

Science 10

Review Material for Test on Reproduction on Thursday, Nov. 23

Know the cell cycle and the approximate fraction of time spent on interphase and on mitosis

Be able to recognize from descriptions or diagrams, all the stages of mitosis including prophase, metaphase, anaphase and telophase both in plant and animal cells (see flash cards)

Be able to recognize from microscope images, all the stages of mitosis including prophase, metaphase, anaphase and telophase both in plant and animal cells (see flash cards)

Know what is happening to centrioles, nuclear membrane, chromatids and spindle fiber during the various stages of mitosis.

Know that the new cells resulting from mitosis are genetically identical to the parent cell. (asexual reproduction)

Describe or recognize what happens in the process of cytokinesis

Know that duplication (replication) of chromosomes and centrioles takes place during interphase

Know that happens to the rate of cell reproduction when a person has cancer

Know some ways to limit chances of getting cancer

Know what a benign and a malignant tumor is.

Know what a mutagen is.

Be able to list or recognize some common mutagens

Be able to describe what happens during the various types of asexual reproduction including binary fission, budding, vegetative reproduction, fragmentation and spore formation.

Be able to list some organisms that reproduce by the various types of asexual reproduction including binary fission, budding, vegetative reproduction, fragmentation and spore formation.

Know what a clone is

Know what is meant by haploid cells and diploid cells

Know what is meant by homologous chromosomes and chromatids

Know that human gametes contain 23 chromosomes and normal human cells contain 46 chromosomes

Know that gametes are produced by the process of meiosis

Know that in the process of meiosis, one parent cell produces 4 daughter cells (gametes)

Know that a male gamete is called a spermatozoon or sperm cell

Know that a female gamete is called an ovum (plural ova)

Know what happens during fertilization

Know what hermaphrodites are and how they can reproduce

Know the difference between external and internal fertilization

Know puberty is and that it is initiated by hormones produced in the pituitary gland

Know that testosterone is a male sex hormone and estrogen and progesterone are female hormones

Know where the male and female hormones are produced in the body

Know the sex organs of the male and female human and their functions

Know that a human female produces about 1 000 000 immature ova and during a lifetime about 400 of them mature.

Know about how many sperm cells are in a typical ejaculation and how long sperm cells survive.

Know when an offspring is called a zygote, embryo and fetus

Know the terms cervix and follicle

Know that the placenta is tissue between the mother and the fetus in which both blood streams circulate and that oxygen, nutrients and potentially harmful substances pass through the placental membrane by the process of diffusion.

Know the function of the umbilical cord

Know how drugs the mother takes can affect an unborn fetus

Know the after effects on the child of drug use by the mother

Know the main causes of birth defects