

7th Grade Life Science

Cell Division, Genetics and Heredity - Study Guide:

Test: 11-15-07

Understand the meanings of the following Key Science Words/Terms:

Heredity, genetics, allele, dominant, recessive, genotype, phenotype, punnett square, pure, hybrid, mitosis, meiosis, haploid, diploid, gamete, interphase, cytokinesis, chromosomes, genes, DNA, replication.

1. Know the main functions of cell division. Be able to explain how genetic material is organized in the cells. What is a chromosome? Text Pp 73-78
2. Understand the stages of the cell cycle. Know what occurs during Interphase. Describe clearly the four stages of mitosis. Explain cytokinesis. Text Pp 80-85
3. Briefly describe the differences between asexual and sexual reproduction. Text Pp 88-92
4. Be able to explain how traits are inherited and what Mendel's role was in the understanding of genetics. Know how to draw and use a punnet square. Know about the difference between dominant and recessive alleles. Explain the difference between genotype and phenotype. Text Pp 100-107
5. Explain how punnet squares are used to predict patterns of heredity. know how probability and percentages are used to predict patterns of heredity also. Text Pp 110-115
6. Describe how the structure of DNA contains information the cell needs. Explain how DNA is copied during replication. Know how RNA uses the information from DNA to make proteins. Know the structure of DNA and the arrangement of the four nucleotide bases. Text Pp 124-133
7. Review the chapter summaries, vocabulary questions and review questions.

Some helpful strategies for studying:

- Write summaries of all the key points.
- Use Flash cards for vocabulary practice.
- Create drawings and tables to help compare and contrast.
- Practice drawing and completing punnet squares and pedigree charts.
- Practice questions in the review section.
- Work with a friend and discuss the information.
- Check with your teacher on anything you are not clear about.
- Try to attend the morning review class.