



Course Name	Instructor	Instructor E-mail & Availability
Biology	Mrs. Andrea Finley	anmfinley@aps.k12.co.us anmfinley@aurorak12.com
Course Website	Class Meeting Times & Location:	Prerequisites
	HSA 03 Period 3, 6, 7	

Course Description

This course is a life science class in which you will study the cell, the molecular basis of heredity, biological evolution, interdependence of organisms, matter and energy, and organization in living systems and the behavior of organisms.

Standards

Colorado Academic Science Standards will be used throughout the school year. A copy of those can be provided if needed.

Learning Outcomes

- I can identify the parts of a controlled scientific experiment. I can develop, interpret & analyze a controlled scientific experiment.
- Obtain, evaluate, and communicate information how carbohydrates, lipids, and proteins play a role in the structure and function of living organisms.
- Plan and Conduct an investigation regarding feedback mechanisms, and analyze and interpret data about how they maintain homeostasis in interacting body systems.
- Use a model to provide accounts of how DNA’s structure ultimately determines the functions of proteins and predict possible effects on the organism as a result of mutations.
- Apply concepts of statistics (correlation) and probability to explain why offspring are genetically different from their parents and the mechanisms that lead to variation.
- Construct an explanation based on scientific evidence for how natural selection leads to adaptation of populations as a result of: (1) the potential for population increase, (2) genetic variation and heritability, (3) competition for resources, and (4) differential survival and reproduction.
- Develop a model to illustrate the cycling of matter within an ecosystem and the flow of energy among organisms within an ecosystem.
- Develop a model to illustrate the flow of energy through autotrophs and heterotrophs that includes the relationship between photosynthesis and cellular respiration.

Required Supplies

1. Notebook
2. Pens/Pencils/Paper

Grading

Students will be graded on a 4 point scale for all assignments

Point	Letter Grade	Explanation
3.0-4.0	A	In addition to the performance score of 3.0, the student demonstrates in depth inferences and applications that extend beyond what was taught.
2.5-2.99	B	There are no major errors or omissions regarding any of the information

		and/or processes (simple or complex) that were explicitly taught. This level is mastery
2.0-2.49	C	There are no major errors or omissions regarding the simpler details and processes, but there are major errors or omissions regarding the more complex ideas and processes.
1.0-1.99	D	With help, the student demonstrates a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.
Below 1.0 or No Evidence	F	Even with help, the student cannot demonstrate understanding of the simple details.

School Policies

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TARDY POLICY

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PASSES

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NON-ACADEMIC TECHNOLOGICAL DEVICES

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Classroom Policies

- **Be Present:** In order for you to learn, you must be present. The expectation is that you are in the classroom, willing and ready to learn each day. This class is fun but it is also challenging. If you miss class, you will get behind which ultimately causes you more work.
- **Be Prepared:** Bring your notebook, pencils, pens, and assignments with you to class every day. If you forget your homework in your car, locker, etc. you will not be permitted to go get it after the bell has rung.
- **Be Respectful and Courteous:** Please remember that you are not the only one in the class, and that you are to treat others in a

tolerant, considerate, courteous, respectful manner at all times. This includes being on time, not sleeping in class, doing your own work, keeping your hands to yourself, speaking in a mature manner, using appropriate language, being helpful, participating in class, etc. Also, keep in mind that you determine much of the climate of the classroom with your actions (spoken, written, and the use of gestures), if you wish to keep the classroom environment one conducive to learning, fun, and productivity, then please use common sense when dealing with your fellow classmates, and myself. In general treat others how you wish to be treated, but please try to think a little before acting. If you are have issues with another students please bring it to my attention as I do not see things that happen outside of class or on social media.

- **Do Your Best:** This includes actively participating in each and every class, activity, assignment, discussion. You will only get out of class as much as you put in. Please, please, please.....**ASK QUESTIONS!** If you don't ask you'll never know!
- **Homework** -Homework consists of a variety of things including introduction to new material, practice opportunities, intervention, and remediation. Like an athlete who must condition, practice, and refine their skills to improve their performance, students must also practice and refine their skills through homework to improve their learning. Teachers are expected to assign homework and students are expected to do it! Homework is essential and provides information to students, parents, and teachers about the student's progress.
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Tear off and return THIS PAGE only and return to Mrs. Finley

I have carefully read the expectations of this course and agree to support the goals and initiatives of the course. I will show up, speak up, stand up and go further than I ever thought possible.

