

Gear Essentials

Backpack Selection

Capacity (Liters)	30-50L: Day trips/Overnights 50-75L: Multi-day trips 75L+: Extended expeditions
Fit	Torso length is crucial. Measure from C7 vertebra to iliac crest.
Features	Hip belt, sternum strap, multiple compartments, rain cover compatibility.
Weight	Consider a lighter pack to reduce overall load.
Suspension	Internal frame backpacks are more common, providing better load transfer to hips.

Shelter

Tent	Lightweight, waterproof, appropriate capacity (1-person, 2-person, etc.). Consider freestanding vs. non-freestanding.
Sleeping Bag	Temperature rating should match expected conditions. Consider fill type (down vs. synthetic) and shape (mummy vs. rectangular).
Sleeping Pad	Provides insulation and cushioning. Types: closed-cell foam, inflatable, self-inflating.
Trekking Poles	Reduce strain on knees and improve stability.

Clothing System

Layering is Key: <ul style="list-style-type: none"><li>Base Layer: Moisture-wicking material (e.g., merino wool, synthetic).</li><li>Insulating Layer: Fleece or down jacket.</li><li>Outer Layer: Waterproof and windproof jacket and pants.</li></ul>
Essential Items: <ul style="list-style-type: none"><li>Hiking boots (broken in!)</li><li>Socks (moisture-wicking)</li><li>Hat and gloves</li><li>Sun protection (sunglasses, sunscreen, hat)</li></ul>

Navigation & Safety

Navigation

Map & Compass	Essential for off-trail navigation. Learn how to use them effectively.
GPS Device/Smartphone	Useful for tracking location and routes, but rely on batteries. Carry a power bank.
Route Planning	Study maps, identify landmarks, and estimate distances and elevation gains.
Altimeter Watch	Can help determine your altitude and track elevation changes, especially useful in poor visibility.

First Aid & Emergency

First-Aid Kit	Include essentials like bandages, antiseptic wipes, pain relievers, blister treatment, and any personal medications.
Emergency Shelter	Lightweight bivy sack or emergency blanket for protection from the elements.
Signaling Devices	Whistle, signal mirror, and headlamp with a red light function.
Communication	Satellite communicator or personal locator beacon (PLB) for emergencies in remote areas. Let someone know your plans.

Wildlife Safety

Bear Safety: <ul style="list-style-type: none"><li>Store food properly (bear canister or bear bag).</li><li>Make noise while hiking.</li><li>Carry bear spray (and know how to use it!).</li></ul>
Other Wildlife: <ul style="list-style-type: none"><li>Be aware of potential hazards (snakes, insects).</li><li>Respect wildlife and maintain a safe distance.</li><li>Learn about the local fauna and their behaviors.</li></ul>

Food & Water

Food Planning

Calorie Needs	Estimate calorie needs based on activity level and trip duration. Aim for 2500-4500 calories per day.
Food Weight	Choose lightweight, calorie-dense foods. Dehydrated meals, energy bars, nuts, and dried fruit are good options.
Meal Planning	Plan meals in advance to avoid overpacking or running out of food. Pack extra food in case of delays.
Storage	Use waterproof bags or containers to protect food from moisture and pests.

Water Sources & Treatment

Water Availability	Research water sources along your route. Consider seasonal variations and potential contamination.
Water Treatment Methods	Boiling (1 minute at sea level, 3 minutes at higher altitudes), filtration (pump or gravity filters), chemical treatment (iodine or chlorine tablets), UV light.
Water Capacity	Carry enough water for your needs (at least 2-3 liters per day). Use a hydration reservoir or water bottles.
Containers	Collapsible water bottles can save space when empty.

Cooking Gear (Optional)

Stove: Lightweight backpacking stove (canister, liquid fuel, or alcohol).
Cookware: Pot, spoon, spork
Fuel: Enough fuel for your trip.
Lighter/Matches: Waterproof container.

# Leave No Trace Principles

## The 7 Principles

1. <b>Plan Ahead and Prepare:</b> Know the regulations and special concerns for the area you'll visit.
2. <b>Travel and Camp on Durable Surfaces:</b> Use established trails and campsites.
3. <b>Dispose of Waste Properly:</b> Pack it in, pack it out. Bury human waste in a cathole at least 200 feet from water, camp, and trails.
4. <b>Leave What You Find:</b> Leave rocks, plants, and other natural objects as you find them.
5. <b>Minimize Campfire Impacts:</b> Use a lightweight stove for cooking. If you must have a fire, use an existing fire ring or fire pan.
6. <b>Respect Wildlife:</b> Observe wildlife from a distance. Never feed animals.
7. <b>Be Considerate of Other Visitors:</b> Respect the quiet of the wilderness. Let nature's sounds prevail.

## Specific Considerations

<b>Toiletries</b>	Use biodegradable soap and minimize packaging. Pack out all trash.
<b>Water Usage</b>	Wash dishes and bathe at least 200 feet from water sources. Scatter strained dishwater.
<b>Trail Etiquette</b>	Yield to uphill hikers. Step aside to let others pass.