



Digital Imagery in Chemistry

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Project, Strategy, Method or Activity: Observing and Recording during DIIMSA® Experiences

Synopsis: My students use digital cameras to: (1) *enhance vocabulary understanding*; (2) *incorporate their work into MS-PowerPoint lab write-ups*; and (3) *explore concepts for submissions to the Aldine ISD Science Fair Digital Photography Division*. My students are introduced to vocabulary for a given topic during a specific period of study. Students work in groups and each group is assigned a set of vocabulary terms. Groups are then required to capture scenes to support their assigned vocabulary terms. Some pictures may have two or more associated terms; however, each term requires a statement of justification that supports the scene. Student groups then do a peer review and are awarded points based on my vocabulary visual scene rubric. Students also are required to submit a MS-PowerPoint presentation (in lieu of a written lab) that includes their own images and video demonstrating safety, materials, purpose, procedures, data, results and conclusions. These digital “artifacts” are then presented to the entire class for teacher and peer reviews. Because the students have taken so many pictures, they are required to submit a “science fair” ready photo in the Aldine ISD Science Fair Digital Photography Division. I also use student captured scenes in other strategies including DIIMSA Extreme Vocabulary.

Teacher Observations: Initially my students were very limited and tried taking one picture per vocabulary term. After questioning from me and giving them examples, they soon begin to realize that one photo/video could be used to support multiple terms. This allowed them to begin to understand the inter-relationships of vocabulary and linkages to concepts and associated content. Many “Ah Ha” moments are created as they begin to link terms to major concepts. The real benefit of the project artifacts is that it requires students to pay attention to all the details of an experience which they must capture digitally. One of the true benefits is that if a student misses a lab or wants to review a lab, there are 20-25 artifacts available for review, each one slightly different, but covering the essentials of the lab experience. Students know that our cameras are to be used for every lab and I also allow them to check out cameras to finish their work. In summary, the use of digital cameras and toolsets is a critical part of my teaching/learning strategy for students. Plus, the kids love it!