

# The Ten Essentials

Knowing the Ten Essentials is good. Carrying the Ten Essentials is better.

## Updated Ten Essential "Systems"

1. Navigation (map and compass)
2. Sun protection (sunglasses and sunscreen)
3. [Insulation](#) (extra clothing)
4. Illumination (headlamp/flashlight)
5. First-aid supplies
6. Fire (waterproof matches/lighter/candles)
7. Repair kit and tools
8. Nutrition (extra food)
9. Hydration (extra water)
10. [Emergency shelter](#)

## Classic Ten Essentials

1. Map
2. Compass
3. Sunglasses and sunscreen
4. Extra clothing
5. Headlamp/flashlight
6. First-aid supplies
7. Firestarter
8. Matches
9. Knife
10. Extra food

The original Ten Essentials list was assembled in the 1930s by The Mountaineers, a Seattle-based organization for climbers and outdoor adventurers. In 2003, the group's updated "systems" approach made its debut in its seminal text on climbing and outdoor

exploration, [\*Mountaineering: The Freedom of the Hills\*](#) (The Mountaineers Books, 2010), now in its eighth edition.

Why create such a list? The book's editors explain: "The purpose of this list has always been to answer 2 basic questions: First, can you respond positively to an accident or emergency? Second, can you safely spend a night—or more—out?"

Packing these items whenever you step into the backcountry, even on day hikes, is a good habit to acquire. True, on a routine trip you may use only a few of them. Yet you'll probably never fully appreciate the value of the Ten Essentials until you *really* need one of them.

## 1. Navigation

Map and compass are now viewed as 2 components of a navigation system. Add a wrist altimeter, toss in a GPS and, well, you can see how the systems approach to the Ten Essentials can easily total more than 10 individual items.

A **topographic map** (in a protective sheath or case) should accompany you on any trip that involves anything more than a short, impossible-to-miss footpath or frequently visited nature trail. Handout maps, the type offered at visitor centers or entrance stations, usually provide only simplistic line drawings of trails and do not show the topographic details necessary for route finding. If, for example, you stray off the trail or need to locate a water source, you need a topo map.

A **compass**, combined with map-reading knowledge, is a vital tool if you become disoriented in the backcountry. Have high-tech **GPS receivers** made compasses obsolete? No. A compass weighs next to nothing and does not rely on batteries. So even if you rely heavily on a GPS for navigation, a traditional compass is an indispensable [backup](#). Note: A compass equipped with a sighting mirror can also be used to flash sunlight to a helicopter or rescuer during an emergency.

Shop REI's selection of [compasses](#).

An **altimeter** is a worthwhile navigational extra to consider. It uses a barometric sensor to measure air pressure and provide a close estimate of your elevation—information that helps you track your progress and determine your location on a map. We say "estimate" because when weather changes, air pressure changes, and such a change can cause an altimeter's elevation reading to fluctuate even if it remains stationary.

Shop REI's selection of [altimeters](#).

If you travel regularly in the wilderness, consider taking a [class](#) to learn navigation techniques in depth.

## 2. Sun Protection

This involves sunglasses, sunscreen (for skin and lips) and, for optimized protection, lightweight, skin-shielding clothing.

**Sunglasses** are indispensable, and you'll need extra-dark glacier glasses if you're planning prolonged travel on snow or ice. All sunglasses sold at REI block 100% of ultraviolet light (UVA and UVB)—a key function of quality lenses. UVB rays, the rays that can burn your skin, have been linked to the development of cataracts.

Wraparound lenses keep light from entering the corners of your eyes and also help buffer eyes from wind. Factors influencing your choice of sunglasses include lens types, frames, fit and, of course, fashion.

Shop REI's selection of [sunglasses](#).

When choosing **sunscreen**, health experts advise choosing 1) a formula that offers a sun protection factor (SPF) of least 15, though SPF 30 is recommended for extended outdoor activity and 2) one that blocks both UVA and UVB rays.

