S T E I N W A Y I N T E R M E D I A T E S C H O O L 141Q
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Date of Observation: February 13, 2002

Teacher: Mr. Gondal

Class: 7-6

Period: 2

Subject Area: Science - Grade 7

Teacher Goals and Objectives for 2002 - 2003:

1. To learn subject matter according to the curriculum

2. To have my students learn computer skills

3. To learn and demonstrate how science generates technology

Aim: What is oil fractionation?

Standard: 1F - Demonstrates understanding of interactions of energy and matter

Dear Mr. Gondal:

I had the opportunity to observe a science lesson in your room. As I entered the room, the students were divided into two groups with about fourteen students to each group. The aim, standard, new homework assignment and "Do Now" were on the chalkboard, and you were reviewing yesterday's homework.

After you collected the homework, you called on a student, Brian, to write the formula for kinetic energy on the chalkboard and solve the "Do Now" problem. Brian made a calculation mistake on the formula, and you called on Kirk to correct the answer. The students asked you how Kirk arrived at 500, and you answered their question by clarifying the formula and showing them step-by-step directions how the answer was derived ($5 \times 10^2 = 5 \times 100 = 500$).

You began the lesson by introducing different objects that are derived from oil such as vaseline and motor oil. This motivated a discussion focusing on by products of oil. A student asked about the difference of gas oil and other oil. This led the students to

further discuss how different companies compete, such as BP and Exxon, and which gas is better for the environment.

Subsequently, you asked, "What are hydrocarbons?" A student read the answer from a previous handout sheet given to the class. You then distributed a handout sheet titled, "Oil Fractionation and Major Oil Products" and explained the process of how oil feedstock rids itself of compounds and eventually becomes anything from bottled gas to asphalt. In conclusion to this process, you asked, "What are we learning about oil fractionation?" Brian answered, "It is the separation of different oil." You further elaborated, "It is the separation of different hydrocarbons from the mixture of hydrocarbons found in crude oil."

As a culminating activity, you distributed two other handouts. One was titled, "Oil: A Shrinking Reservoir," and the other was a sheet of questions and vocabulary words. You instructed the students to read the sheets then discuss the questions among themselves. They were also told that they would have ten minutes to do this task. After ten minutes, you directed the class to give you the answers to the six questions on the second sheet. Since only one group of boys and girls raised their hands, you called on only that group to answer the questions.

For the last few remaining minutes of the lesson, you reviewed the new homework assignment with the class. They were to write a research report on OPEC. Furthermore, you gave them a series of questions to answer in their report.

Commendable Features

1. Your questioning technique focused on a variety of questions that strengthened and reinforced the concept of oil fractionation.

2. You gave explicit explanations to questions asked by the boys and girls such as clarifying the formula on kinetic energy.

3. You asked numerous questions throughout the lesson and allowed many students to participate in the discussions concerning oil products and oil fractionation.

4. You utilized well-planned materials for the lesson such as the handouts to reinforce the concept of oil fractionation and motor oil to motivate the lesson.

5. You walked around the room during the class activity to observe the students as they were discussing the questions on their handout sheet.

6. Your culminating activity reinforced the concept of oil fractionation as well as assessed the students' understanding of this concept.

7. You had good control of time management, and the lesson flowed smoothly.

8. Your new homework assignment on OPEC encouraged the boys and girls to expand their knowledge on the importance of oil.

9. Many students succeeded in attaining the aim of the lesson.

Suggestions

1. To save more time during the lesson, have a monitor distribute the handout sheets instead of you distributing them to each student.

2. Since only one group of students raised their hands to answer the questions from the culminating activity worksheet, you tended to call on only this group and neglected the other group. It would be better if you had assigned these two groups three questions each from this worksheet activity. In this way, you would be able to assess both groups of students.

This lesson is rated satisfactory.

Sincerely,

Cynthia Katsounis

Cynthia Katsounis
Assistant Principal