

Twelve C's of Survival

A practical gear guide for building a reliable outdoor survival kit



Introduction

The Twelve C's of Survival are not twelve individual items. They are twelve essential categories that should be represented in your outdoor kit. The goal is to build a system that helps you manage the most common survival problems: water, food, fire, exposure, shelter, navigation, tools, light, first aid, signaling, cordage, and personal protection.

This guide is written as a practical planning document. It does not require you to buy the exact items listed. Instead, use the recommendations as examples of the quality, function, and capability you should look for when building your own kit. Your final gear choices should match your climate, trip length, terrain, season, activity, group size, training level, and budget.

Gear alone does not make someone prepared. Some of these items require practice before they are useful under stress. A water filter, compass, fire kit, tourniquet, radio, or shelter system should be tested before you rely on it in the field.

The recommendations in this document are based on field use, training experience, and a preference for equipment that is reliable, practical, and reasonably easy to use. Remember: two is one, and one is none.

The 12 C's at a Glance

#	Category	Main Job
1	Container	Carry, collect, boil, and treat water
2	Calories	Maintain energy during an emergency or delay
3	Combustion	Start and sustain fire for heat, water, cooking, and signaling
4	Clothing	Protect against cold, rain, wind, sun, and exposure
5	Cover	Create emergency shelter and insulation from the ground
6	Compass	Navigate when electronics fail or become unreliable
7	Cutting	Carry tools, cutting, repair, shelter building, and general field work
8	Candle	Provide light or movement, camp tasks, emergencies, and signaling
9	Casualty Care	Treat life-threatening and common injuries until help arrives
10	Communication	Call, message, signal, or mark for location for help
11	Cordage	Build shelter, repair gear, secure items, and improvise solutions
12	Combat	Reduce risk from animals, people, and poor decisions

1 – Container (Water)

Purpose:

Water is one of the highest priorities in any survival situation. You can only carry so much, so your kit should help you carry water, collect water, boil water, and treat water from questionable sources.

What to have:

- A primary water container such as a bladder or durable bottle.
- A metal cup or bottle that can be used to boil water.
- A physical water filter or purifier.
- Chemical water treatment tablets as a backup.
- A way to pre-filter muddy or sediment-heavy water before using your main filter.

Recommended Equipment

Need	What to Carry	Recommended Examples
Water carriage	Hydration bladder and/or wide-mouth water bottle.	Osprey hydration reservoir; Nalgene 32 oz wide-mouth bottle.
Boiling	Titanium or stainless cup that nests with your bottle.	MSR Titan cup or similar nesting metal cup.
Primary treatment	Physical filter or purifier suitable for backcountry use.	Grayl GeoPress Ti, Sawyer Squeeze, or LifeStraw bottle.
Backup treatment	Chemical tablets for clear water or after pre-filtering.	AquaTabs or similar water purification tablets.
Primitive pre-filter	Bottle, cloth, charcoal, sand, and gravel to remove sediment before final treatment.	Improvised field filter used only before boiling, chemical treatment, or a proper filter.

Field Notes

- Do not rely on one treatment method. A strong system is filter plus boil or filter plus chemical treatment.
- Sediment can clog small filters quickly. Let dirty water settle or pre-filter it before using your main filter.
- A primitive filter can make water clearer, but it does not make water safe by itself.

2 – Calories (Food)

Purpose:

Food is usually less urgent than water or shelter, but energy matters. As calories drop, strength, focus, mood, and decision-making drop with them. Nature apparently does not pause because someone skipped lunch.

What to Have:

- High-calorie emergency food that does not require cooking.
- Food that stores well in heat, cold, and movement.
- Optional freeze-dried meals for planned trips where you already have water and a stove.
- Enough food to cover unexpected delays, not just the planned outing.

Recommended Equipment

Need	What to Carry	Recommended Examples
Emergency Ration	Ready-to-eat calorie bars that can be eaten without water or cooking.	S.O.S. Emergency Food Rations or similar Coast Guard-style ration blocks.
Trail Food	High-calorie snacks with fats, carbs, and protein.	Nuts, jerky, trail mix, meal bars, nut butter packets.
Meal Option	Freeze-dried meals when water and cooking gear are available.	Mountain House or similar freeze-dried meals.
Packing Method	Break bulky ration blocks into smaller daily portions and reseal them.	Vacuum-sealed 1-day packs for easier carry and portion control.

