

Teacher Observation Report
Submitted by Betsy Price May 20, 2002

Kenny Dunlap, Lenoir City High School, Tennessee

Location: Rural Tennessee and west of Knoxville. Although Kenny referred to the area as rural, Knoxville, 20 miles away, is fast approaching Lenoir City. Subdivisions and country estates are replacing the small family farms.

Ethnic mix of students: The students are mostly Caucasian students who are in the middle to lower middle socioeconomic groups. There are small pockets of upper socioeconomic students from families who migrated from Knoxville. The largest minority group is Hispanic Americans. The older, established families came as migrant workers to the farms and some have found permanent jobs. New migrant workers find employment in the mushroom farms that are large, hothouse factories. There were very few Afro-Americans. An interesting culture group of female students were the "rainbow girls" who were self-proclaimed lesbians. They identified themselves by wearing clothes or jewelry with a rainbow theme.

Types of classes observed: Two applied biology classes for lower achieving students

Length of class period: Block scheduling 90-minute classes.

Classes demographics: The applied class is the lowest level biology course the school offers. It is a mix of grades (freshman to seniors), non-college bound, and special needs students. The seniors take the course because they failed science once or twice before. The freshman or sophomores take the course because it was expected they could not pass a regular biology course.

The specific reasons the students are tracked into this course are mixed. The students can be low achievers, truants, physically handicapped, behavior problems, learning disabled, non-English speakers, or have a low I.Q. Although they are special needs students, the problems are not so severe that they could be omitted to more specialized classes.

Classroom and teaching characteristics: Kenny works very well with the students and creates an easygoing atmosphere. He has easy mannerisms, is informal, and very upbeat. The students respond well to him. Kenny uses many hands-on activities, mostly model making and art type projects.

Attendance varies every day. Many of the kids are there because they have poor attendance. Also, kids are tardy and leave early. In his last class he has a physically handicapped student who comes in late. She has two aid attached to her. They come in and out of the class at various times to help her with tasks. One girl leaves early every day because her foster mom picks her up when she gets off work at the cafeteria.

Kenny keeps the content, concepts, and expectations of the lessons low. His goal is to allow the students every opportunity to pass. There is hardly any homework assigned.

He prefers to keep them doing the same thing at the same time. Many of his hands-on activities are craft and art-type projects. Results of the activities hang from the walls and ceilings.

Description of computers and facilities

Two rooms will be described. Kenny was unable to use the computers in his classroom so he changed rooms with the physics teacher. This is a temporary fix. If he were to use Exploring Life for the year, he would have to adapt his room and facilities. Therefore both his room and the temporary room are described.

Kenny's Computers

First Kenny used the 6 5300 PowerMacs and one iMac in his room. He inherited all the



computers from the head of the science department when she received a grant for new iMacs. He had installed flash and Internet Explorer on the computers the day before. The computers were all networked, however with the exception of the iMac, they were too slow to use. It was unclear what the problem was. The students use the computers in the morning to check their

email and don't seem to have too much of a problem connecting at a reasonable speed. However when the students tried to log onto EL at one time, they were unsuccessful.

The computers in Kenny's room are arranged together in an L shape. The students have easy access to them during homeroom and when assignments are complete. Most of the Hispanic students use the computers to check email during their free time.

Kenny also had a computer set-up he did not use for the online Exploring Life activities. It was an old Apple that was attached to a television monitor. He used it for demonstrations of lessons he had on a CD. He acquired it when he and the head of the department collaborated on a grant.



New iMacs Kenny traded rooms with the head of the science department for the pilot test. Her new iMacs were faster. However, not all the computers had the correct plug-ins. These computers will be described later.

Kenny's Facilities The science rooms in the school had been completely remodeled. The biology teachers were given an opportunity to provide input on what equipment and furniture they wanted. However, the superintendent of the school purchased and apparently designed the rooms. In the fall, the biology teachers were surprised with their new rooms, furniture and equipment. The superintendent moved out of the district the next year.



All three biology rooms have a large piece of equipment that the biology teachers are to share. For example one room has a grow-lab where students can place plants in different growing environments. Unfortunately, the machine is too noisy to plug in and not large enough for each student in sections of courses to run an experiment.

