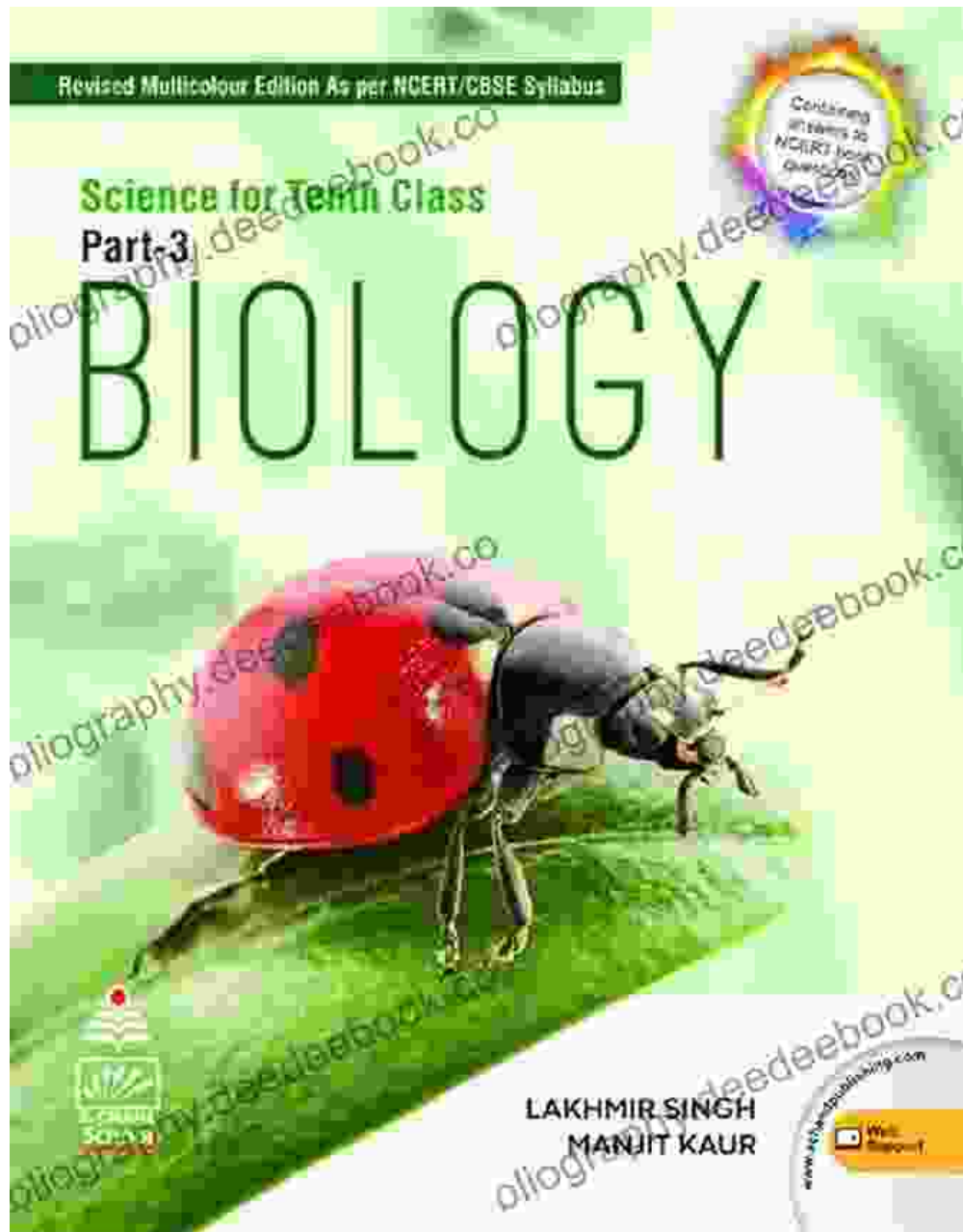
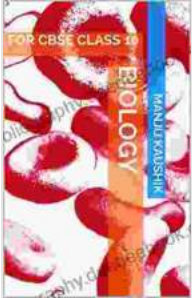


Biology for CBSE Class 10 Science: A Comprehensive Guide to Life Processes, Genetics, and Evolution



Biology is the study of life, and it is a fascinating and complex subject. CBSE Class 10 Science introduces students to the basics of biology,

including life processes, genetics, and evolution. This article will provide a comprehensive overview of these topics, with detailed explanations, diagrams, and examples.



