

## Reproduction Test Review GRADE 9 Science

### Cells

- Know what differs in plant and animal cells
  - o What is found only in plant cells?
  - o What is found only in animal cells?
- Parts of the cell
  - o Nucleus, chloroplast, Golgi apparatus, centriole, mitochondria, cell membrane, ribosome, cell wall, vacuole, endoplasmic reticulum, cytoplasm
- Cilia/ Flagellum

### Mitosis (Cell division)

- Diagrams and what is happening in each stage (Names of stages) Read notes or page 152-153
- Cytokinesis → pinching off
- Interphase

### Mutations

- a Change in DNA that can be harmful or harmless
- Caused by chemicals, radiations or viruses
- Definition of Cancer, Carcinogens, Benign, Malignant

### DNA

- Nitrogen bases, # chromosomes and pairs of chromosomes in humans
- Allen Legere → (Killed 4 after escape, 1<sup>st</sup> Case in Canada to use DNA to prove guilty)

## Know the advantages and disadvantages of both Asexual Reproduction and sexual reproduction

### Asexual Reproduction

- Daughter cells and how they compare to mother cell (Identical)
- Know the different types of asexual reproduction (Definition of Budding & Fragmentation)
  - o Know that Budding, Binary Fission, Fragmentation, Spore Formation are asexual
- Definitions → Hormones, Auxins, Cytokinins, Growth hormones, Gigantism & Dwarfism, Homologous pairs, spontaneous generations, somatic cells, reproductive cells, zygote, hermaphrodites
- Dolly the sheep (2 facts about this)
- Cloning
  - o Explain “all twins are clones but not all clones are twins” from the “ – Clone Age video
  - o Dolly the sheep (How was she formed) Page 197
    - Year and how she was formed? How long did she live?

- What are some reason some people are for or against cloning?

### **Sexual Reproduction**

- Male vs Female Chromosomes
- 23 Chromosomes inherited from mother and 23 chromosomes inherited from father to give you 46 chromosomes
- External and Internal sexual reproduction
- # of chromosomes in unfertilized egg/sperm, zygote, skin cells
- What part of the sperm penetrates the egg and why does 1 sperm only fertilizes the egg

### **Compare Meiosis to Mitosis**

- Know how many cells each produce once finished cell division
- How do the new cell produced compare to the original cells for BOTH meiosis and Mitosis
- Mitosis requires one cell division but Meiosis requires 2 cell divisions
- Diploid and haploid (not just the numbers for humans)