Kenny has a flame hood in his room that is an essential piece of equipment for many higher level genetics and biotech experiments. However he is not trained for these experiments and will not use it. If another teacher wants to use it, they would have to exchange rooms.



Each room is equipped with a teacher demo area. Over the teacher's desk is a large mirror that can be operated by remote controlled. The students can watch the demonstration in the mirror. Unfortunately, it gets little use from any of the biology teachers.

The desks were replaced with modular units that can be arranged in many different configurations. There are five base stations that have water and electric outlets. When the teacher wants to conduct labs, the base stations can be plugged into permanent connections in the floor. When they are doing class work, the base stations can be arranged around the walls and plugged into water and electric outlets there.

The students sit around long, thin tables that can be arranged around the base stations for lab groups. There are multiple configurations that can be used. When the students are doing class work, they can arrange them in rows or pair them up for work groups. The students arrange the tables daily. When I observed, the tables were in no recognizable pattern for any specific activity or grouping. The students seemed to have had a plan, which appeared to be influenced by social groupings more than any other reason.

Physics Computers and Facilities

Kenny changed rooms with the physics teacher who was also the head of the biology department. The computers and the furniture were purchased at the same time as a complete lab unit so they will be described together. When the labs were remodeled, she had the new furniture and lab equipment so she was able to have 100% control of the design and equipment. Her set-up was ideal for Exploring Life, however, there is little chance that Kenny would be able to have his room be as effective as hers unless he were to do some major changes and seek additional funding.

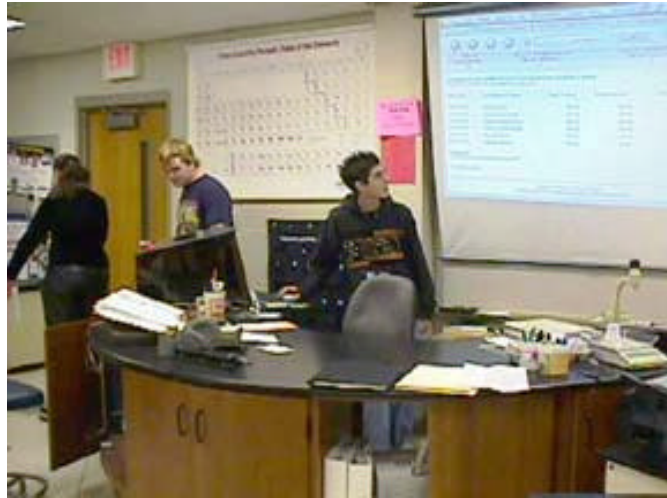


Each lab unit is a bean shaped table with a computer in the center. Three to four students could view the computer. Any more students would prohibit the ones on the end from having a clear view of the screen. Only the students closest to the middle could operate the mouse. The configuration is permanent.

The water, sink, and electrical outlets are behind the computer. The computer is protected from water by a plastic covering. There is a flame hood in the center of the room with four stations for students to work. It is also a permanent installation.

The teacher's desk is also bean-shaped with a permanent place for a computer. There is a pull down screen behind the desk for the LCD projector and the overhead. The LCD has a rolling cart that matches the lab units. The only place to plug it in are at the teacher's desk or at one of the lab units.

The LCD projector was an old one that was very difficult to read. The image was faded. The projector was placed on a rolling cart. The angle of projection distorted the image even more. The projection screen was even older which only amplified the poor projection.



The LCD projector was plugged into the teacher desk and extended out into the room. Cords ran between the desk and the cart and trailed on the floor. The students had to step over the cords to move around the room. Kenny and the students seemed to be quite comfortable with this set-up. He left the LCD projector, wires and cart in place after he finished his presentation and as he left and entered the room.

The wires in the pathway were a liability issue if a student had tripped and fallen over the wires. It also put the LCD projector in peril. Kenny didn't mention or seem concerned about the situation.



This is what Kenny would have to do to use Exploring Life in his classroom.

