January 29, 2019 MSE 2103 topics

- Dealing with the 2nd quiz trauma
- The advent of physical sciences
 - Descartes' Vortex theory (1664)
 - Newton's Principia (1687)
 - Kant's Nebular theory (1755)
 - Laplace's Celestial mechanics (1799)
- All these theories require much more time than 6000 years!
- Enter paleontology: Cuvier's fossils of extinct animals
 - can *catastrophism* explain it?
- Hutton's paradigm revisited
- The fundamental forces in nature
- Atoms, isotopes, bonds, and all that...
- Alpha, beta and gamma decays
- The concept of half-life
- Radioactive decay as geological clock
- The math behind radioactive decay this is a science class after all :)