

3.4 Cycles of Matter

Lesson Objectives

-  Describe how matter cycles among the living and nonliving parts of an ecosystem.
-  Describe how water cycles through the biosphere.
-  Explain why nutrients are important in living systems.
-  Describe how the availability of nutrients affects the productivity of ecosystems.

Lesson Summary

Recycling in the Biosphere _____, unlike energy, is _____ within and between ecosystems. Elements pass from one organism to another and from one part of the biosphere to another through _____, which are closed loops powered by the flow of energy.

The Water Cycle Water moves between the _____, the _____, and _____.

- ▶ Evaporation is the process in which water changes from a liquid to a gas.
- ▶ Transpiration is the process in which water evaporates from the leaves of plants. Other steps in the water cycle include _____.

Nutrient Cycles The chemical substances that an organism needs to survive are called _____. Like water, nutrients pass through organisms and the environment.

- ▶ **Carbon Cycle:** Carbon is a key ingredient of all _____. Processes involved in the carbon cycle include photosynthesis and human activities such as burning.
- ▶ **Nitrogen Cycle:** Nitrogen is needed by all organisms to _____. Processes involved in the nitrogen cycle include _____ and _____.
 - In **nitrogen fixation**, certain _____ convert _____ into _____.
 - In **denitrification**, other soil _____ nitrogen compounds called _____ back into _____.
- ▶ **Phosphorus Cycle:** Phosphorus is needed for molecules such as _____ and _____. Most of the phosphorus in the biosphere is _____ and _____. Stored phosphorus is gradually released into water and soil, where it is used by organisms.

Nutrient Limitation A nutrient that, in short supply, can limit the productivity of an ecosystem is called a _____.

Matter Cycles Word Doc Answers

RD Boyd



Matter Cycles Word Doc Answers:

This book delves into Matter Cycles Word Doc Answers. Matter Cycles Word Doc Answers is a crucial topic that needs to be grasped by everyone, ranging from students and scholars to the general public. This book will furnish comprehensive and in-depth insights into Matter Cycles Word Doc Answers, encompassing both the fundamentals and more intricate discussions.

1. This book is structured into several chapters, namely:

- Chapter 1: Introduction to Matter Cycles Word Doc Answers
- Chapter 2: Essential Elements of Matter Cycles Word Doc Answers
- Chapter 3: Matter Cycles Word Doc Answers in Everyday Life
- Chapter 4: Matter Cycles Word Doc Answers in Specific Contexts
- Chapter 5: Conclusion

2. In chapter 1, the author will provide an overview of Matter Cycles Word Doc Answers. The first chapter will explore what Matter Cycles Word Doc Answers is, why Matter Cycles Word Doc Answers is vital, and how to effectively learn about Matter Cycles Word Doc Answers.
3. In chapter 2, the author will delve into the foundational concepts of Matter Cycles Word Doc Answers. This chapter will elucidate the essential principles that need to be understood to grasp Matter Cycles Word Doc Answers in its entirety.
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6. In chapter 5, the author will draw a conclusion about Matter Cycles Word Doc Answers. The final chapter will summarize the key points that have been discussed throughout the book.

The book is crafted in an easy-to-understand language and is complemented by engaging illustrations. It is highly recommended for anyone seeking to gain a comprehensive understanding of Matter Cycles Word Doc Answers.

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