Student observations

Kenny lets the students have the first 5 to 10 minutes of class time for the students to organize themselves. The students were very interested in me and asked many questions. As I moved around the room, the students stopped what they were doing to

focus their attention to me. Kenny feels a 90-minute period is a long time for the students to be attentive. As soon as the class settles down, Kenny began the lesson.

The class was working on Chapter 36. Kenny began by projecting the website and explaining the lesson. The students then were to access the Webquest and complete the

activities. This is what they tried to do the day before but were largely unsuccessful. Kenny made a simple worksheet for them to complete.

The students were all comfortable finding the website and the activity and quickly got on task. They were thrilled with the faster computers. They began the Webquest, however within the first 10 minutes two of the lab groups were off task. Within fifteen minutes three of the lab groups were off task and onto other web sites. They didn't seem concerned when I came around to observe. The sites were Mr. Bill, a gothic fashion site, and a modified stock car site. Two of the sites had a lot of text; however, they were the same sites the students returned to the next day.

One student had found a racing game after being on task for about 20 minutes. I didn't have an opportunity to determine if it was on the web or something that he had downloaded.

Two groups could not find where they should be. When they opened a web page, they hit the scroll button and went up and down the page. They were not clear what they were looking for, but that didn't seem to bother them. All the groups responded better when Kenny gave them verbal directions than if they had to find things on their own.

Two of the computers were having problems running the vent movie. We determined that they needed QuickTime. I had to download it for the students. They were not interested in fixing the computer, they were happy to have me fix it while they walked around.

The second day, the students were to do 36.1 and complete a worksheet. Kenny projected the lesson and explained what they were to do. He did a short lecture about some of the concepts. The students were very attentive and listened, but did not ask questions. He told them to work on the activity.

The students were more attentive to the website that day. They liked the activities better than the Webquest. Although the same favorite web sites did appear again, it took them longer to get bored and begin to wonder.

The one student who had found the racing game the day before went through the microscope activity very quickly. Once he found the organisms in the microscope, he was able to classify them correctly as quickly as the dichotomous key's classifying questions came up. The student was taking the course for the second time and Kenny predicted he would not pass this time either. He would be an interesting student to do some testing on. He seemed to be in a constant race mode and very bright.

Two of the computers did not have Flash installed on them. The students did not express that they had trouble the day before so it was unclear what had happened. Some of the less timid students would not complain or speak out if the computer did not work. I don't know how they finished their worksheets from the day before. Flash 6 came out that day

and did not show the regular pattern on the web page. That created some confusion if it was working or not.

When the activities did not work the students collectively and immediately slammed on the desk and stood up. Again, they are happy to have someone else take care of fixing it. They completely lost interest in the site and began pestering other students. It created a wave of confusion around the room. Kenny did not seem concerned or upset. He slowly got them back to task.

Kenny said that ordinarily he would have guided the students more in the activity. He wanted me to see how the students would do on their own initiative. They didn't do so well.

Comments from the evaluator:

Varying activities

Although the description of Kenny's students' behavior may suggest they were not interested in the website, they expressed that that they were. The type of student he teaches probably would have done better if he had varied the lesson and kept the activities changing and the students moving around. They needed much more teacher intervention. Kenny had non-traditional teacher preparation courses in a very small private college. He is not aware of many of the new teaching styles when I talked with him. He did not have a course in learning disabilities or special education.

Hispanic students

The most attentive students were Hispanic. With the exception of one, the students appeared to have average to above average intelligence. They were English as a second language students. The two that did speak English well translated what they read on the site into Spanish for the other two, including the scientific terms. They stayed attentive and on task the entire class period. They were the only ones to complete the Webquest. During homeroom, the Hispanic students are allowed to use the computers. They email to their friends in Mexico and other migrant children. The students are not allowed to use the Internet or email on their own because the administration fears they will access pornography or other harmful sites. Kenny knows how important the Internet is to them and allows them to use email in the morning.

What Kenny would have to do to use Exploring Life

Purchase new computers

This would require that Kenny obtain funds that most likely would not come from the school, district, or state. At the time of my visit, the principal cancelled our interview because the district was drastically cutting budgets. She went to the meetings to do damage control. There is Title 9 money for minority students and lower socioeconomic groups that could possibly be available. There are also extra funds for the children of migrant workers to stay connected via distance learning.

