empowering the next generation of park enthusiasts and conservationists as they embark on unforgettable learning adventures in our nation's most cherished natural spaces. With "Backpack the Parks," the journey to discovery begins with the turn of a backpack strap, and the possibilities for educational exploration are endless.



# Backpack the Parks!



## *Instruction*

### **Step 1: Ask for Donations of Backpacks and Clean Them Up**

- Reach out to parents, local businesses, or the school community to request donations of gently used backpacks.
- Inspect the donated backpacks for any damage or excessive wear.

### **Step 2: Print the Activity Cards and Laminate**

- Prepare activity cards that detail each of the educational activities you plan to include in the backpacks.
- Print these activity cards on durable cardstock paper.
- Laminate the activity cards to protect them from wear and tear during use.

### **Step 3: Put Cards on Rings**

- Hole punch each laminated activity card.
- Use rings or zip ties to secure the cards together, creating a set of instructions for each activity.

### **Step 4: Purchase or Collect the Materials Needed for the Activities**

- Create a list of materials required for each activity, as outlined in your activity plan.
- Gather all the necessary materials for each activity. This may include items such as magnifying glasses, sketchbooks, rocks, clay, flashlights, and more.

### **Step 5: Put Materials in Ziplock Bags**

- Organize the materials for each activity into separate ziplock bags.
- Ensure that each bag contains all the necessary materials, making it easy for students to access and use them.

### **Step 6: Attach the National Park Tag to the Outside of the Bag**

- Create or print a National Park-themed tag that identifies the backpack as part of the Backpack the Park program.
- Attach this tag securely to the outside of the ziplock bag or backpack.

## Activity 1: Wildlife Identification: Build a Field Guide

- **Materials:**

- Field guide books or printouts
- Art supplies (colored pencils, markers, etc.)
- Paper
- Access to the internet

- **Instructions:**

- a. Choose a local animal or bird species to research.
- b. Use field guide books or online resources to gather information and images.
- c. Create your own field guide entry with drawings, facts, and habitat information.
- d. Share your field guide entry with the class.

# Voyageurs National Park

## Activity 2: Water Quality Testing: DIY Water Quality Kit

- **Materials:**

- Clear containers (jars or plastic bottles)
- Water samples (from local sources)
- Water testing kits (pH strips, turbidity testers)
- Notebook
- Pencil

- **Instructions:**

- a. Collect water samples from different sources (e.g., tap water, pond, river).
- b. Test and record pH levels, turbidity, and other relevant parameters.
- c. Compare and discuss the results, exploring the concept of water quality.

## Activity 3: Plant Identification: Herbarium Collection

- **Materials:**

- Local plant specimens (leaves, flowers, etc.)
- Sheets of white paper
- Glue
- Labels
- Clear plastic sheets (optional)

- **Instructions:**

- a. Collect and press local plant specimens.
- b. Create herbarium pages by gluing the pressed specimens onto white paper.
- c. Label each specimen with its common and scientific names, date, and location.
- d. Optionally, protect pages with clear plastic sheets and create a binder.

## Activity 4: Astronomy: Create a Star Chart

- **Materials:**

- Star charts
- Markers
- Rulers
- Glow-in-the-dark stars (optional)

- **Instructions:**

- a. Obtain a star chart for your geographic location and time of year.
- b. Use markers to draw and label constellations on the chart.





## Activity 5: Navigation Skills: Create a Treasure Map

- Materials:
  - Paper
  - Pencils
  - Markers
  - Compasses (optional)
- Instructions:
  - a. Design a treasure map with landmarks and directions.
  - b. Include a legend with symbols for various elements (e.g., trees, rivers).
  - c. Challenge classmates to follow your map and find the "treasure."

# Voyageurs National Park

## Activity 6: Conservation: Environmental Impact Assessment

- Materials:
  - Research materials (books, websites)
  - Paper
  - Pencils
- Instructions:
  - a. Select a local environmental issue (e.g., pollution, deforestation).
  - b. Research the issue and its impact on the environment.
  - c. Create a presentation or report outlining potential solutions.

## Activity 7: Outdoor Recreation: Knot-Tying Skills

- Materials:
  - Ropes or cords of different thicknesses
- Instructions:
  - a. Learn and practice various knots used in outdoor activities (e.g., square knot, bowline, clove hitch).
  - b. Demonstrate your knot-tying skills to the class.

## Activity 8: Teamwork and Leadership: Survival Scenarios

- Materials:
  - Scenario cards with survival situations
  - Paper
  - Pencils
- Instructions:
  - a. In small groups, receive a survival scenario card.
  - b. Discuss and plan how to survive in the given situation, emphasizing teamwork and leadership.
  - c. Present your plans to the class.

