Sequencing Rationale

Science-Powders and Crystals

Grade 4

I begin the unit by defining property means, particles, and what a powders and crystals are. Next, I break the class up into groups in which they will complete all hands on activities during this unit together. Next, I begin passing out three unknown substances (baking soda, citric acid, cornstarch), each substance is placed in a paper cup with a different color dot on the bottom. The students are asked to feel, small, listen, and look at the unknowns and record their notes onto an activity chart. Once they are done with the first three unknown substances they are given three more, (plaster of paris, salt, and sugar), the same activity is completed and notes are recorded.

Over the course of the unit there are various different activities. I demonstrate how to use a pocket scope. I then have the students use pocket scopes to examine the salt, sugar, and citric acid. While looking though the pocket scope the students are given an activity sheet, which they draw pictures so what each substance looks like,

 Once the students have identified the properties of each substance I have the students begin performing more complex tests on each of the powders and crystals. These tests include, observing how each substance interacts with water. Noting the differences in the way each responds to water. Observing what happens when vinegar is added to each substance. Discovering that vinegar fizzes when combined with baking soda. Lastly, the iodine tests with will indicate happens when iodine is added to each substance. They will learn that the starch will turn a dark blue-black color when mixed with iodine.

Much of this unit requires hands on activities. I feel that this is a very fun unit and the students really enjoy working to together and being able to actually touch what they are learning about. I understand that I need to meet the needs of all the learning styles in my classrooms and I feel the way I teach this unit that each students needs are met.