**Breaking Cores Down**:

For cores: 2, 5, 10, 20, 27, 35, 43, 46, 52, 3, 6, 21, 28, 44, 47 (36, 53):

1. Removed soil from core sleeve and weigh soil, record. (pre-weigh Al foil, add soil and weigh again)
2. Weigh empty core sleeve, record.
3. Let air-dry, 24-72 hours (or until weight is stable)
4. Record dry weight
5. Sieve through 2 mm sieve (remove roots, rocks, everything > 2 mm), homogenize.
6. RECORD weight of sieved soil OR material > 2mm.

For cores: 1, 4, 19, 26 (9, 34, 42 )

1. Subsection core (starting from top-end): 0-10 cm, 10-20cm and below 20 cm.
2. Carefully remove one subsection at a time and record weight for each subsection (pre-weigh Al foil, add soil and weigh again).
3. Weigh empty core sleeve, record.
4. Let air-dry, 24-72 hours (or until weight is stable)
5. Record dry weight
6. Sieve through 2 mm sieve (remove roots, rocks, everything > 2 mm), homogenize.
7. RECORD weight of sieved soil OR material > 2mm.

**For CN**

1. Re-sieve/mix soil to homogenize
2. Subsample ~ 1 g soil for Retsch grinding, 3 g for hand-grinding
3. Grind using stainless steel balls and vials in retsch (LABEL VIALS) for ~ 5 minutes, check and regrind if necessary.
4. Label and store in small glass vials for further analysis.

**Measuring soil pH**

1. Weigh 5 g dried, sieved soil into a specimen cup IN DUPLICATE.
2. Add 10 ml of deionized water (use repipettor) to one cup and 10 ml of buffer to the other.
3. Gently swirl cups to form soil slurry.
4. Mix by placing on shaker for 15-20 minutes (low setting).
5. Let sit for 10 minutes before measuring pH.
6. Standardize pH meter using pH 7 and 4 standard buffers.
7. Gently swirl the soil slurry while taking measurement. Take measurements form all water samples first before starting the buffered samples.
8. Record pH to the nearest 0.01.
9. Recheck standard buffer concentrations every 10 to 12 samples. Recalibrate meter as needed.

**For Particle Size Analysis**

1. Prepare 1% Pyrophosphate solution: 15g of sodium pyroP (on Alex’s shelf) in 1500 mL DI water.
2. Add 25 mL of pyroP solution into 50 mL centrifuge tubes (40 tubes).
3. Weigh 10 g of dried, sieved soil and place into the 50 ml centrifuge tubes (filled with pyroP), record weight of soil that went into tube.
4. Place rack on shaker and shake for 24 hours.

**Water Retention Curves**

1. TO BE DETERMINED: Pack soil….how much? How long?