A sunscreen's SPF number refers only to its ability to absorb sunburn-causing UVB rays; measuring how it performs against age-inducing UVA rays is a topic under discussion at the Food and Drug Administration. Active ingredients considered most effective against UVA light are avobenzone, ecamsule, zinc oxide and titanium dioxide.

The biggest mistake people make with sunscreen? Applying too little, dermatologists say. A thin application diminishes your protection. So glop it on; 1 ounce is needed to cover the arms, legs, neck and face of the average person. Depending on many factors (time of day, sweat and more), you should reapply as often as every 2 hours. And don't overlook SPF-rated lip balm.

Shop REI's selection of [sunscreen](#).

Lightweight, synthetic **sun-protection clothing** comes with an ultraviolet protection factor (UPF). Skin-care experts say using clothing to shield your skin is a good sun-protection strategy.

Your activity level (and resulting perspiration) and the temperature are the factors that will determine if you choose to wear pants or shorts (or long sleeves vs. short sleeves) while outdoors. You'll still need sunscreen for your face, neck and hands.

### 3. Insulation

Conditions can abruptly turn wet, windy or chilly in the backcountry, so it's smart to carry an **additional layer of clothing** in case something unexpected (you get hurt or lost, for example) prolongs your exposure to the elements.

The authors of *Mountaineering* suggest this strategy: "Extra clothing should be selected according to the season. Ask this question: What is needed to survive the worst conditions that could be realistically encountered on this trip?"

Common options include a layer of underwear (tops and bottoms), an insulating hat, extra socks and a synthetic jacket or vest. And yes, humans lose significant heat through their heads. Thus, according to *Mountaineering*, it's smart to pack a hat or balaclava "because they provide more warmth for their weight than any other clothing article."

### 4. Illumination

**Headlamps** are the light source of choice in the backcountry. Reasons:

- Hands-free operation (their No. 1 advantage over flashlights)
- Low weight
- Compact size (so they occupy minimal space in your pack)
- Long battery life (in models using light-emitting diodes, or LEDs).

High-output LEDs (the 1- and 3-watt varieties) provide light output that is comparable to the output of incandescent bulbs, even those that use pressurized gas (xenon, halogen and other intensity-boosting gases). Because LEDs can handle rugged use (no filaments to break), offer vastly superior battery life and are perpetually evolving to higher levels of performance, the vast majority of headlamps these days are LED models.

It's easy to overextend your stay on a picture-perfect mountain. If you're trying to hustle out of the backcountry in dwindling light or trying to set up camp as the last bit of blue drains from the sky, a headlamp is an invaluable aid.

Many headlamps also offer a strobe mode. It's a great option to have for emergency situations. Headlamps offer their longest battery life while in strobe mode.

**Flashlights** and **packable lanterns** also have value. Some flashlights cast very powerful beams and are useful for signaling during emergencies.

Always carry spare batteries—and if your light is equipped with an incandescent bulb, also carry spare bulbs. Every member of a backcountry party should carry his or her own light.

Shop REI's selection of [headlamps and flashlights](#).

## 5. First-aid Supplies

Pre-assembled **first-aid kits** take the guesswork out of building your own kit, though many people personalize these kits to suit individual needs. Any kit should include treatments for blisters, adhesive bandages of various sizes, several gauze pads, adhesive tape, disinfecting ointment, over-the-counter pain medication, pen and paper. Latex gloves also deserve consideration. The length of your trip and the number of people involved will impact the contents of your kit. It's also a good idea to carry some sort of compact guide to dealing with medical emergencies.

Shop REI's selection of [first-aid kits and supplies](#).

## 6. Fire

**Matches** headed into the backcountry should be the waterproof variety, or they should be stored in a waterproof container. Take plenty and ensure they are kept dry. Convenience-store matchbooks are often too flimsy and poorly constructed to be trusted for wilderness use. Save yourself some frustration and tote reliable matches on every trip. Mechanical lighters are handy, but always carry some matches as a backup.

**Firestarter**, as the name implies, is an element that helps you jump-start (and possibly sustain) a fire. Of all the classic Ten Essentials, it is probably the one least commonly carried by wilderness travelers. But should you get stranded overnight in the boonies and you start to shiver, you need the means to build an emergency fire.

