

Class observations
Monday, December 3, 2001
Caldwell High School, Caldwell Idaho
Ms. Tami Dickenson

Submitted by Betsy Price

Students:

Three of the classes were 9th grade biology who were using the EL materials. One class (second period) was AP biology that was studying genetics. About 40% of the students in the school come from migrant families. The English literacy was very mixed. Some students spoke perfect English and others not. Even the strong English speakers spoke Spanish when they were with Spanish speakers.

Classroom:

The classroom was new. It was combination of classroom and lab. The front of the room was a traditional one-student per desk lecture set-up. The back of the room was a lab with 8 lab tables lined against the wall. In the center was two sinks.

Each lab table had one computer. There were no chairs or stools around the lab tables so the students had to stand. This made the computer sharing easier. All the students were able to view the computer. However only two were in close range, the others stood two to four feet away from the screen.

Tami had two prep areas. One was in a large room behind her desk at the front. The other was a large lab storage and prep area for all the science classes. Most of the chemicals and equipment were stored in that area.

Demo equipment:

ELMO camera, ceiling mounted LCD projector, and d computer on the teacher's desk (ELMO description and price <http://www.pharmnet2000.com/ELMO/index.html>)

Use of computers:

Tami uses computers regularly in her classroom. The students were very comfortable using them. When the classroom was built, the architects put the computers in a row against the wall of the regular classroom area. That arrangement did not work because only one student at a time was able to sit at a computer. Tami and her fellow teachers had the school rewire the room to put the computers in the back on the lab tables.

Regular textbook:

Elephant book with different editions Classroom sets only. The school is ready to purchase, but they delayed it to test the EL program.

Financing of equipment:

Tami and her fellow bio teachers wrote a grant and received \$70,000 grant from the local college to purchase computers and demo equipment. The district has a computer

committee that allocates computers and money. There was a rift between Tami and the committee since they were deciding what she needed and just told her what she would get. It was a pretty nasty situation resulting in Tami writing grants for her own equipment. She has little contact with the district committee now.

Networking:

The students are not allowed to access the Internet. To do the program Tami has to use her account and password on all the computers. Each hour the system logs everyone out. This results in her having to reload all the computers again with her account.

The lack of access was interesting since I was able to type guest in the log-in and get access to the Internet. Evidentially Tami or the students have not figured this out.

Tami by-passed the system people to do the program. She “jerry-rigged” their system to get it to work.

Biology in the curriculum:

Students take biology as a sophomore and then can take AP bio in their senior year. Too many students take AP bio in the sophomore year and do not pass, so they offer it again to students in their senior year. They are in the process of changing the science classes to require all students to take it in the 9th grade. All the biology teachers are using the Exploring Life materials in the school rather than the regular textbook.

Day One

When the students come into the room they immediately took out a calendar and began copying the information from the board. It had the goals for the day as well as what would be covered for the remainder of the week. This took up the first five to 7 minutes. This appeared to be a regular routine to start this way.

Objective for the day

Compare ADP and ATP

Use paper cutouts to compare ADP to ATP

Assignment for Monday

1. Agenda, table, grades->(progress Friday), Prefix test tomorrow
2. Reflect on last week - what and why?
3. Complete Pg. 23 Scissors, qts.
4. Turn in food lab today study prefixes for tomorrow

Monday 12-3

- ATP models

Tuesday 12-4

- ATP on computer
- Prefix quiz

Wed 12-5

- Glycolosis / Krebs cycle notes
- Pinball computers

Thursday 12-6

- Electron transport notes

Friday 12-7

- Fermentation Computer concepts

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The students are responsible for missing up any work that they miss. The semester was close to the end and the students had to make up any work prior to the end of the week. Tami normally allows the students to come in early before school begins and after school to make up labs and work. This week the students could only come in the morning since the teachers would be working on the ways they would meet the district and state standards.

One of the senior students had committed suicide the week before. Tuesday was the memorial and burial. Tami mentioned that those students would miss the computer day and would have to find some way to make it up. The students have 10 days sick leave per semester.

Tami read a list of vocabulary. The students checked the words they would encounter during the week from a vocabulary sheet that she had given them at the beginning of the school year. She gave the number of the word, pronounced the word, and then gave a definition. The words did not all fit into the lessons for the week. Some were in anticipation of the next unit they were going to do.

Homework for the kids was to study vocabulary for quiz the next day. The students did little homework. The textbooks that they used appeared to be classroom copies that were not taken home.

