## October 30, 2019 MSE 2101 topics

- Materials and energy quick recap
- The role of water
- DNA (and RNA) the structure
  - backbone (C)
  - bases: adenine (a), guanine (g), cytosine (c) and thymine (t)
- Genes, chromosomes, the noncoding DNA, genomes
- The genetic code
- DNA replication and heredity
- Mutations: the fat cat ate the rat.
- Extremophiles
  - thermo- and hyperthermophiles
  - psychrophiles
  - o endoliths
  - o radiodurans
  - o endospores
  - eucariotic example: tardigrades