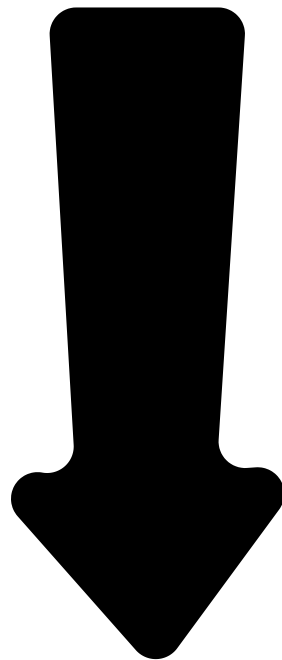
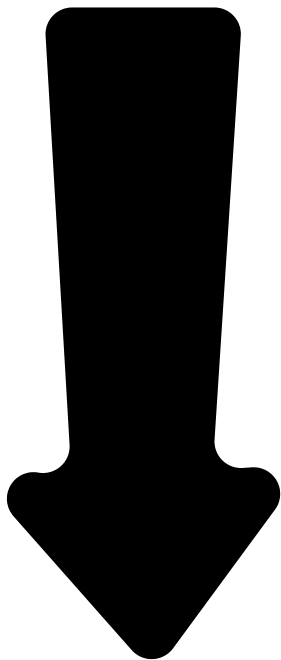


# Activity Cards

Print on cardstock

Laminate

Put on rings



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- Create herbarium pages by gluing the pressed specimens onto white paper.
- Label each specimen with its common and scientific names, date, and location.
- Optionally, protect pages with clear plastic sheets and create a binder.
- Compare what you find in your own community with plants found in Voyageurs National Park.

## Activity 4: Astronomy: Create a Star Chart

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**BAG TAG BELOW!**



**Voyageurs  
National Park**

**Backpack the Parks!**

**#ExploreTheParksWithUs**

**"Pack Your Curiosity,  
Explore Nature's Beauty!"**

**[www.expeditionsineducation.org](http://www.expeditionsineducation.org)**

# Waterways of Voyageurs National Parks

**Introduction:** Voyageurs National Park, nestled in the northern part of Minnesota, is a watery wonderland renowned for its pristine lakes, meandering rivers, and interconnected waterways. Covering over 218,000 acres, this national park is a haven for water enthusiasts, offering a rich tapestry of experiences for visitors to explore.

**Kabetogama Lake:** Kabetogama Lake, one of the park's four major lakes, is a serene gem. Its clear waters span over 25,000 acres, making it perfect for boating, fishing, and kayaking. The lake's shores are adorned with lush forests and abundant wildlife, making it a peaceful escape for nature lovers.

**Rainy Lake:** Rainy Lake, the largest of the park's lakes, stretches across 220 square miles and boasts a rich history of exploration and trade. Visitors can explore its numerous bays and islands, fish for walleye and northern pike, or paddle along its scenic routes.

**Namakan Lake:** Namakan Lake, nestled along the Canadian border, is famous for its rugged beauty and challenging waterways. It offers excellent opportunities for wilderness canoeing, as well as glimpses of wildlife like bald eagles and moose.

**Ash River:** The Ash River, a scenic river winding through the heart of the park, is known for its tranquil setting and exceptional fishing. Canoeing down the Ash River is a serene adventure, surrounded by towering pines and rocky shores.

**International Border Waters:** Voyageurs National Park shares a border with Canada, and the international waters offer a unique experience. Visitors can traverse the park's boundary waters, where the U.S. and Canada coexist peacefully, and witness breathtaking landscapes along the way.

**Wildlife and Nature:** The waterways of Voyageurs National Park are teeming with wildlife. Common sightings include bald eagles, loons, beavers, otters, and even black bears along the shores. The park's diverse ecosystems support a wide range of flora and fauna.

**Recreational Opportunities:** Water-based activities such as fishing, boating, kayaking, and canoeing are the heart of the park's recreational opportunities. Guided tours, ranger programs, and educational activities are available for visitors of all ages.

**Conservation and Preservation:** Voyageurs National Park is committed to preserving its pristine waterways and ecosystems for future generations. The park's designation as an International Dark Sky Park reflects its dedication to reducing light pollution and protecting the night skies.

# Dark Skies of Voyageurs National Park

Voyageurs National Park, situated in the pristine wilderness of northern Minnesota, is not only celebrated for its waterways and natural beauty but also for its distinction as an International Dark Sky Park. With minimal light pollution and expansive starry vistas, this park offers a remarkable opportunity to connect with the cosmos and experience the magic of the night sky.

**Stargazing Paradise:** Voyageurs National Park's designation as an International Dark Sky Park signifies its commitment to preserving the natural darkness of the night sky. Here, visitors can immerse themselves in a celestial wonderland, where stars, planets, and constellations shine with breathtaking clarity.

**The Milky Way Spectacle:** One of the park's most awe-inspiring features is the vivid Milky Way stretching across the heavens. In this dark sky sanctuary, the Milky Way's spiral arms become visible, and its beauty captivates the imagination, making it a must-see for stargazers and photographers.

