Designing Meiofauna Lab

Meiofauna: organisms between 62 microns and 500 microns

Pass out pictures of organisms

- Diversity of meiofaunal organisms
  - Many unique phyla (Kinoryncha, Tartigrada, Gastrotricha, etc.)
  - Members of common phyla whose size has been reduced (Crustacea)
- What kind of adaptations do these organisms have to interstitial environment?
  - Adaptations to fit small area: small size, elongated or vermiform bodies, flat bodies
  - Adaptations to dynamic environment: reinforcement of body walls, free moving
  - Adaptations to avoid resuspension: adhesive organs, hooks or claws, organs to detect gravity

What factors do you think might affect the abundance and diversity of meiofauna? Why?

- Water
- Wave energy
- Oxygen (RPD=redox potential discontinuity, approx 20cm depth)
  - How do grain size and wave energy affect depth of RPD?
    - High wave energy and big grains=deeper RPD
- Sand grain size
- Mineral nature of the sand
- Temperature
- Salinity
- Pollution

Decide on a factor to test.

- From where should the sand be collected?
  - How do we best control for factor of interest?
- How many samples should be taken?

Decide on data collection method.

- How many sub-samples from each sample?
- What should we quantify?
  - Abundance and/or diversity?

- What groups should we count?
  - Copepods
  - Nematodes
  - Forams
  - Polychaete
  - Gastrotrich
  - Flatworms
  - Other

Make data table.