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((( Any and all comments welcome! Email [ken.demarest@gmail.com](mailto:ken.demarest@gmail.com) )))

## Ken's Austin Process

*By Ken Demarest*

This is a draft of how I teach in Austin. I might be unusual in that I try to keep people's expenses as low as possible, so I often build them custom foot loops, tether, and cow's tails. I also keep two sets of loaner gear. I will also give people a [Minimal Gear Buyers Guide](#) if they want it.

Philosophy: Introduce things slowly to keep cognitive load roughly linear, practicing for mastery and muscle memory.

Setup: a vertical treadmill and one rebelay.

1. Intros: understand their prior experience. Ask about disabilities or medical I should be aware of. (I had a near-blind guy once who didn't disclose) I have them sign my waiver.
2. Gear: put on gear. I try not to touch it. They must "own" handling their gear.
  - a. Have them repeat the names of everything so we can communicate well.
  - b. I happen to teach cow/tether/rack/Croll from left to right.
  - c. I emphasize that I teach one way, and many ways are valid. Get good at one way first, then you can experiment if you wish.
3. Safety
  - a. Do a safety check
  - b. Boots, gloves, helmet, all required gear
  - c. Mention that getting safety checked shows you're a pro. Only newbs don't.
  - d. Mention "on rope" and "rope free" and what they *really* mean (rockfall)
  - e. Talk about our goal: They fully "own" what happens on rope, reliant on nobody but themselves.
4. Build

- a. If appropriate, build custom foot loops, hand ascender tether, and sometimes cow's tails
5. Tune
  - a. Hang on hand ascender and check reach
  - b. Check foot loop distance
  - c. If they're a big person, treadmill a bit for balance and to check strength
6. Basics
  - a. Show ascender gate "safe" open and "full" open. Practice.
  - b. Show sliding ascender up, and that a weighted ascender can not be removed.
  - c. Show how to slide an ascender down, without rope touching the teeth. Practice.
  - d. Mention "gear left, rope right"
  - e. Teach the rack threading and lockoff. Practice.
7. Do a changeover standing on the ground, with step-by-step instruction.
  - a. Sequence is: attach chest, attach hand, sit, feet in loop, fake climb, thread rack, remove chest, slide hand ascender down, stand to remove chest, test rack, lock-off, remove hand, descend
  - b. Emphasize threading the rack properly. Show tether length vs rope length.
  - c. Emphasize testing rack! Show rack of death.
  - d. Emphasize "hand on chest gate pulling down, *before* you stand"
  - e. This is high cognitive load, so I don't mention nuances. Just get it done.
8. Do a hanging changeover, about three feet up. Review the major steps prior, but during it give a bit less instruction. Mention:
  - a. Grip rope with toes to ascend at first
  - b. Grip the rack to add friction while removing lock-off.
9. Do a 3' up changeover, saying very little. Correct anything unsafe. Their foot loop length and tether length should be correct. Keep repeating at this height if they are struggling.
10. Climb to 6+' and changeover. Only correcting unsafe things.
  - a. If they haven't short-tethered themselves yet, make them do it on purpose.
  - b. Mention to always close their gates, and any other nuances.
11. Do ten consecutive changeovers, to build muscle memory. The last five must be flawless.

At this point I tell them they are ready for a *simple* beginner vertical trip, but ONLY with an experienced trip leader. Mention the limits of this training! Basic competence includes:

- Be able to check the safety of your anchor!
- Know downclimbing, crossing a redirect, crossing rebelay, soft lock vs hard lock
- Knowing exactly the gear you trained on, and training on all gear you're using

Next Steps:

- Build & assess anchors: tensionless, w3p2, waterknot, bowline, and figure 8; tree size and type; risky rock/formation types
- Learn downclimbing, crossing a redirect, crossing rebelay, soft lock vs hard lock

# SoCal Grotto SRT Instruction Process

*By: David Angel*

[http://ropewiki.com/SoCal\\_Grotto\\_Gear\\_Recommendations](http://ropewiki.com/SoCal_Grotto_Gear_Recommendations)

[http://ropewiki.com/SoCal\\_Grotto\\_SRT\\_Gear\\_and\\_Technique\\_Resources](http://ropewiki.com/SoCal_Grotto_SRT_Gear_and_Technique_Resources)

We do a monthly SRT practice with SoCal Grotto.

We have four SRT setups that are loaners. 2 small harnesses and 2 large harnesses.

All srt setups have microracks because we believe that racks teach better skills up front.

Loaner gear is available as first requested, first served, and “new” trumps “returning” members.

STOP and canyon devices are available as loaners after you understand how to operate a rack.

Our classes of 4-5 newbs are generally full. So I or another instructor will be teaching four people at a time, with perhaps one assistant at times for gear donning, downclimbing, and bottom belays.

We don't spend much time on tuning gear because newbs don't own any. Our footloops are adjustable and the cowtails seem to work “ok-ish”. We tell newbs to try our gear before buying any. I offer a separate session when they buy gear and we give them a cowstail rope, and configure lengths in my garage.

We have a separate monthly grotto knot practice, so we don't do too much construction of knots. But we do discuss strength and failure modes.

Vertical instruction location info:

We instruct at a local “crag” which is good for us, but terrible for climbers. Lots of trees and rocks.

