

# Reproduction

EQ: How can humans choose to not reproduce?

- I. Fertilization
  - a. Sperm must travel to the egg and penetrate to combine the DNA from both parents
    - i. Creates the first cell after fertilization: the ZYGOTE
  - b. 23 chromosomes from each parent
    - i. zygote has a total of 46 chromosomes
- II. Embryo and Fetal Development
  - a. An egg is usually a few days old before it implants in the uterus.
    - i. it has already divided several times
    - ii. is called a blastula.
  - b. Fetal Development
    - i. 35 +/- 1 day (10-12mm)
    - ii. 37 +/- 1 day (12.5-115.75mm)
    - iii. 40 +/- 1 day (16-21mm)
    - iv. 45 +/- 1 day (22-24mm)
    - v. 49 +/- 1 day (28-30mm)
    - vi. 52 +/- 1 day (32-34mm)
    - vii. 56 +/- 1 day (34-40mm)
    - viii. At the 8th week, the embryo is called a FETUS
- III. Changes in woman's body during pregnancy
  - a. Morning Sickness
    - i. It is likely hormones that rise rapidly with most incidences occurring in the first trimester
    - ii. Human chorionic gonadotropin (hCG)
      1. rises rapidly during early pregnancy
      2. Nausea tends to peak around the same time as levels of hCG.
      3. conditions in which women have higher levels of hCG, such as carrying multiples, are associated with higher rates of nausea and vomiting.
- IV. Birth
  - a. Stage 1
    - i. Initial (Latent) Phase
    - ii. Active Phase
    - iii. Transition Phase
  - b. Stage 2
  - c. Stage 3