

## BYA Class 8

- Constellations - Spring: Bootes (and Arcturus), Virgo (and Spica), Leo (and Regulus)
- Comets
  - Physics
    - Dirty Snowballs, 1 to 10's miles diameter, ices and dust
    - orbit (elliptical), close to sun - tail which points away from sun,
    - Short and long period
      - Halley = short (76 yrs)
      - Hyakutake and Hale-Bopp = long (millions of years)
  - Observing
    - naked eye, binoculars, dark location
- Meteors (Shooting Stars)
  - sporadic meteors ( $\approx 15$  min)
  - shower meteors
  - meteor storms
  - fireballs
- Meteor Showers
  - (from dead comets)
  - Perseid's (August 12)
  - Geminid's (Dec 14)
  - Naming; radiant point
- Meteorites
  - (from busted asteroids)
    - Falls, Finds
    - 4.6 billion years old
  - Irons
    - Sikhote Alin (Siberia 1947)
    - Canyon Diablo (Meteor Crater Arizona;  $\approx 50,000$  yrs)
    - Gibeon (old)
  - Stones
    - NWA
  - Stony Irons
    - Pallisites
  - Carbaceous chondrites
    - Allende (Mexico 1969)
- Earth Impacts
  - Meteor Crater Arizona;  $\frac{3}{4}$  mile x 500',  $\approx 50,000$  yrs old
  - Tunguska, Siberia (1908)
  - Kentland, Indiana (old, millions of years)
- Mass Extinctions - KT
  - Chicxulub ( $\approx 67$  million yrs old!, dinosaur extinction)