

Canyoneering Grading & Gear Introduction (Sample Outline)

Technical Grading Classification

- 1 - Canyon Hiking:** Non-technical. No rope required. See route description for difficulties.
- 2 - Basic Canyoneering:** Scrambling, easy vertical or near-vertical climbing or downclimbing. Rope recommended for handlines, belays, lowering packs and possible emergency use. Exit or retreat possible upcanyon without fixed ropes.
- 3 - Intermediate Canyoneering:** Real technical climbing/downclimbing, difficult and dangerous. Most people will rappel instead. Rope required for belays and single pitch rappels. Retreat upcanyon would require fixing ropes.
- 4 - Advanced Canyoneering:** Aid climbing, multi-pitch rappels and/or other complex rope work (such as re-belays, tyrolleans and guided rappels) will be required. Might also require extensive downclimbing, or difficult to establish natural anchor problems.

Water: Volume/Current

- A** - Normally dry or with very little water. Wading to waist deep at most.
- B** - Water with no current or light current. Still pools. Falls normally dry or running at a trickle. Swimming expected.
- C** - Water with strong current. Waterfalls. Wet canyon rope techniques required.

Risk / Seriousness

(no rating) - Normal risk factors are present on this adventure.

R - Risky: One or more extraordinary risk factors exist that will complicate the descent. Solid technical skills and sound judgement required. Not appropriate for beginners, even in competent company.

X - Extreme: Multiple risk factors exist that will complicate the descent. Errors in technique or judgement will likely result in serious injury or death. Descent should be attempted by expert canyoneers only.

Time (Grade)

- I** - Short. A couple of hours.
- II** - Requires about a half day.
- III** - Normally requires most of a day.
- IV** - Expected to take a long day. Get up early, bring a headlamp. Possible bivvy.
- V** - More than one day. Normally done in two days.
- VI** - Two full days or more.

Canyoneering Equipment

Footwear

All I want is a shoe that I can hike in all day, climb in reasonably well, swim, go in and out of water without discomfort, that offers enough support for carrying a large pack, that holds up well and is inexpensive. Also, I want to toss them in the back of the car for a few weeks after a trip, and not have them rot or change size. Is that too much to ask? I guess not, because Five-Ten has recently developed a shoe that works really darn well. *The Five-Ten Canyoneer* is great. The sticky rubber gives a lot of confidence in dicey situations, and the shoe is self draining and totally synthetic. Since I wear a somewhat heavy pack all the time, I added a Spenco footbed to get a little more support. No laces rules - these things stay snug even when wet. It helps to cut the ends of the buckle straps off, because they tend to catch ropes when you're coiling. And they are inexpensive (\$ 96) though hard to find. Not interested in buying special shoes? Then carry two pairs of sneakers - a decent pair for the dry hiking, and a pair from deep in the closet for the wet stuff. Bring a dry pair of socks for when you switch back. *Sandals* do not work - generally the wet stuff involves swimming and wading in very murky water, where more protection for the feet than sandals provide is required.



Clothing

Depending on what you are doing, wearing the correct clothing will make you dapper and reasonably comfortable, and will definitely improve the fun factor. I think of our little outfits in levels:

Level 1: Normal Hiking requires little more than shorts and a t-shirt. If you are doing a few potholes or some wading, you will want to wear quick-drying river shorts, and may want to add knee pads, like the neoprene *ACE* brand pull on knee braces available in grocery stores or Pay-less. Even in hot weather, bring a fleece jacket to warm up with after the potholes.



Level 2: A Few Potholes in hot weather requires somewhat more protection. Let's start with Neoprene Shorts, then add a paddling drytop or semi-wet top. I understand that a Goretex Drytop is the trick for this kind of thing. At this point, those *ACE* kneepads are really useful. A summer-style wetsuit works too, one with short sleeves and short legs, though it is somewhat less flexible than the shorts / top combination. Your waterskiing pals might have one you can borrow. This is also called a "Summer Weight" wet suit.

Level 3: Full Meal Deal: even in hot weather, continuous potholes require quite a bit more warmth. For these, a full **DRY-SUIT** is the preferred method. Some amount of fleece clothing is worn beneath the suit, with neoprene booties, a warm hat, and gloves. This kind of treatment is reserved for the heavy hitters like Imlay, Heaps, Kolob, and many other canyons in other-than-stinking-hot conditions. Dry Suits can often be rented at your local dive shop (be sure to tell them you are canyoneering in them).

Packs

Carrying your stuff is your pack's job. Comfortably, with the things you need most to the outside. Not too hard. You'll probably start out by just carrying whatever pack you own, but if you want to buy a specific pack, here's some thoughts:

- Simple and Rugged: your pack will get beat up real fast, so no use in carrying something fancy. Look for something rugged, simple and fairly inexpensive. Look for 1000D Cordura.

- Fairly Big: it's helpful to get all the stuff inside the pack, including the rope. Catches less on trees and stuff. I like a pack of 2500 - 3000 cubic inches. See the "trick" below about Thermarests.
- A Hydration System is a good idea.

