

## Reproductive System Video Home Work Assignment

### Comparing Mitosis to Meiosis (54 sec)

1. What happens before either of these cell divisions?
2. What happens to the nuclear membrane as the nucleic acids organize into chromosomes?
3. What happens in meiosis crossing over?
4. What type of division has a second division? Net result?

### Ovulation and Menstrual Cycles Overview ( 11 min)

1. What occurs to the oogonium prior to puberty? Type of cell division?
2. What triggers the primordial follicle after puberty to develop into a primary follicle and eventually into a Graffian Follicle?
3. What hormone is produced by the epithelial cells surrounding the follicles? Called what phase?
4. What two secretions will the Graffian follicle produce at day 14 to reduce FSH and increase LH?
5. What will the LH surge cause?
6. After ovulation, what will the cells surrounding the Graffian follicle become? Produces what? Significance?
7. What strata of the endometrium is shed during day 1 through 5 of the menstrual cycle?
8. Around day 14 of the ovarian cycle the Graffian follicle increases production of estrogen. What effect will this estrogen have on the endometrium during day 6 through 14? At day 14 what effect will estrogen have on the thick cervical plug?
9. After day 14 what hormone is the corpus luteum producing? What is the effect on the endometrium and cervical canal?
10. What hormone is not produced by the blastocyst if the egg is not fertilized? How will this effect the corpus luteum? What will the corpus luteum stop producing? Result?

### Conception to Childbirth (TED Presentation – 9 min)

1. After fertilization, when did the first cell division occur?
2. When did the heart chamber start to develop?
3. How fast is the embryo's heart beating compared its mother?
4. What does the human heart look like between days 25-30? How many cells are being produced per second as the heart develops?

### Embryology – Fertilization From Day Zero to Seven, Zygote to Blastocyst (4 min)

1. What two layers surrounds the oocyte?
2. What occurs on day one?
3. What do we call the first 16 cells? Is it larger than the zygote?
4. What develops next and what will it do?

### Spermatogenesis (30 min)

1. What hormone is secreted by the hypothalamus to regulate the two anterior pituitary hormones regulating spermatogenesis? Names of two anterior hormones?
2. Where in the testes does spermatogenesis occur?
3. What do we call the cells that make up the tubular structure where spermatogenesis occurs? What type of structure hold these cells together?
4. What is the function of the blood testes barrier? What structure forms this barrier? Why?
5. What is the target cell for LH? Causing what hormone to be formed?
6. What is the target cell for FSH? Causing what protein to be formed? Function of protein?
7. What hormone is required for spermatogenesis?
8. What hormone may Sertoli cells produce to stop spermatogenesis? How? Inhibits what gonadotropin?