



Banana DNA or banana chunk?

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Banana chunks or DNA?

Many students in Traci Deal's biology class at West Rowan High School asked themselves that question Friday when a professor from Rowan-Cabarrus Community College visited their classroom to lead them in a basic biotechnology procedure.

Dr. Gina Sloan, a genetics professor at Rowan-Cabarrus, is visiting school classrooms across the two counties to help raise awareness about the community college's new biotechnology program.

"We wanted to have an outreach program -- a way to introduce students to biotechnology," she said.

Several weeks ago, Deal attended a presentation Sloan gave for science teachers, showing them what the community college could offer students in the way of advanced lab exercises.

Deal was impressed with what she saw and it fit into her biology curriculum so she called to set up the visit.

Sloan showed up Friday with blenders and bananas but students certainly weren't willing to drink the concoction she helped them make.



Rowan Cabarrus-Community College biotechnology instructor, Dr. Gina Sloan, draws a diagram on the board for students. Photo by Wayne Hinshaw, Salisbury Post

She explained that students would be extracting DNA from a banana using only household items.

Students used the blenders to turn the bananas to mush then added dish soap and salt.

Sloan explained that the dish soap would help break the cell membranes to allow the DNA to come out. The salt would then take away the proteins normally attached to DNA so students would have pure DNA to work with.

After a 20-minute soak, students poured the mixture through a strainer and mashed it with a spoon to try to get out large banana chunks.

As groups of students worked, Patricia Smith said when she first heard about the experiment the class would be doing "I didn't really understand how it was going to work, how we were going to extract DNA from a banana so it will be cool to see that."

Ashlea Armstrong was ready to see the finished product as well; she admitted that mashing the banana through the strainer wasn't the highlight of the experiment for her.

After students got their banana mixture into test tubes they poured alcohol in on top and waited.

White stringy matter started rising up in the alcohol.

Sloan explained that this was the banana's DNA.

Students took paper clips and fished the DNA out of the test tube and put it in a smaller vial.

Sloan said understanding what DNA is and how to extract it is central to any work that goes on in a research lab. The experiment helps give students a basis for the next step of actually doing testing with DNA.

Katie Cox said she thought it was cool that she could do the same procedure with things she had at home.

"You would think extracting DNA is in a lab, but it's cool you can actually do it in your house," she said.

As Katie and Lacy Heglar tried to fish DNA out of their test tubes Katie said "Is that banana chunks or DNA?"

"I'd like to think it's DNA," Lacy replied.

Deal said she thought her students loved the experiment and it was great for them to be able to actually see something she usually has to use models to show them.

The fact that money is tight in the school system and Sloan brings all the supplies and equipment is also a big plus for her, Deal said.

Sloan said biotechnology classes will start at Rowan-Cabarrus Community College in the spring.

We'll also hopefully offer a summer camp for school-aged children and workshops for teachers, she said.

Sloan said she's available to visit classes in both Rowan and Cabarrus counties and programs are available for all grade levels.



Clay Browning pulls the DNA of a banana from the test tube, while Jessica Wilkerson watches in a West Rowan High biology class. Rowan-Cabarrus Community College biotechnology instructor Dr. Gina Sloan has been visiting schools introducing the students to the biotech lab. Photo by Wayne Hinshaw, Salisbury Post