

Model: Concept Attainment Model

Purposes:

Teach students to classify matter as a mixture or pure substance.

Context:

Introduction to the classification of matter. Students have learned how to classify matter as homogenous or heterogeneous.

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.

Mixture: cool-aid, coffee, rocks, dirt, oil and water

Pure Substance: water, aluminum, copper, diamond, carbon

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 mixture and why. (a mixture can be made strong or weak, or can have different types)

Teacher now states which group is called pure substance and why. (a pure substance can not be broken down or weakened, it is a pure substance)

Students generate examples of mixture and pure substance.

Phase Three: Analysis of Thinking Strategies

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