We setup a Treadmill, multiple static lines in tall trees, a rebelay course, and a bunny slop with 2-4 static lines on a slope that you can't quite walk up. If we feel like it, we can also rig a 60ft rap, a hard edge, and a J-hang. It generally takes about an hour to setup in the morning before members arrive.

Returning members decide what they want to do and whether or not we have a supervisor available for them. We try to have lots of “instructor” level cavers available, but sometimes I see people get stuck alone and someone needs to go over and talk them through a problem.

Before handing out their gear, we have about an hour lecture at the crag that consists of:

Pass out frog printouts, all knots, class materials, various “knowledge checklists”

What's happening today

- Softgoods Safety
- Hardgoods safety
- Harness fit
- Ascenders
- Bottom Belay
- Rappelling
- Lock offs
- Talk about Liability

## Safety

- Practice, obsess, think, read, and learn from others/books/youtube.

- People make mistakes (Cold,

- V. Fed, tired, poor training, etc)

- Everyone checks everyone, Ask to be gv, Silently check everyone gearing up, Start at the bottom. Check everything.

- Pilot in command - you are responsible

- Ask about something if you don't understand or think its unsafe.

- Make things safer: Before, during, after.

- Canyoneering/Caving trade-offs. Cold, water, rope.

- Get medical training!

## Webbing (17kn)

- Materials, Uses, Loads

- MilSpec 1-2 stitches 3500-3800 psi

- ClimbSpec 3 stitches 4,000 psi

- Knots, Bends

## Ropes

- dynamic vs. static

- materials, diameter, construction, strength, tracer/history

## Knots

- Knots, Bends, Hitches

- Load direction, Failure, Dressing, Untying

## Anchors

- Safety factor of the system. Weakest point.

- unnatural vs. natural

- assessment (start at beginning)

- Natural

- Unnatural

## Systems

- Frog System

- Simple, effective, well rounded, international

- Other Systems

Mitchell  
Texas  
Ropewalker  
Canyoneering

#### Gear

Rating (No hardware store stuff)  
Marking  
Helmets (job appropriate), Lights (cave appropriate)  
Where to buy (no rei, internet, on rope 1, inner mountain outfitters)  
Failure modes (know them for each piece of gear. Your responsibility)  
Where and where not to store gear.  
Replacing gear, sometimes after one use.

#### Harness

Types of harnesses  
Checking for safety  
Appropriateness

#### Carabiners

shape, locking mechanism  
Loading

#### Rock!

#### Ascenders

Left vs Right handed  
Teeth vs. Cam  
Cam movement vs. Opening movement  
Downclimbing  
Failure modes  
Shock, mud, size,  
Keep closed while not in use

#### Rappel devices

Munter, 8 Variants, Bobbins, Racks  
Demonstrate rappelling

- 1. So Lecture over with, I show them how the ascenders work, then have them gear up.**
- 2. They climb up and downclimb using only ascenders on a free-hanging rope.**
- 3. Once they're good at downclimbing with ascenders we go over to the bunny slope.**
- 4. At the bottom of the bunny slope I demonstrate and discuss the bottom belay they'll be doing.**
- 5. Then we all climb to the top of the bunny slope on rope (This is their first non-free-hang ascent)**
- 6. Then I demonstrate the rack, and lockoffs, and have an assistant apply my bottom belay.**

- 7. They rappel on one rope, then bottom belay for the next person. Then ascend back up a second line.**
- 8. We keep that circular conga line going for as long as they have the energy and aren't getting sloppy, introducing lockoffs or another device.**

If they're learning fast, we introduce changeovers on the slope. Then finally move back to the treadmill for ascending distances or free hanging changeovers

Toward the end of the day, or when it's convenient, I try to show dangerous stuff:

- Rollout / Gate popping a carabiner
- Rack of death
- Webbing water knot snag
- Belaying with no knot
- Cutting loaded ropes (we try to demo at a meeting once a year)

Finally, we talk about what they learned today and I give them the "with great power comes great responsibility" speech...

- You're dangerous (green belts have all the power and none of the control)
- Practice changeovers on your own, in a tree, 3 feet up. Practice until you can perform blindfolded, quickly, in a waterfall, at gunpoint.
- Study the manual for each of your devices.
- Obsess about and practice safety
- Study how cavers die. (ACA)
- NCRC

Typically SoCal grotto will require three practices, or equivalent experience, before taking anyone to caves that have significant vertical drops. We'd be looking for efficient changeovers and, strong safety checks, testing rappels, clipping in for safety, comfort level with gear.

# Sonia's SFBC Vertical Teaching Process

1. Go over gear names and quiz
2. Adjust harness properly and put in
3. Put things on D ring, I have no preference other than croll on the right
4. Adjust chest harness
5. Review gear safety checks
6. Practice opening and closing ascenders
7. Explain teeth
8. Practice putting on and take off rope
9. Practice taking a weighted croll off rope while on ground
10. Explain two rules of safe vertical
  - a. **Always have two points of attachment**
  - b. **Always test your descender**
11. Practice the sit stand frogging motion climbing on treadmill
12. Practice downclimbing until comfortable (this is an essential skill to do a changeover and important skill if you drop your descender)
13. Practice attaching descender to rope and locking off, descend from standing to sitting on ground
14. Verbally review changeover step by step, do a demo if not lazy
15. Walk them through changeover step by step once, then have them practice