Student name: _____ (print)

Grade _____ Period _____

Student Signature: _____

Parent/Guardian Name: _____

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Course Name	Instructor	Instructor E-mail & Availability
Human Body System	Mrs. Andrea Finley	anmfiney@aps.k12.co.us anmfiney@aurorak12.com
Course Website	Class Meeting Times & Location:	Prerequisites
www.my.pltw.org google classroom (site address coming)	HSA 03 Period 5	PBS

Course Description

In Human Body Systems (HBS), students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis in the body. Exploring science in action, students build organs and tissues on a skeletal Maniken®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases.

Standards

The curriculum for this course was designed by Project Lead the Way. They have incorporated national standards in science, mathematics, language arts, healthcare and technology. A copy of the standards and benchmarks for each lesson will be available for you to review within the LMS system. A hard copy of the standards will be available upon request.

Learning Outcomes by Quarter

Quarter 1 : Unit 1: Identity 1.1 Human 1.2 Tissues 1.3 Molecules and Cells Unit 2: Communication 2.1 The Brain 2.2 Electrical Communication	Quarter 3 Unit 3: Power 3.3 Oxygen 3.4 Water Unit 4: Movement 4.1 Joints and Motion 4.2 Muscles 4.3 Blood Flow
Quarter 2 Unit 2: 2.3 Chemical Communication 2.4 Communication with the Outside World Unit 3: Power 3.1 Introduction to Power 3.2 Food	Quarter 4 Unit 4: Movement 4.4 Energy and Motion: Exercise Physiology Unit 5: Protection 5.1 The Skin 5.2 Bones 5.3 Lymph and Blood Cells Unit 6: Homeostasis 6.1 Health and Wellness

Required Supplies

1. Three Ring Notebook with dividers
2. Laboratory Journal
3. Pens/Pencils/Paper

Grading

Students will be graded on a 4 point scale for all assignments

Point	Letter Grade	Explanation
3.0-4.0	A	In addition to the performance score of 3.0, the student demonstrates in depth inferences and applications that extend beyond what was taught.
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- Use the internet appropriately for class work only; NOT for email (only school email), surfing the web, Facebook, messaging or playing games.

Equipment use:

You will be using a lot of different equipment in this course. The equipment you will be using is both sensitive and expensive.

Here are just a few examples of some of the equipment you will use and their costs:

Laptops \$1,199 each	Micropipettes \$108.44 each
Electrophoresis equipment \$595 each	EKG sensors \$140.65 each
Microscopes \$429.84 each	Hand grip heart rate monitor \$110.58 each
CO2 gas sensors \$241.53 each	DNA discovery kit \$190 each

- You will be assigned a computer and will use the same one for every class.
- It is your responsibility to use ALL equipment and supplies appropriately, carefully, and according to the instructions you are given, and to ensure that they remain in good condition (for example, not scratching up the computers).
- Misuse of equipment and supplies could result in your not being able to use the equipment, which would jeopardize your standing in the program.
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Course Name	Instructor	Instructor E-mail & Availability
Medical Intervention	Mrs. Andrea Finley	anmfiney@aps.k12.co.us anmfiney@aurorak12.com
Course Website	Class Meeting Times & Location:	Prerequisites
www.my.pltw.org	HAS 03 Period 2	PBS HBS

Course Description

In Medical Interventions (MI), students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Standards

The curriculum for this course was designed by Project Lead the Way. They have incorporated national standards in science, mathematics, language arts, healthcare and technology. A copy of the standards and benchmarks for each lesson will be available for you to review within the LMS system. A hard copy of the standards will be available upon request.

Learning Outcomes by Quarter

Quarter 1 :

Unit 1: How to Fight Infection
Mystery Infection
Antibiotic Treatment
The Aftermath: Hearing Loss

Quarter 2

Unit 1:
Vaccination
Unit 2:
Genetic Testing and Screening
Our Genetic Future

Quarter 3

Unit 3: How to Conquer Cancer
Detecting Cancer
Reducing your Risk
Treating Cancer

Quarter 4

Unit 4: How to Prevail When Organs Fail
Manufacturing Human Proteins
Organ Failure
Transplant
Building a Better Body

Required Supplies

1. Three Ring Notebook with dividers
2. Laboratory Journal
3. Pens/Pencils/Paper

Grading

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3.0-4.0	A	In addition to the performance score of 3.0, the student demonstrates in depth inferences and applications that extend beyond what was taught.
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