The week before they had read Concept 7.1 in class. Tami did a short review. Students looked at their notebooks to review. They went over the following equations.

Made an equation for photosynthesis and for respiration

Dealt with the misconception of photosynthesis and respiration

Photosynthesis $\text{CO}_2 + \text{H}_2\text{O} + \text{sun} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$

Respiration $\text{O}_2 + \text{C}_6\text{H}_{12}\text{O}_6$

Tami then used the bear to reinforce what they had learned. During this time she used the bear activity as a demonstration. Kids were more animated (quiet group). They liked the diagrams and commented when the sounds were made.

As Tami taught she asked all the students questions. She had a system of walking around the room making sure that they kids knew that anyone could be asked a question.

The students had done the Peanut lab earlier in the week. They used a Cheezit and a walnut. She explained why the nut burned a lot longer because it had more saturated fat.

Tami does a lot of chemistry and descriptive math with the students.

Tami said the students liked the chapter packets. It made it seem more like they could do this.

Tami is very well prepared and organized. The students knew they had to have their notebooks with their papers filed correctly. Kids had to have their garbage cleared from the floor.

2nd class AP bio class that was doing genetics:

Bio Fly lab - Not EL activity The fly lab activity comes from an old CD she has. She had to load every machine prior to class.

Kids already assigned computers and when Tami said they were to go to the computers just went back quietly.

The handout that the students did was an old one that she had had for many years. It was a pretty sad looking handout that had hand written changes on it. Tami and the students did the handout together. She gave them hints using the scientific names to help them through it.

The students enjoyed doing the fly lab. Again, the A students were not as sold on the computers as the textbook.

3rd class biology

Tami grades the notebooks as a free A. All they have to do is turn it in with all the notes and assignments. Some students get an A on this, others can't get it together.

The students noticed that the bear looks as if he is pooping out CO₂. "And he is because it is a waste product."

4th class

This time the class went into their lab groups. This class is much more animated than the other group.

Student comment: Make pinball a game instead of a video.

Observation of students: Sound seems to be an important factor.

Tami liked the way the concepts flowed. She was hoping that the students did also. She said they didn't but perhaps by Friday they would.

Day two:

Class one

Students began with a vocabulary test. They then went over the homework that needed to be done in the day.

Students then went to complete the cut and paste activity.

Only one group did the computer before they finished the cut and paste activity. They liked the bird eating the tail of the lizard.

Student comments:

The computer is easier to learn

Liked the pictures to be first; if they had questions first then they would read the text.

The computer activities make it funner to do.

We seldom have homework. Student gets most of it done in class.

Observation: One group looked at the ATP diagram over and over. Then read text aloud. Periodically went back to using the diagram in between reading the text. They said they didn't know what they were doing, that is why they would read the text then try the diagram.

All groups responded that they didn't have a plan for who went to the computer first. Some said they switched and took turns. Some said that they let the person who was most prepared operate the computer. One girl usually did the computer first but said she missed the day before so she let the boy go first.

Suggestion from Tami:

Kids were real successful with doing cut and paste activities to build and tear apart molecules. A good addition of activities would be to have students put together molecules on the computer.

Student went to lab tables to complete activity. They had an ATP activity to complete.

Computer problems

Kids don't have Flash plug-ins at home.

Note from Betsy: We need someone to download a flash over a telephone line. How much trouble is it?

I asked the students how they used the computer during group work. Responses included:

Switch off so everyone had a turn operating the computer.

Most students said they could see the screen from the back.

They read the materials aloud so the ones in the back did not have to read.

All the students get on computers.

Whoever gets there first is the one who usually starts.

They divide up work to get it done.

Read first not visual-person (female).

If we know what to do, we just do it; we don't read. If she doesn't know, she reads it.

Some groups switched days to operate the computer.

Whoever understand the most operates the computer.

Most of the students had Internet access at home. Hispanic students knew about the computers at the library.

Student comment:

Computers make it easier to remember.

Pinball I don't want to play it if it won't let me do anything.

Teacher comment:

Students want to win something.

ESL Students:

One of the concerns is that students will not have computer access at home. During the afternoon I talked with the ESL students to determine what their computer literacy might be. When I asked them if they had computer access at home, they responded, as expected, that they did not. When I asked them if they had an email account they overwhelming said yes. Then I asked them where they had access. It was a relative, a neighbor, the library, and school. This seems to be a similar scenario with encyclopedias. Before the Internet, students were asked to write reports from encyclopedias. Those lucky ones at home had a set, although out of date. The others used libraries.