Write Grants to purchase hardware

Kenny would have to write a grant or devise a way to raise money. Kenny has not had any training for grant writing. He is a well-known local artist and spends most of his free time marketing his prints. Also, he has a special needs child who takes up the remaining free time he has. Kenny would need help.

Kenny's description of the head of the science department whose room they borrowed is that: She is the department chair and is the teacher's representative to the teachers union. She has a very good working relationship with the principal. She enjoys writing grants. Her last grant was for \$150,000 from NSTA to outfit her classroom.

Use the computers as learning stations

In order to manage the students and use his computers in his classroom as it is now, Kenny would have to divide tasks so that the students would not be doing computer work all at one time. He could use some of the activities, but would have to get them up on the computer well before class. Because Kenny's students are less motivated to learn and are easily distracted, he would have to devise methods to keep them in line and on task. Kenny has the control and respect of his students and I believe this would be possible.

Use the CD

Kenny could use the old computers and the CD version of Exploring Life. Kenny would be able to do this easily with the furniture he has in his room. There would be a place to plug in the computers in the centers of the base units. The students would miss out on the Webquests. This would not be fatal since his students are lower level readers and the Webquests may be too complicated to manage navigation and have too much reading.

Wireless

Kenny and the other biology teachers could make the program work by getting a classroom set of wireless laptops. Because all three biology teachers are low end users, they would be able to set up a sharing schedule for computer days.

Can the other teachers use the program?

No. The other two biology teachers are young women who are not interested in using computers in their classrooms. One may not stay in teaching too much longer. They do not have student computers in their classrooms. There would have to be some persuasion or tangible reward to convince them.

Systems Administrator

There are two people who are in the technology department who serve three buildings. One is an administrator whose many jobs are to manage the budgets, write grants, and manage the tech person. Most of her time is spent with administrative tasks. She reports directly to the Principal and the district. She can and does occasionally help teachers with hardware problems. The other position is a tech person who does repair work, sets up

computers and manages the system. He does the bulk of the work in the classrooms and administrative offices. Neither person had any type of formal training for their position.

The person I interviewed is the Administrator. She was a classroom teacher who was interested in computers and wanted to be in administration. She will be retiring soon. Another teacher moving up the ranks will most likely fill her position. Kenny is interested in applying.

How do you prioritize your work orders?

The administrative computers in the offices are the highest priority. Almost all of the office work is sent via network to the district office. This includes daily attendance, lunch counts, tardy students, grades, and many general office duties. This is the priority: attendance computers, network, central office, computer labs, library circulation, student machines.

When are you the most busy?

In the summer. All the computer orders are sent out in July. The computers must be set up for the first week in August for the upcoming school year. (This means that the district money is allocated in the spring for the next year. That's it. There needs to be some timing consideration for when textbook money is decided and the computer.)

Which computers are the most powerful?

The student machines are the ones with the least memory and are the slowest. The Central office has the fastest and newest computers.

Network

All the schools are networked internally and to the Internet. They use a larger service provider that other schools also use. This makes the system bog down at times the Internet is the busy. Some days the network doesn't work.

What should the developers tell the systems people?

- Be real specific on what the types of computers can be used, operating systems, memory, ram, etc.
- The least requirements the better.
- Use minimal plug-ins.
- The district needs to know up front that they already have the equipment. (This I disagree with. If system managers express to textbook committees that they must wait until the student computers are there before they purchase an Internet curriculum, the purchase will never happen. Notice the priority of computers. The administration that has the software and the need gets the best computers and service.)

How is money allocated for student computers?

- Every teacher has a budget for technology that they decide how to spend.
- School purchases one computer for each teacher.
- The school just purchased new computers for the lab.

- They purchased some extra computers for the social studies teacher.
- Jane Whittiker, the head of the science department, is more proactive than other teachers and hence, has lots of computers. She gets her computers herself.

What would happen if all the science teachers got a set of classroom computers?
The tech department would have to add on additional staff.