Biomedical Science Academy
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If You like...
• Asking questions and seeking answers
• Solving problems and making discoveries
• Designing experiments and collecting data
• Building models and creating projects
• Utilizing teamwork and exhibiting leadership

If You are...
• Good at mathematics and science
• Creative, innovative and inquisitive
• Interested in technology and its applications
• Highly motivated and willing to work
• Preparing for a 4-year college or graduate degree
• Interested in challenging courses and college credit opportunities

Then...
the Biomedical Academy may be for YOU!

• Physician
• Surgeon
• Dentist
• Veterinarian
• Nurse
• Medical Technologist
• Biomedical Engineer
• Pharmacist
• Forensic Scientist
• Medical/Research Scientist
• Radiologist
• And many more!

Explore
Question
Discover
Solve

www.pltw.org

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Biomedical Science is a broad field encompassing many different medical and health care disciplines. These include biochemistry, biomedical engineering, forensics, immunology, microbiology, pharmacology, physiology, radiological sciences, and many more. In fact, the opportunities vary so greatly that no matter what your personality type or where your interests lie, there is a Biomedical Science career for you.

People working in Biomedical Science seek to understand the chemistry and biology of life in order to better diagnose, treat and prevent disease, improve health, and ease pain and suffering. This includes not only doctors and nurses, but scientists, engineers, administrators and technicians.

So, how do You get there?

1. Tell your counselor you want in this academy (as early as the 8th grade)!

2. Take the classes your counselor recommends!

3. Keep those grades up!

4. Do your best on all standardized tests!

5. During your sophomore year, complete the application to the Biomedical Science Academy!

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1) Principles of the Biomedical Sciences
Through exciting “hands-on” projects and problems, students are introduced to the field of biomedical sciences. Students will investigate the human body systems and various health conditions in order to determine the factors that led to the death of a fictional person. Key biological concepts including homeostasis, metabolism, inheritance, feedback systems and defense against disease are embedded throughout the course.

2) Human Body Systems
Students will be engaged in activities to better their understanding of basic human physiology, especially in relationship to human health. Students will use a variety of monitors to examine the human body both at rest and under stress in order to observe the interactions between the various body systems. Students will use LabVIEW® software to design and build systems to monitor body functions.

3) Medical Interventions
Student projects will investigate various medical interventions that extend and improve quality of life including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will study the design and development of various existing medical interventions. Using 3-D imaging software and current scientific research, students will design and build a model of a therapeutic protein.

4) Science Research Project
This capstone course gives students the opportunity to work with a mentor from the scientific and/or medical community, identify a science research topic, conduct research, write a scientific paper, and defend their conclusions and recommendations to a panel of outside reviewers.

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