

Model: Concept Attainment Model

Purposes:

Teach students to classify matter as homogeneous or heterogeneous.

Context:

Introduction to the classification of matter

**Phase One: Presentation of Data and Identification of Concept**

Show students several different types of matter. [water, sulfur, rocks, dirt, oil, sponge, cereal, . . .  
Let students compare attributes.

Homogeneous: water, sulfur, cool-aid, oil, glass of air. . .

Heterogeneous: dirt, rocks, a mixture of oil and water, sponge. . .

Ask students to identify groups and attributes of the groups.

Give positive and negative examples.

Students generate a definition for each group according to essential attributes.

**Phase Two: Testing Attainment of the Concept**

Students identify unlabeled examples.

Teacher now states which group is called homogeneous and why.

Teacher now states which group is called heterogeneous and why.

Students generate examples of homogeneous and heterogeneous matter.

**Phase Three: Analysis of Thinking Strategies**

Students describe the ways in which they formulated their definitions and discuss the role of them.