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TEACHING GUIDELINES

Exploring the World of Chemistry contains 16 chapters. This study guide provides comprehension questions for each chapter, 4 tests, covering chapters 1-4, 5-8, 9-12, 13-16, and a comprehensive Final Exam.

A recommended plan of use follows:

Students read the chapter before class, underlining or highlighting key facts and vocabulary words. If the books do not belong to the students, the key facts and vocabulary should be copied onto a notes page.

Students participate in the classroom discussion by sharing their key facts and vocabulary words. The teacher can point out additional key facts and essential vocabulary. The teacher will also help make connections to students' studies in history, geography, Latin, etc.

After the classroom discussion, students answer the comprehension questions from this study guide and the end of chapter questions from the end of the chapter in the textbook. Students can check their answers to those questions with the answer key on p. 137 in the back of the text. Comprehension questions can be discussed in class and submitted for a homework grade.

To study for the final exam, students should review their previous tests.

EXPLORING THE WORLD OF CHEMISTRY

Chapter 1 Supplemental Questions

1. How did the Egyptians extract iron from iron ore?

First the Egyptians baked wood in closed ovens (absence of oxygen), making charcoal. Then they made a blast furnace by tipping hollow reeds with clay so they could blow through the reeds, sending oxygen through the charcoal, iron-ore mixture, molten iron resulting.

2. How is iron quenched, and how does it change the property of the iron?

The iron is heated till it is red-hot. Then it is thrust into cold water. This makes the iron stronger and harder than regular steel.

3. Pewter is an alloy made up of what two elements? tin and lead

4. Bronze is an alloy made up of what two elements? copper and tin

5. Three of the seven ancient elements known as the working elements:

1. lead
2. tin
3. iron