**Astronomy Programs:** Voyageurs National Park offers a range of astronomy programs and events throughout the year. From guided night sky hikes to telescope viewing parties, visitors have the opportunity to learn from park rangers and local astronomers, deepening their understanding of the cosmos.

**Astrophotography Haven:** For photographers, the park's dark skies provide an ideal backdrop for astrophotography. Capture stunning shots of the Milky Way, meteor showers, and celestial phenomena against the backdrop of the park's serene lakes and forests.

**Nocturnal Wildlife:** Beyond the stars, Voyageurs National Park's dark skies offer glimpses of nocturnal wildlife. Listen for the haunting calls of loons and owls while watching for the graceful flight of bats and the occasional visit of a curious raccoon.

**Light Pollution Mitigation:** The park actively manages and mitigates light pollution to preserve its dark skies. Shielded outdoor lighting, education on responsible lighting practices, and efforts to reduce artificial light all contribute to maintaining the pristine night environment.



# Animals found in Voyageurs National Park

## **Mammals:**

- White-tailed Deer
- Moose
- Black Bear
- Timber Wolf
- Red Fox
- River Otter
- North American Beaver
- Eastern Cottontail Rabbit
- Snowshoe Hare
- Gray Wolf (occasional sightings)

## **Birds:**

- Bald Eagle
- Common Loon
- Osprey
- Great Blue Heron
- Double-crested Cormorant
- American White Pelican
- Common Merganser
- Wood Duck
- Northern Goshawk
- Yellow-bellied Sapsucker

## **Waterfowl:**

- Canada Goose
- Mallard
- Northern Pintail
- Blue-winged Teal
- Bufflehead
- Canvasback
- Hooded Merganser
- Ruddy Duck
- Trumpeter Swan
- Tundra Swan

## **Amphibians and Reptiles:**

- Painted Turtle
- Snapping Turtle
- Northern Leopard Frog
- American Toad
- Eastern Garter Snake
- Northern Red-bellied Snake

## **Fish:**

- Walleye
- Northern Pike
- Smallmouth Bass
- Lake Sturgeon
- Yellow Perch
- Lake Whitefish
- Cisco (Lake Herring)
- Burbot (Eelpout)
- Brook Trout

## **Invertebrates:**

- Dragonflies
- Damselflies
- Mayflies
- Stoneflies
- Crayfish

# Knots That Can be Used in Voyageurs National Park

Knot Name	Purpose/Use
Square Knot (Reef Knot)	Join two ropes of equal diameter securely.
Bowline Knot	Create a secure loop at the end of a rope.
Clove Hitch	Secure a rope to a post, tree, or other object.
Taut Line Hitch	Adjust the tension of a line while camping.
Sheet Bend	Join two ropes of unequal diameter securely.
Figure Eight Knot	Prevent the rope from slipping through a loop.
Double Fisherman's Bend	Join two ropes securely for climbing or rappelling.
Prusik Knot	Create a friction hitch for ascending a rope.
Trucker's Hitch	Securely tie down loads, like a canoe or gear.
Bowline on a Bight	Create a secure loop in the middle of a rope.
Alpine Butterfly Knot	Create a fixed loop in the middle of a rope.
Square Lashing	Bind two poles together, such as for a shelter frame.
Sheet Bend (Doubled)	Join two ropes of unequal diameter more securely.
Barrel Hitch	Lift or move heavy objects with a rope and a barrel.

# Survivor Scenarios for Voyageurs National Park

## 1. Lost in the Woods:

You went on a hike and lost your way. It's getting dark, and you need to find your campsite before nightfall.

## 2. Capsized Canoe:

While paddling on a lake, your canoe tipped over, and your gear is floating away. You need to retrieve your gear and find a way to dry off and stay warm.

## 3. Bee Sting Allergy:

You accidentally stepped on a beehive and got stung multiple times. You need to treat the stings and find help.

## 4. Thunderstorm Surprise:

A sudden thunderstorm has caught you while camping. You need to quickly set up a shelter and stay safe from lightning.

## 5. Lost Gear:

You were fishing, and your fishing gear got caught underwater. You need to retrieve it safely without getting into deep water.

## 6. Injured Ankle:

While hiking, you twisted your ankle. You need to create a splint and find help or make your way back to camp.

## 7. Bear Encounter:

You came across a black bear while hiking. You need to stay calm, make noise, and slowly back away to safety.

## 8. Lost in the Dark:

You were exploring caves, and your flashlight died. You need to find your way out in complete darkness.

## 9. Lost Group:

You were on a guided tour but got separated from the group. You need to stay put and signal for help.

## 10. Stranded on an Island:

- While canoeing, you got stranded on a small island in the middle of a lake. You need to build a signal fire to get rescued.