REQUIRED ITEMS

   a. Buy it early and study it – you will be glad you did.

   a. You **must** have your own copy of this manual and it must be the current edition as the manual is updated every year. Available in early May.

3. Hand lens/magnifier. At least 10X magnification. There are nice little ones that have double and triplet magnifiers

4. Orienteering-style compass - **liquid-filled** with rotating 0º to 360 º azimuth dial on a base with direction of travel arrow. Silva, Suunto, and Brunton all make very good orienteering-style compasses. Students anticipating more fieldwork in the future should invest in a compass with attached mirror and adjustable declination ($40-$70). **Note**: If the CSU Bookstore does **not** have this item you can purchase it from an outdoor store such as JAX, REI, or online.

5. Masking tape, metric ruler, pencils and pens (including a variety of Sharpie/permanent colors), scissors, knife, paper clips, etc. (a stapler can be handy).

6. Scientific hand calculator. Extra batteries for your calculator (and an extra calculator if you have one).

7. Regular clipboard or covered “Tatum” style holder for note taking in the field in rain/wind.

8. Waterproof notebook(s) or notepaper as well as sheets of 8.5” X 11” **unlined**, white printer paper for reports. Graph paper may also be helpful.

9. Pingree Park Trails and Peak Map

10. USGS Key to Map Symbols.

11. iClicker

12. Wrist watch or some other time-keeping device so you will not be late to class and know how much time you have left on exams. (note: bring your chargers)

13. Most days are spent in the field. Bring daypack, flashlight/headlamp, water bottle, field clothes, at least one pair of hiking shoes or boots, (not just tennis shoes or sandals), sunscreen, insect repellant, sunglasses, baseball or wide-brimmed hat, synthetic or wool jacket for layering, light-weight gloves, and either a good poncho or rain jacket and rain/snow pants. **It can snow any day and rains frequently.**

OPTIONAL/RECOMMENDED ITEMS:

14. **Field Guides** – If you are considering a career in natural resources, field guides are indispensable and highly recommended. We will have a few copies of field guides available at the Mountain Campus, but you should consider having your own (or sharing with a friend). Electronic field guides are also available for many disciplines.
   a. **The Sibley Guide to Birds of Western North America** (by David Sibley) **OR** National Geographic Field Guide to Birds of North America (by Dunn and Alderfer). **OR** Peterson Field Guide to Birds of Western North America (by R.T. Peterson) **OR** Birds of North America (by Robbins, et al.) **OR** Audubon’s field guides **OR** consider an electronic guide/App of one of the above or Ibird Pro.

   b. **Mammals of the Central Rockies** by J. Wassink. **OR** Rocky Mountain Mammals by D. Armstrong.

   c. **Plant guides. Tree guides. Flower guides.** Flora of Colorado by Jennifer Ackerfield is a new book this year and available in the bookstore.
15. Three-ring notebook at least 1” thick for NR 220 Manual (Number 2 above), which is unbound.

16. Computer (laptops work well) and printer for reports. Computers and printers are available at the Mountain Campus, but are in fairly high demand.

17. Two 100-count sets of 3”x5” flashcards.

18. Several gallon-size “Ziplock” plastic bags for collecting fresh plant specimens.

19. 50 sheets of heavyweight biology/botany paper for mounting specimens (can share a pack with 2 or 3 other students).

20. Binoculars for bird identification (we have some available at the Mountain Campus). Optional if you want to buy a pair, but most wildlife biologists will want a pair of their own. You will probably want to spend $100-$200 on a pair that will last you a long time.

21. Hip boots or chest waders for aquatic surveys (and evening fishing? We have some at the Mountain Campus; Don’t forget to bring fishing license!). You do not need to buy a pair if you do not already own a pair.

22. Backpacking/camping gear for weekend excursions.