The ideal firestarter ignites quickly and sustains heat for more than a few seconds. Candidates include dry tinder tucked away in a plastic bag; candles; priming paste; heat "nuggets" (chipped-wood clusters soaked in resin). Even lint trappings from a household clothes dryer can work.

Shop REI's selection of [firestarters](#).

## 7. Repair Kit and Tools

**Knives** or **multitools** are handy for gear repair, food preparation, first aid, making kindling or other emergency needs. A basic knife should have at least 1 foldout blade (more likely 2), 1 or 2 flathead screwdrivers, a can opener and (though some people will call this a luxury) a pair of foldout scissors. The more complex your needs (if, for example, you are leading an inexperienced group), the more options you may want in your knife or tool.

If you carry a self-inflating mattress, you probably do not carry a **repair kit** for it. Typically, the only people who do are those who have endured a puncture deep in the backcountry. Depending on your outlook on Murphy's Law, it's an item worth considering.

Here's a classic tip for carrying the basics of a poor-man's repair kit: Wrap strips of **duct tape** (the universal fix-it product) around your water bottle or trekking poles so you can repair who-knows-what in the backcountry.

Shop REI's selection of [camp tools](#).

## 8. Nutrition (extra food)

Always pack at least an extra day's worth of **food**. It can be as simple as a freeze-dried meal, but it's even better to include no-cook items with nearly infinite storage times: extra energy bars, nuts, dried fruits or jerky.

The process of digesting food helps keep your body warm, so on a cold night it's smart to munch some food before bunking down—just don't leave animal-attracting leftovers inside your shelter.

Shop REI's selection of [food](#).

## 9. Hydration (extra water)

*Mountaineering* suggests always carrying at least 1 water **bottle** and a collapsible water **reservoir**. You should also carry some means for treating water, whether it is a **filter/purifier** or **chemical treatment**.

When beginning extended travel along a ridgeline or in alpine conditions, consult your map and try to envision possible water sources. Try to resupply at the last obvious water source before beginning a stretch of unpredictable water availability.

Shop REI's selection of [water bottles and treatment options](#).

## 10. Emergency Shelter

**Shelter** is a new component in the updated Ten Essentials, one that seems targeted at day trippers. (Most overnight wilderness travelers already carry a tent or tarp.) The thinking is, if getting lost or injured leaves you stranded in the backcountry, something is better than nothing if you have to deal with wind or rain. Options include an ultralight tarp, a bivy sack, an emergency space blanket (which packs small and weighs just ounces), even a large plastic trash bag.

Shop REI's selection of [emergency gear](#).

## Beyond the Top Ten

Earlier I mentioned an altimeter as worthy candidate to consider as an add-on to the updated Ten Essentials list. Here are a few others:

- **Insect repellent:** Your most effective options are: 1) Lotion or spray repellents containing DEET, and/or 2) Clothing that has been treated with permethrin.
- **Whistle:** For summoning help, it will outlast your vocal chords.
- **Ice axe:** For safety when crossing snow fields.
- **Communication device:** Two-way radios, a cell phone or a satellite telephone can add a measure of safety in many situations.
- **Signaling device:** As noted earlier, some compasses come with sighting mirrors. If yours does not, consider taking a small mirror to signal rescuers in an emergency.
- **Knowledge:** Having items in your pack has no value unless you understand how to use them. As one search-and-rescue leader told us, "People talk about the Ten Essentials, but the most important essential is between your ears."

# Final Thoughts

Even though you may only occasionally use a few of these items, carrying the Ten Essentials on all your backcountry excursions is a smart move. They serve as the antidote to the unexpected, like the seatbelts in your vehicle.

The Ten Essentials can also form the core of your home (or car) emergency-preparedness kit. They are all about safety, advance preparation and peace of mind. They could potentially save your life.

Related Expert Advice checklists:

- [Day hiking checklist](#)
- [Backpacking checklist](#)
- [Ultralight backpacking checklist](#)