

AP Biology: A Pathway to Success in College & STEM Careers

- **College Incentives** – Earn up to 10 college credits with College in High School credit with Central Washington University. Exempt out of Introductory Biology – that’s a whole year of college tuition. When students pass the AP exam, they get additional 5 college credits in a 4-year university.
- **Careers/Majors** – Medical field (Doctor/Physician/Surgeon/Dentist). Nursing. Veterinary Medicine. Biomedical Engineering. Molecular Biology. Infectious Diseases – HIV, Ebola, Influenza, COVID, Biotechnology, Genetic Engineering. Scientific Research in Industry.
- **Topics Covered** – Diabetes, Cancer, Genetic Disorders, Bacteria, Cells, Natural Selection, Ecology, Cellular Energetics, Cell Communication, Brain and the Nervous System. Biostatistics. Overlaps with AP Statistics and AP Psychology. Case studies are used
- **Prerequisites** – Biology and/or chemistry, good work ethic, interest to learn, teamwork
- **Uniqueness** – Long term labs projects with sophisticated lab equipment procured by several grants, student-centered learning with flexibility, tons of teacher support and help that students won’t get typically in college. Creates a strong resume.
- **Assessments** – Vocab quizzes, lab practicals, projects, and exams with test corrections
- **Questions?** - Contact Dr. Devagupta by email. Rama.Devagupta@ksd.org. Or visit G-219

Honors Biology: Leads to Strong STEM Experiences in High School

- **Grades** – 9 and 10
- **Prerequisites** – A or B in 8th grade Science, or in 9th grade Physical and Earth Science
- **Benefits**– Prepares students for success in Honors Chemistry and other STEM courses in college. Students who do exceptionally well may have the option to enroll in College in High School in the Spring semester and earn 5 lab science credits with Central Washington University.
- **Topics Covered** – Chemistry of Life, Cells, Cell Transport, Cell Division, DNA, RNA, Protein Synthesis, Photosynthesis & Cellular Respiration, Genetics, Natural Selection, Ecology and Sustainability
- **Uniqueness** – Student based discussions, Socratic Seminars, Case Studies, Data Analysis from CDC, wet labs, and hands-on modeling. Students learn various study skills to be successful learners. Students are encouraged to participate in the Mid-Columbia Science Fair which opens up opportunities for summer internships at PNNL and universities.
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Forensics: A Great Choice for Juniors & Seniors

- **Grades** – 11 and 12.
- **Prerequisites** – 2 years of sciences like Biology and Chemistry. Consult with the teacher.
- **Benefits** – Forensics is a fun course for students who are not sure if they want to pursue STEM careers or not. Fulfills the 3rd-year of science requirement to graduate.
- **Topics Covered** – Crime Scene Investigations, Law and Justice, Physical & Trace Evidence, Hair & Fiber Analysis, Fingerprints, Soil & Plant analysis, Social Media & Cybercrimes, DNA Fingerprinting, Firearms & Ballistics, Arson, Fire & Explosives, Foot & Tire Impressions, Serology & Blood Spatter Analysis, Handwriting Analysis, Counterfeits, Tool Mark, Forensic Anthropology, Forensic Case Studies like the JonBenet Ramsey Case, O. J. Simpson case, assassinations of John Kennedy and Abraham Lincoln, Forensic Entomology, Nuclear Forensics, Alcohol Poisoning & Forensic Toxicology, Body Systems, Odontology, Wildlife Forensics, Psychology of a Killer, Postmortem, Death & Decay.
- **Uniqueness** – Student based discussions on Court Cases, Research Projects, Case Studies from FBI Investigations, wet labs, and hands-on modeling. Guest speakers from PNNL, Kennewick Police Department and a Spring field trip to the Crime Lab in Cheney & EWU.
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