

Course: *Sports Medicine*
Unit #2: *Anatomy & Physiology*

Year of Implementation: 2024-2025

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Stage One - Desired Results

Link(s) to New Jersey Student Learning Standards for this course:

{provide all applicable links to standards here}

<https://www.state.nj.us/education/cccs/2020/>

- **Unit Standards:** *(keep each of the following headings in place)*
 - **Content Standards**
 - 2.2.12.MSC.2: Analyze application of force and motion (e.g., weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.
 - 2.2.12.PF.4: Determine the role of genetics, age, nutrition, sleep, the environment, and exercise type on body composition and personal health (e.g., anabolic steroids, human growth hormones, stimulants).
 - **21st Century Life & Career Standards**
 - 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives
 - 9.4.2.CI.2: Demonstrate originality and inventiveness in work
 - 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas
 - 9.4.12.DC.6: Select information to post online that positively impacts personal image and future college and career opportunities.
 - 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving
 - 9.1.12.CFR.6: Identify and explain the consequences of breaking federal and/or state employment or financial laws.
 - 9.4.2.CT.2: Identify possible approaches and resources to execute a plan
 - 9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem
 - 9.4.2.CT.3: Use a variety of types of thinking to solve problems
 - 9.4.2.DC.1: Explain differences between ownership and sharing of information.
 - 9.4.2.DC.2: Explain the importance of respecting the digital content of others.

- 9.4.2.GCA:1: Articulate the role of culture in everyday life by describing one's own culture and comparing it to the cultures of other individuals
<https://www.state.nj.us/education/cccs/2020/2020%20NJSLs-CLKS.pdf>
- **Interdisciplinary Content Standards**
 - 8.2.12.EC.3: Synthesize data, analyze trends, and draw conclusions regarding the effect of a technology on the individual, culture, society, and environment and share this information with the appropriate audience
 - 8.2.12.ITH.3: Analyze the impact that globalization, social media, and access to open source technologies has had on innovation and on a society's economy, politics, and culture.
 - 6.1.12.CivicsDP.6.a: Use a variety of sources from multiple perspectives to document the ways in which women organized to promote government policies designed to address injustice, inequality, and workplace safety (i.e., abolition, women's suffrage, and the temperance movement)
 - 6.1.12.HistorySE.13.a: Use a variety of sources to explain the relationship between the changing role of women in the labor force and changes in family structure.
 - 6.1.12.HistoryUP.16.a: Analyze the impact of American culture on other world cultures and determine the impact of social media on the dissemination of American culture.
- **NJ Statutes:** NJ State law mandates the inclusion of the following topics in lesson design and instruction as aligned to elementary and secondary curriculum.

Amistad Law: N.J.S.A. 18A 52:16A-88 Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35 A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New Jersey Student Learning Standards (N.J.S.A. 18A:35-4.36) A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.

Diversity and Inclusion ([N.J.S.A. 18A:35-4.36a](#)) A board of education shall incorporate instruction on diversity and inclusion in an appropriate place in the curriculum of students in grades kindergarten through 12 as part of the district's implementation of the New Jersey Student Learning Standards.

Asian American and Pacific Islanders (AAPI) [P.L.2021, c.410](#) Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSLS) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416)

For additional information, see

NJ Amistad Curriculum: <https://www.nj.gov/education/amistad/about/>

Diversity and Inclusion: <https://www.nj.gov/education/standards/dei/index.shtml>

- (Sample Activities/ Lessons): <https://www.nj.gov/education/standards/dei/samples/index.shtml>

Asian American and Pacific Islanders:

- [Asian American and Pacific Islander Heritage and History in the U.S.](#)

A Teacher's Guide from EDSITEment offering a collection of lessons and resources for K-12 social studies, literature and arts classrooms that center around the experiences, achievements and perspectives of Asian Americans and Pacific Islanders across U.S. history.

Transfer Goal: Students will be able to communicate using anatomically correct terms when discussing the structure and function of the human body.

As aligned with LRHSD Long Term Learning Goal(s):<https://www.lrhhsd.org/Page/6163>

The Lenape Regional High School District Health/Physical Education program, in alignment with the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education, prepares students to lead successful lives. Through completing our coursework, our students will be better able to

- foster positive social influence as educated, contributing citizens
- use problem solving skills to solve “real world” health and well-being situations
- make responsible life decisions that contribute to their wellness

- communicate effectively as part of a peer group
- live healthy lifestyles through physical activity
- analyze and evaluate health and safety situations
- self-assess their personal decisions to improve wellness

Enduring Understandings

Students will understand that. . .

EU 1

communicating with anatomical terms is essential when discussing the structure and function of the human body.

