I. Sperm production, egg production, and sexual arousal
   
   A. Sperm production
      
      1. Takes place in the testes
         
         a) Inside testes are a bunch of lobes called seminiferous tubules
         
         1) Spermatogonia (diploid) cells are closest to tubule wall
         2) Spermatogonia eventually give rise to spermatocytes
         3) Spermatocytes undergo meiosis I to become secondary spermatocytes (haploid and duplicated)
         4) Secondary spermatocytes undergo meiosis II to become spermatids (haploid, non-duplicated), which become mature sperm
   
   B. Egg (secondary oocyte) production
      
      1. All oocytes present in ovaries at birth, but they are not mature
         
         a) Oocytes have recombined, but have not completed meiosis I
         b) This undeveloped oocyte finishes meiosis I to make two haploid and duplicated secondary oocytes
         c) Secondary oocyte is released from the ovary during ovulation
         d) Meiosis II is completed only if fertilization occurs
         e) Only one (out of four total) oocytes mature to become a mature oocyte (ovum)
   
   C. Sexual arousal
      
      1. Male: blood flow faster into the penis faster than it flows out - the organ lengthens and hardens to facilitate vaginal penetration - during arousal, a mucus-rich fluid (from bulbourethral glands) is secreted through urethra to assist penetration
      2. Female: clitoris and labia minor become erect, breasts may enlarge up to 20%, nipples become erect, and fluids pass through the vagina to moisten the vaginal canal and entrance
      3. Male is stimulated by friction at the tip of the penis and female is stimulated by massaging action on the clitoris and labia
      4. Male orgasm encompasses involuntary muscle contractions, ejaculation, and sensations of release, warmth, and relaxation
      5. Female orgasm includes increased vaginal awareness, involuntary vaginal contractions, and sensations of relaxation and warmth - female orgasm is not required for fertilization

II. Fertilization

   A. Pregnancy - a result of sperm and egg union
      
      1. Pregnancy can result if sperm ejaculation into the vagina coincides with ovulation
         
         a) Range of about three days before and three days after ovulation
      2. Fertilization usually occurs in the oviduct

III. Development

   A. Union of sperm with secondary oocyte stimulates completion of meiosis II
      
      1. Oocyte is now referred to as mature ovum
   
   B. The fertilized egg (zygote) travels to the uterus and becomes a blastocyst
   
   C. The blastocyst then adheres to the uterine lining
   
   D. The embryo develops here (see movie)