

## 50-MINUTE, TEACHER-CENTERED LESSON PLAN

### *Unit Objectives: Classification of Matter*

- Identify the characteristics of matter and substances
- Define and list several common physical properties of substances
- Differentiate between physical and chemical changes in matter
- Apply the law of conservation of mass
- Explain the difference between an element and a compound
- Classify a sample of matter as a substance or a mixture
- Distinguish between homogeneous and heterogeneous samples of matter
- Determine appropriate methods for separating mixtures

### **Day 1**

#### *Objectives:*

- Students will become familiar with the physical properties of elements, compounds, and mixtures.
- Students will become familiar with separation techniques.

#### *Anticipatory Set:*

Show students a mixture of iron, salt, sand, and poppy seeds and have them brainstorm methods for separating the four components. (5 minutes)

#### *Lesson:*

1. Students will take notes on physical and chemical properties, classification of matter, and separation techniques. (20 minutes)
  - a. Demonstrations of various properties (iron is magnetic)
2. Students will fill in a flow chart of classification of matter. (5 minutes)
3. Students will begin worksheets on properties of matter concepts and will answer questions from the text. (15 minutes)
4. Students will be given a lab procedure to follow regarding the separation of the mixture they began class discussing – salt, sand, seeds, and iron. Homework is to read this procedure and finish the worksheet questions.

### **Day 2**

#### *Objectives:*

Students will gain experience in using physical separation techniques.

#### *Lesson:*

1. Discuss worksheets and text questions from homework. (10 minutes)
2. Review lab procedures, explain use of equipment, and make safety recommendations. (5 minutes)
3. Have students conduct the separation of the mixture according to the lab procedure. (30 minutes)
4. Students will complete the analysis questions on the lab sheet for homework.

#### *Assessment:*

- Analysis questions
- Worksheet and textbook questions
- Unit exam with multiple choice and short answer questions