Field Notes

- Freeze-dried meals are useful, but they usually require extra water.
- For emergency use, choose food that can be eaten cold and under stress.
- Rotate food before it expires, melts, leaks, or turns into sadness in a wrapper.

3 – Combustion (Fire)

Purpose:

Fire can provide heat, purify water, cook food, dry clothing, deter animals, improve morale, and signal rescuers. Your fire kit should include multiple ignition sources and multiple tinder sources.

What to Have

- At least three ignition sources.
- At least three reliable tinder sources.
- A waterproof bag or pouch to keep the fire kit together.
- A way to process kindling, such as a knife or multitool saw.

Recommended Equipment

Need	What to Carry	Recommended Examples
Ignition	Immediate flame source for normal conditions.	BIC lighter or Zippo lighter.
Ignition backup	Spark-based fire starter that works after fuel is gone.	Ferro rod such as Lightning Strike Fire Starter or similar full-size ferro rod.
Bad weather ignition	Matches designed for wind and moisture.	Stormproof or hurricane matches in a waterproof case.
Tinder	Water-resistant tinder that burns long enough to start kindling.	Zippo Tinder Shreds, SOL Tinder Quik, cotton balls with petroleum jelly.
Storage	Dedicated waterproof pouch or freezer bag.	Gallon freezer bag, dry bag, or small hard case.

Field Notes

- A lighter is simple and effective, but it can break, run out of fuel, or struggle in wind.
- Ferro rods require practice. Buying one and never using it is just decorative optimism.
- Tinder should burn for minutes, not seconds. Flashy gimmicks are less helpful than boring materials that actually work.

4 – Clothing (Insulation and Sun Protection)

Purpose:

Clothing protects your core temperature and skin. Exposure can happen in summer or winter when sweat, rain, wind, and falling temperatures combine.

What to Have:

- Moisture-wicking base layer.
- Insulating mid layer.
- Waterproof and windproof outer shell.
- Sun protection including sunscreen, sunglasses, hat, long sleeves, and pants.
- Seasonal accessories such as gloves, beanie, neck gaiter, or extra socks.

Recommended Equipment

Need	What to Carry	Recommended Examples
Base layer	Wool or synthetic material that moves moisture away from skin.	Smartwool merino base layers or similar synthetic/wool blend.
Mid layer	Fleece, down, or synthetic insulation.	Kuhl fleece, Carhartt fleece-lined shirt jacket, or similar fleece layer.
Outer shell	Windproof and waterproof jacket with ventilation.	Fjallraven Hydratic Trail Jacket, Cabela's Guidewear, or similar rain shell.
Cold/wet upgrade	Heavier waterproof shell or insulated waterproof layer.	Gore-Tex style outerwear or similar high-quality waterproof shell.
Sun protection	UV protection and glare reduction.	Wide-brim hat, sunglasses, sunscreen, long sleeves, lightweight pants.

Field Notes

- Avoid cotton as a base layer. Cotton traps moisture and can speed heat loss.
- Down is warm but loses performance when wet. Fleece and synthetic insulation are often better in wet environments.
- Pack for the worst reasonable weather, not the weather you hope happens.

5 – Cover (Shelter)

Purpose:

Shelter protects you from wind, rain, cold ground, sun, and exposure. Primitive shelters are useful skills, but they should not be your primary emergency plan.

What to Have

- Emergency bivy or emergency blanket system.
- Tarp or tent when distance, weather, or overnight risk increases.
- Cordage and stakes for pitching shelter.
- Sleeping pad or other ground insulation if overnight conditions are possible.
- Extra shelter considerations for children and pets.

Recommended Equipment

Need	What to Carry	Recommended Examples
Emergency shelter	Compact emergency bivy or blanket.	SOL Emergency Bivy, SOL Escape Bivy, or similar reflective emergency shelter.
Tarp shelter	Waterproof tarp with tie-out points.	REI Trailbreak tarp, oilskin tarp, or other durable tarp.
Tent option	Lightweight one-person tent or bivy tent for planned overnights.	Nemo Hornet OSMO or similar quality backpacking tent.
Ground insulation	Inflatable or closed-cell foam sleeping pad.	Any reliable sleeping pad rated for the season.
Setup hardware	Cordage and stakes.	550 cord, bank line, and small metal stakes.