Here's a good trick when doing potholes: bring a ThermaRest mattress. The new ones are pretty small and light. When you prep for the potholes, put a little air in your Thermarest to fill out the rest of your pack. This will make your pack nice and buoyant.

Drybags

Your Trusty Drybag is what keeps your stuff dry. Makes sense, don't it. The days of double trash bags have been over for a while. Dry Bags are CHEAP. Get one that is about the same size as your pack, and put it inside your pack. Load ALL the stuff you have to keep dry in it, and seal it up well. Drybags are not infallible - they do occasionally leak, even when carefully closed. It helps to tightly enclose them in the pack, to protect them from the explosive force of dropping into water.

Bring a nice fleece sweater and put it at the top of the drybag. This will provide a soft space on the top to help the drybag seal, and catch moisture that leaks in. Keep all your technical gear outside the drybag (mesh bags help here). I like the transparent ones because you can find stuff easier, and you can see when the bag is leaking. Cheaper drybags are stiffer and heavier. More expensive ones are softer, and can fill the pack better. Your pack will fill with water while swimming, and the more of its volume that is filled, the less water you will have to drain out.



Harnesses

Harnesses allow you to use ropes and stuff. This is good. If you are a climber, you probably already own a harness that will work just fine, although it helps if your harness does not absorb water. For semi-technical canyons, where you will not be in the harness a lot, a BD Alpine Bod Harness is perfect - light, non-bulky, cheap and non-absorbant. For more technical trips, a more padded, deluxe harness with a belay loop will be more comfortable and easier to use. There are many good harnesses available, one is the BD Dyno AL. When buying a harness, the most important attribute is that it fit YOU. Different models and brands of harnesses fit differently - try a few on and see what works with your particular physique. Be sure to get a loose enough fit to allow wearing over your wetsuit shorts, and be comfortable for hiking.



Ropes

Ropes are your lifeline, getting you out of trouble at least as often as in. You can use any old retired climbing rope, though fuzzmasters absorb a ton of water. Dry ropes are a little better, though by the time you have retired it from climbing, not much of the dry treatment usually remains. Any rope you use for Canyoneering should not be used for lead climbing - the sand worked into the rope during canyoneering makes it suspect for subsequent dynamic use. Canyons often have many short rappels, and some people like to carry a short rope (50'?), to avoid coiling and uncoiling a full length rope repeatedly. Just be sure you only need 50'.

Standard length for ropes is 50 meters (165'), though 60 meter (190') ropes are becoming popular. If buying a rope for canyoneering, get a 60 meter 8mm or 9mm static rope. Static ropes stretch less and hold up to the abuse of canyoneering better. If you have to prussik up the rope, it is easier and safer to jug a static line than a dynamic climbing rope.

Small diameter ropes (8mm or 9mm) work well for canyoneering because, for the same weight, you can rap farther. Dynamic 9mm ropes do not hold up well to the wear and tear, and should be avoided. When rappelling on small diameter ropes, put two carabiners under your ATC to increase the friction. Gloves help too. Static ropes are often difficult to find, but are worth the effort.



Rappelling Gear

Technical Canyoneering begins with rappelling. Having your rap rig dialed will make your canyon experience safer, faster and more fun. Rapping is done by putting your rope through a simple mechanical device that creates friction as you slide down the rope. The device of choice these days is the Air Traffic Controller, or similar devices made by other folks. To increase the friction (important when using small diameter ropes or rappelling with a pack on), use 2 carabiners under the ATC (1 locking, 1 non-locking). You'll also need a locking biner to rappel with. Forget twist lock and bayonet biners - due to the sand and murky water, fancy locking biners will jam up quickly, while simple, inexpensive screwgates work just fine. Use a non-locking biner for your second biner, for ease of unclipping when treading water in a pool.

I used to poo-poo them, but now I am totally sold. Gloves Rule! They give you much more control when rappelling, and protect your hands when coiling the wet, gooey and sandy ropes. These Franklin Catcher's Mitts are a synthetic leather that holds up amazingly well to getting wet. (They are sized very small, order 2 sizes larger than your usual size. If you have Large or XL hands, you're out of luck here). A decent pair of leather gloves can work well, but tend to get ruined by the wet and dry action of canyoneering. Now that you're rappelling into pools, you really should have a way to get out, too. While prussiks work OK, the new Petzl Tiblocs are tiny and lightweight, and a lot faster to set up when treading water in a pool. Take two, they're small. It also helps to have some Etriers (aka Aiders) a Daisy Chain, and a couple of extra biners, plus some tied over-the-shoulder slings. It requires practice to use prussicks or tiblocs efficiently. Practice on your backyard tree, rather than deep in a canyon, when in trouble.

My suggested "minimum gear" for the leader of a Class 5 EZ canyon adventure is:

- 1 Rappel Device (ATC)
- 1 screwgate biner and 1 plain biner;
- 2 Petzl Tiblocs;
- 1 Daisy Chain with 1 screwgate biner;
- 2 BD Alpine Aiders
- 4 extra biners and 4 (at least) tied

*Each person in the party should have as a minimum a rap device w/ 2 biners, and a daisy chain or two slings, with an extra locking biner.

Reference: <http://www.canyoneeringusa.com/utah/index.htm>