

## BYA Class 5

- Constellations III
  - Big and Little Dipper
    - (Ursa Major and Ursa Minor)
    - North Star = Polaris
  - Cassiopeia
    - Queen
    - Mythology (circumpolar, Cephus)
- Seasons
  - Tilt of Earth's Axis (seasons)
  - Precession (changing North Star; change in seasonal constellations)
    - 26 thousand years
  - Time, Calendar (locked to the seasons),
    - Day = 365d 5h 48m 46s
    - Pope Gregory in 1582
- Planetarium Programs
  - Free, Shareware, Paid
  - Any place on Earth (or even off earth); any time for hundreds of years; some to thousands of years.
- Sky Motions
  - Daily Motions
    - Spin of Earth: Sun and Moon - East to West across sky each day
      - details of moon motion later ~ 1hr later/nite
    - Hourly changes of stars; Rise in East, set in West
    - Polaris; Circumpolar Stars
    - Where are Dippers
  - Motions over a Year
    - Stars rise 4 minutes earlier each nite. Two hours per month, 24 hrs/yr.
    - Motion of Sun for a year - Ecliptic
    - Motion of planets
  - Precession
    - Sun signs (Astrology)
    - 'North Star'
  - Horoscopes!!