Field Notes

- Cheap blue tarps can work briefly, but they tear easily and are bulky.
- A shelter system should manage both outside rain and inside condensation.
- If you plan to sleep outside, bring a real sleep system. An emergency bivy is not a hotel, despite what the packaging whispers.

6 – Compass (Navigation)

Purpose:

Navigation keeps a simple mistake from becoming a search and rescue incident. Electronics are useful, but batteries fail, devices break, terrain blocks signals, and overconfidence remains undefeated.

What to Have

- A PACE plan: primary, alternate, contingency, and emergency navigation methods.
- Phone navigation app with offline maps.
- Dedicated GPS or satellite communicator when appropriate.
- Paper topographic map of the area.
- Quality baseplate compass and the training to use it.

Recommended Equipment

Need	What to Carry	Recommended Examples
Phone app	Offline mapping and route tracking.	onX Hunt/Offroad/Backcountry, AllTrails, CalTopo mobile maps.
GPS unit	Dedicated navigation device for longer trips or remote areas.	Garmin eTrex 22x, Garmin GPSMAP 66i, Garmin Foretrex series.
Satellite capability	Emergency messaging and SOS where cell service is absent.	Garmin inReach-capable device.
Maps	Printed topographic maps at useful scale.	CalTopo printed maps, USFS maps, state forestry maps.
Compass	Baseplate compass with useful navigation features.	Brunton TruArc 20; Brunton TruArc 3 as a lower-cost option.

Field Notes

- A usable compass should have a baseplate, bearing markings, straight edge, and preferably adjustable declination.
- Avoid tiny button compasses and cheap novelty compasses for real navigation.
- Know your route, backup route, and exit points before leaving the trailhead.

7 – Cutting (Tools)

Purpose:

Cutting tools help with shelter building, fire preparation, food, repairs, and general field tasks. The goal is not to carry a hardware store, which humans would absolutely attempt if backpacks had more pockets.

What to Have

- A reliable fixed blade knife.
- A multitool with pliers, knife, saw, and wire cutters.
- A battery bank for electronics.
- A repair kit matched to your gear and activity.

Recommended Equipment

Need	What to Carry	Recommended Examples
Knife	Full-tang fixed blade, around 6 inches, with a strong spine.	Benchmade, Buck, Kershaw, Spartan Blades, Montana Knife Company, or similar quality fixed blade.
Multitool	Pliers-based tool with knife, saw, and wire cutters.	Leatherman Signal, Leatherman Wave, Gerber Stake Out Spark, or similar multitool.
Power	Battery bank large enough to recharge your phone at least twice.	20,000 mAh portable charger, BioLite Charge 80 PD, Goal Zero Venture series.
Repair kit	Basic kit for clothing, pack, shelter, and gear repair.	Sewing kit, duct tape, electrical tape, super glue, spare buckles, straps, patches.

Field Notes

- A folding pocketknife is useful, but it does not replace a strong fixed blade for harder field work.
- Solar chargers are situational. In the Pacific Northwest and wooded terrain, they may not be reliable.
- Tailor repair kits to the activity: biking, fishing, hunting, backpacking, or vehicle travel.

8 – Candle (Illumination)

Purpose:

Light allows you to move, work, treat injuries, signal, and manage camp after dark. A good lighting plan includes hands-free light and handheld light.

What to Have

- A headlamp with high and low settings.
- A red light mode when possible.
- A lockout mode to prevent accidental activation in your pack.
- A handheld flashlight for signaling, searching, and deterrence.
- Spare batteries or charging cable.

Recommended Equipment

Need	What to Carry	Recommended Examples
Headlamp	Hands-free light with multiple brightness levels.	Black Diamond Spot 400, Black Diamond Distance series, Fenix HM50R.
Flashlight	Handheld light with high and low modes.	Fenix PD36R Pro, Fenix LD30, or similar rechargeable flashlight.
Power support	Spare batteries or charging system.	Extra lithium batteries or USB charging cable connected to battery bank.
Emergency use	Light that can also signal rescuers.	High-output flashlight, strobe-capable light, or headlamp with signal mode.

