

Curriculum Suggestions

Topics

Chemical Bonding

Crystal Structure
Structure of Solids
Metallic Bonding
Alloys

Chemical Equilibrium

Equilibrium
Phases-Phase Diagrams
LeChatelier's Principle

Introduction to Chemistry

Scientific Method
Physical Properties
Observational Skills

Overview

This unit could stand alone with a scope that is limited to understanding memory metals. It could also be used as a supplement to an existing chemistry curriculum and provide for a unique way to introduce or reinforce the above topics. In the suggestions that follow, when a specific investigation or experiment is used as an example, it refers not only to the activity but also to the background information that is included within the Teacher Notes. These suggestions should in no way be considered complete.

Suggestions

Investigation 1 ----- This is an introduction to scientific observation. It could also be used to introduce any of the above topics.

Investigation 2 ----- This is an introduction to crystal structures (and the structure of solids), which are often included in a unit on the phases of matter. It can also be used to introduce the nature of alloys.

Investigation 3 ----- This is an introduction to reversible reactions and to heats of reaction.

Investigation 4 ----- This is an introduction to phase diagrams, equilibrium, LeChatelier's Principle, and to physical properties and their relationship to structure.

Investigation 5 ----- This is an extension of Investigation 4 topics with the introduction of sound propagation as an additional physical characteristic.

Experiment 1----- This experiment provides an opportunity for an open-ended problem solving activity, as well as an authentic assessment opportunity.