Praxis Paper

This chemisTREE multiliteracy project involves constructing a visual representation of different functional groups in the Organic Chemistry unit of the Grade 12 University Chemistry curriculum. Students will work in small groups to create and name the various groups previously taught in class, as well as complete a summarizing worksheet to demonstrate their understanding in greater detail.

The chemisTREE targets various types of learners and allows the students to use creativity to review the material taught in class. This project incorporates teamwork, while still enforcing student-centered learning (Vacca & Vacca, 1993). This allows the students to gain independence and confidence in their academics, while still learning how to work together in a group towards a common goal. Scaffolding methods can still be used by the teacher when students are struggling, and the use of the students’ class notes is encouraged (Vacca & Vacca, 1993).

Building the chemisTREE is a tactile activity with the end result being aesthetically pleasing and a great visual tool for review. Giving the students the pieces of the tree to move around and put together allows them to organize the information in a way that makes sense to them, therefore the material is more likely to be retained. Studies show that students who perform hands-on activities tend to remember the information more accurately and score higher on tests than students who do not (Ates & Eryilmaz, 2011). Working in groups also allows for group discussion of the material, which helps to clear misconceptions of students who may be struggling, while reinforcing the learning of the student who is able to explain.

Students will gain skills beyond what is taught in the curriculum. They will learn how to work efficiently and effectively with a group of their peers. They will need to be able to communicate their ideas, as well as divide tasks and assign roles in order to complete the assignment. Students will also have to both give feedback in a way that is constructive and receive criticism. They will begin to see things from the perspectives of the others in the group, opening their minds to different ways of thinking. Finally, they will have to be able to resolve conflict and reach compromises that take into account the benefit of the entire group. Working together allows for students with limited abilities to communicate their ideas with their peers, allowing them to gain confidence in the classroom setting.

References

Ates, O., & Eryilmaz, A. (2011). Effectiveness of hands-on and minds-on activities on students’ achievement and attitudes towards physics. *Asia-Pacific Forum on Science Learning and Teaching, 12(1).*

Vacca, R. T., & Vacca, J. A. L. (2014). *Content area reading* (11th ed.). Pearson Education Inc.