Field Notes

- Balance lumens, candela, and battery life. Extremely bright lights that die quickly are not always useful.
- The headlamp is for tasks. The handheld flashlight is better for distance, signaling, and checking movement around camp.
- Store lights locked out or with batteries protected so your pack does not quietly turn into a dead-battery museum.

9 – Casualty Care (First Aid)

Purpose:

First aid is one of the most important parts of a survival kit. Your kit should handle minor injuries, but it should also include supplies for serious bleeding, breathing problems, burns, bites, stings, and fractures.

What to Have

- Dedicated first aid pouch or bag.
- Gloves and basic body substance isolation supplies.
- Bleeding control supplies.
- Breathing and chest injury supplies if you are trained or may be assisted by someone trained.
- Burn, bite, sting, blister, and fracture supplies.
- Personal medications and group-specific medical needs.

Recommended Equipment

Need	What to Carry	Recommended Examples
Base kit	Organized first aid pouch with minor wound supplies.	NOLS Med Kit 4.0, MyMedic kits, Adventure Medical Kits, or similar base kit.
Bleeding	Tourniquets, pressure dressings, packing gauze, rolled gauze, hemostatic gauze.	CAT or SOF-T style tourniquets, trauma dressing, QuikClot or similar hemostatic gauze.
Breathing	Chest seals and barrier device.	Vented chest seals, CPR face shield or mask; airway adjuncts only with appropriate training.
Burns/bites/stings	Dressings and symptom relief supplies.	Burn dressing, burn gel, sting wipes, antiseptic wipes, anti-itch cream.
Breaks/sprains	Compression and splinting supplies.	ACE wraps, finger splints, SAM splint when space allows.
Prepacked trauma refill	Add trauma supplies to a normal first aid kit.	Rhino Rescue refill-style kit, Adventure Medical Trauma Pak, or equivalent.

Field Notes

- Most store-bought outdoor first aid kits are built for inconvenience, not major injury. Add trauma supplies.
- If you carry medical gear, get training. A tourniquet is not a magic bracelet.
- Build the kit around the group size, activity, remoteness, and realistic injury patterns.

10 – Communication (Signal)

Purpose:

Communication gives you a way to call for help, update family, coordinate with a group, or signal rescuers. A good system does not depend on cell service alone.

What to Have

- Fully charged cell phone.
- Backup battery bank.
- Satellite communicator for remote travel.
- FRS or GMRS radio for group communication.
- Whistle, signal mirror, and high-visibility panel for emergency signaling.

Recommended Equipment

Need	What to Carry	Recommended Examples
Primary	Cell phone with offline maps and emergency contacts.	Any reliable smartphone kept charged and protected.
Backup power	Battery bank and correct charging cables.	20,000 mAh battery bank or equivalent.
Satellite	SOS and messaging when outside cell coverage.	Garmin inReach, inReach Mini, or similar satellite communicator.
Radio	Short-range group communication.	Midland FRS radios for simple use; GMRS-capable radios where legal and appropriate.
Visual/audible signal	Passive and active signaling tools.	Whistle, signal mirror, high-visibility panel such as VS-17 style panel.

Field Notes

- FRS radios are simple and license-free in the U.S. GMRS radios require following applicable rules and licensing requirements.
- A whistle carries farther than yelling and wastes less energy.
- Tell someone your route and return time before leaving. Wild concept: prevention.

11 – Cordage

Purpose:

Cordage is useful for shelter building, gear repair, splinting, securing loads, hanging food, improvising repairs, and a long list of field problems.

What to Have

- Several pre-cut lengths of 550 paracord.
- A larger bundle of paracord for longer tasks.
- Bank line or smaller cord for tarp setups, repairs, and lighter-duty tasks.
- Knowledge of basic knots, lashings, and tensioning systems.