BIOLOGY: FOR CBSE CLASS 10 (Science Book 1)

by Lilian Jackson Braun

★★★★☆ 4.4 out of 5

Language : English

Text-to-Speech : Enabled

Enhanced typesetting : Enabled

File size : 6924 KB

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Print length : 187 pages



Life Processes

Life processes are the fundamental functions that all living organisms carry out in order to survive. These processes include:

- **Nutrition:** The process of obtaining and using nutrients for growth and energy.
- **Respiration:** The process of exchanging gases with the environment.
- **Circulation:** The process of transporting nutrients, oxygen, and waste products throughout the body.
- **Excretion:** The process of removing waste products from the body.
- **Reproduction:** The process of creating new individuals.

All living organisms carry out these life processes in order to maintain homeostasis, which is a state of internal balance. When homeostasis is disrupted, the organism may become sick or even die.

Genetics

Genetics is the study of heredity and variation. It is the science of how traits are passed down from parents to offspring. Gregor Mendel, an Austrian monk, is considered the father of genetics. He conducted experiments with pea plants and discovered the basic laws of inheritance.

Mendel's laws of inheritance state that:

- Each trait is controlled by two genes, one inherited from each parent.
- The two genes for a trait may be either dominant or recessive.
- The dominant gene will always be expressed in the offspring if it is present in at least one of the parents.
- The recessive gene will only be expressed in the offspring if both parents carry the gene.

Mendel's laws of inheritance help us to understand how traits are inherited. They can also be used to predict the probability of a particular trait being passed down to offspring.

Evolution

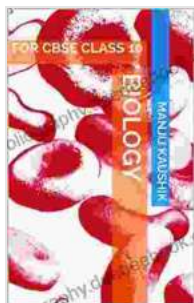
Evolution is the process by which populations of organisms change over generations. It is a gradual process that can lead to the development of new species. Charles Darwin, an English naturalist, is considered the father of evolution. He developed the theory of evolution by natural selection.

Darwin's theory of evolution by natural selection states that:

- Individuals within a population vary in their traits.
- Some of these variations are inherited.
- Individuals with traits that are better suited to their environment are more likely to survive and reproduce.
- Over time, the population will change as the individuals with the most favorable traits become more common.

Darwin's theory of evolution by natural selection explains how new species can arise. It is a powerful theory that has been supported by a vast amount of evidence.

Biology is a fascinating and complex subject that is essential for understanding the world around us. CBSE Class 10 Science provides students with a strong foundation in biology, covering topics such as life processes, genetics, and evolution. This article has provided a comprehensive overview of these topics, with detailed explanations, diagrams, and examples. By understanding these concepts, students can develop a deeper appreciation for the beauty and complexity of life.



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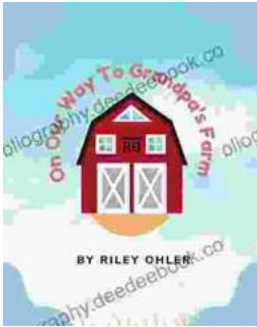
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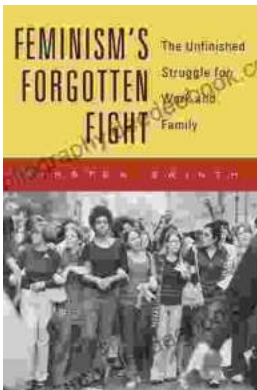
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