EU 2

the structure and function of the human body dictates all natural movements and limitations.

Essential Questions

- Why do anatomical terms need to be used when discussing the human body?
- How do all the bones and soft tissues work together to create movement?

Knowledge

Students will know . . .

EU 1

- how to use anatomical terms to identify structures of the body. (2.2.12.MSC.2)

EU 2

- how muscles create movement. (2.2.12.MSC.2)
- how anatomical movement terminology demonstrates the motions at various joints. (2.2.12.MSC.2)

Skills

Students will be able to. . .

EU 1

- identify anatomical terms (anterior/posterior, medial/lateral, proximal/distal, superior/inferior, dorsal/ventral, deep/superficial). (2.2.12.MSC.2)
- identify the planes of the human body (frontal, sagittal, transverse). (2.2.12.MSC.2)

EU 2

- identify anatomical movements (flexion/extension, rotation, abduction/adduction, supination/pronation, circumduction, opposition/reposition, dorsiflexion/plantar flexion, inversion/eversion). (2.2.12.MSC.2)

- the bones of the human body and their characteristics. (2.2.12.MSC.2)

- identify the major muscles of the human body. (2.2.12.MSC.2)
- identify how muscles contract to create movement. (2.2.12.MSC.2)
- identify the types of joints in the body. (2.2.12.MSC.2)
- identify the bones of the body. (2.2.12.MSC.2)

Stage Two - Assessment

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Stage Three - Instruction

Learning Plan: Suggested Learning Activities to Include Differentiated Instruction and Interdisciplinary Connections: Each learning activity listed must be accompanied by a learning goal of A= Acquiring basic knowledge and skills, M= Making meaning and/or a T= Transfer. {place A, M and/or T along with the applicable EU number in parentheses after each statement} All knowledge and skills must be addressed in this section with a corresponding lesson/activity which teaches each concept. The following color codes are used to notate activities that correspond with interdisciplinary connections and 21st Century Life & Career Connections (which involves Technology Literacy): Red = Interdisciplinary Connection; Purple = 21st Century Life & Career Connection

- Label/color code anatomical diagrams. (A, EU1)
- Create a life size anatomy model. (A, EU1)
- Use Play Doh to identify anatomical planes. (A, EU1)
- Model all anatomical movements with their own body. (A, EU2)
- Skeleton labeling. (A, EU1)
- Create muscle/action flashcards. (A, EU 2)
- Create a poster that displays the different moveable joints of the lower extremity and their actions. (A, EU 2)
- Label/color major muscles of the body. (A, EU 2)
- Create a chart that includes actions and the antagonist pairs that are involved. (A, EU2)
- Utilize internet sites to practice identifying anatomical structures, movements, and position terms. (A, EU1, EU2)

- Show video clips from the internet on muscle contractions, joint characteristics and injury evaluations of the lower extremity. (A, EU2)
- Use the internet site Anatomy Arcade for bone and muscle identification. (A, EU1, EU2)
- Perform muscle movements for identified muscles. (M, EU 2)
- Field trip to the school's weight room to analyze the motions done at the various exercise stations to determine which muscles contract and joint motions occur when doing exercises involving the lower extremity. (M, EU2)
- Analyze a simple everyday movement for the structures involved and the muscles that create that movement. (T, EU2)
- Identify anatomical movements in various sports. (T, EU2)
- Trip to Drexel cadaver lab for observation and hands-on exploration of human anatomy. (T, EU1, EU2)

Pacing Guide

{This chart will be identical in all of the units for this course.}

<i>Unit #</i>	<i>Title of Unit</i>	<i>Approximate # of teaching days</i>
1	Sports Medicine Careers	16
2	Anatomy and Physiology	34
3	Strength and Conditioning	17
4	Injury Evaluation, Treatment, Rehabilitation	68

Instructional Materials

Roller Paper

Index cards

Play Doh

Colored Pencils

Anatomy Arcade online

Biodigital Anatomy online

Quizlet

Instructional online Videos, ie Dr. Brian Sutterer, Institute of Human Anatomy, Corporis on You Tube

Projector

Large Skeleton

Accommodations

Special Education: The curriculum will be modified as per the Individualized Education Plan (IEP). Students will be accommodated based on specific accommodations listed in the IEP.

Students with 504 Plans: Students will be accommodated based on specific accommodations listed in the 504 Plan.

English Language Learners: Students will be accommodated based on individual need and in consultation with the ELL teacher.

Students at Risk of School Failure: Students will be accommodated based on individual need and provided various structural supports through their school.

Gifted and Talented Students: Students will be challenged to enhance their knowledge and skills through acceleration and additional independent research on the subject matter.