Recommended Equipment

Need	What to Carry	Recommended Examples
Main cord	Real 550 paracord or stronger.	Ten 20-foot lengths plus one 100-200 foot bundle.
Utility cord	Smaller cord for lighter tasks.	Bank line or 100 lb paracord.
Shelter use	Cord for tarp ridgelines, guy lines, and prusik knots.	550 cord for main lines; bank line for smaller tensioning work.
Repair use	Cord fibers or smaller line for field repairs.	Inner strands from paracord, bank line, or heavy thread from repair kit.

Field Notes

- Use real paracord from a reputable source, especially for shelter structures.
- Pre-cut lengths save time and prevent you from sacrificing your whole bundle for one small task.
- Practice knots before needing them in wind, rain, darkness, and the human condition.

12 – Combat (Protection)

Purpose:

Protection starts with judgment. Avoid sketchy areas, monitor animal activity, respect closures and posted warnings, travel in groups when possible, and do not create unnecessary problems for yourself.

What to Have

- Situational awareness and route planning.
- Bear spray where animals or people may pose a threat.
- Noise-making deterrents in bear country.
- Walking stick or trekking poles.
- A lawful defensive tool only if trained, legal, and appropriate.

Recommended Equipment

Need	What to Carry	Recommended Examples
Animal deterrent	Bear spray carried where it can be reached quickly.	EPA-registered bear spray from a reputable manufacturer.
Noise	Bear bells or deliberate noise in limited visibility.	Bear bells, voice calls, or group noise in brushy areas.
Physical barrier	Walking stick or trekking poles.	Sturdy hiking staff or trekking poles.
Legal defensive tool	Only if lawful, trained, and used as a last resort.	Sidearm where legally permitted and supported by proper training.

Field Notes

- Bear spray should be carried on your body, not buried in your pack.
- Research local laws and land-use rules before carrying any defensive tool.
- The best protection is avoiding the problem before it becomes a problem. Annoyingly simple, therefore often ignored.

Summary Packing List

This list is the minimum baseline for general outdoor emergency preparedness. Add or remove items based on the trip, season, group size, terrain, activity, and known risks.

Container:

- Water bladder or bottle
- Titanium or steel cup
- Filter or purifier
- Chemical treatment tablets
- Pre-filter materials for muddy water

Calories:

- High-calorie ready-to-eat emergency rations
- Trail snacks
- Optional freeze-dried meals

Combustion:

- Three ignition sources: lighter, ferro rod, storm matches
- Three tinder sources: waxed shavings, tinder tabs, cotton and petroleum jelly
- Waterproof storage pouch

Clothing:

- Moisture-wicking base layer
- Insulating mid layer
- Waterproof and windproof shell
- Gloves, hat, neck gaiter, extra socks
- Sunscreen, sunglasses, sun hat, long sleeves

Cover:

- Emergency bivy or blanket
- Tarp or tent
- Cordage and stakes
- Sleeping pad when overnight risk exists

Compass:

- Phone with offline navigation app
- Paper topographic map
- Quality baseplate compass

- Dedicated GPS or satellite communicator

Cutting:

- Full-tang fixed blade knife
- Multitool with saw
- Battery bank and cables
- Repair kit

Candle:

- Headlamp with spare batteries or charging cable
- Handheld flashlight with spare batteries or charging cable

Casualty Care:

- Gloves
- Bleeding control supplies
- Breathing/chest injury supplies when trained
- Burn supplies
- Bite/sting supplies
- Splinting and wrap supplies
- Personal medications

Communication:

- Cell phone
- Battery bank
- FRS/GMRS radio
- Satellite communicator
- Whistle
- Signal mirror
- High-visibility panel

Cordage:

- Pre-cut 550 paracord lengths
- 100-200 ft paracord bundle
- Bank line or small utility cord

Combat:

- Bear spray
- Bear bells or other noise deterrent

- Walking stick or trekking poles
- Lawful defensive tool only with training

Using This Guide

Use this guide as a checklist and planning tool. The specific brands named are examples of equipment types that have proven useful or meet the desired function. Comparable products from other reputable brands can work just as well if they meet the same purpose and quality standard.

Before relying on any item, test it. Set up the shelter. Start a fire with the fire kit. Filter water. Use the compass. Turn on the radio. Apply a practice tourniquet. Charge your electronics. The field is a terrible place to discover that your gear is still theoretical.