



Fifth-year teacher and RN, Lisa Wood, indicates the amount of blood that passes through the kidneys every minute to Kristen Ireland during a unit on the urinary tract system in Human Body Systems, a second-level class in the Biomedical series of four classes at Jay County.

A perfect gel is achieved by Darren Derome when testing city and well water for bacteria by its DNA. Students were then able to multiply their DNA samples a million times and separate them to be able to detect health issues like E. coli. Well water tested worse than city water because of local areas with fertilizer run-off. Students work with highly technical equipment to test their hypothesis in Biomedical Innovations.



HEALTH SCIENCE: BIOTECHNOLOGY
AVAILABLE @ JAY COUNTY HS



Things don't always go better with Coke... as fourth year biomedical students Zachary James and Grace Goodman discover when checking their radish starts after five days of adding different dilutions of the toxic agent. "Of course it's not as good as water, but it's surprising that Coke can be effective is used below 50% full strength, Zachary said. The use of rubbing alcohol produced some concern for the team of Desi Minnick and Collin Saxman, as many of their radish starts failed to flourish when this toxic element was introduced. Hair spray, another household product, did more than hold hair in place, it prevented the dirt from allowing the moisture to hydrate the starts for Randy Fortkamp and Katie Snyder.



Independence Day PLTW students tackle 7 Biomedical challenges

The bell rings. There is no need for the teacher to begin class. The students know what to do and they are already busy with their partner checking the growth of sample radish starts following a five-day application of a foreign dose response in *Problem 4: Investigating Environmental Health*.

"Working together to solve a task is vital," teacher Lisa Wood said. "Science does not have all the answers at the moment, and we need intelligent young minds to discover new cures and build new innovations." The team of Desi Minnick and Collin Saxman chose alcohol for their foreign application,

finding that any dosage above 50% dilution kills the plants.

On the table next to them, the team of Zachary James and Grace Goodman decide to use their after-lunch Cokes as their toxicity agent.

"The first three classes are hard," Grace said. "But

once you learn all the information, I like that now we can do these experiments all on our own."

Near the end of the year the students will tackle the last of seven problems for the class: The Design of a Medical Innovation.

"It's a very intensive and individualized class. You have to be more independent than in other classes," Desi said.

"A student who plans to enter a medical field and does not take these classes, is going to be lost."

This class was a must-have for Paige Lennartz, who hopes to someday become a Cardiologist.

"The hands-on experience is the best. Once you get into it, it's the coolest thing ever."

COURSES (4)

Principles of Biomedical Science
Human Body Systems
Medical Intervention
Biomedical Innovation

Problem 1: Design of an Effective ER
Problem 2: Exploring Human Physiology
Problem 3: Design of a Medical Innovation
Problem 4: Investigating Env. Health
Problem 5: Combating a Public Health Issue
Problem 6: Molecular Biology in Action
Problem 7: Forensic Autopsy

DUAL CREDITS (12)

3 college credits per class
through IUPUI



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