

Course: *Sports Medicine*
Unit #3: Strength and Conditioning

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.PF.3: Design and implement a personal fitness plan, using evidence and evaluate how that reflects knowledge and application of fitness-training principles (FITT) and the components of skill related fitness.
 - 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).
 - 2.2.12.PF.5: Analyze fitness knowledge in strength, conditioning, agility, and the physiological responses of the energy systems effects on the mind and body before, during, and after physical fitness activities.
 - **21st Century Life & Career Standards**
 - 9.1.12.FP.5: Evaluate how behavioral bias (e.g., overconfidence, confirmation, recency, loss aversion, etc.) affects decision-making.
 - 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**
 - List any standards from other content areas that apply to this unit.
- **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 independently use their learning to develop individualized strength and conditioning programs.

As aligned with LRHSD Long Term Learning Goal(s):<https://www.lrhdsd.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. . .

Essential Questions

<p><i>EU 1</i> strength and conditioning programs vary from athlete to athlete based on individual needs.</p> <p><i>EU 2</i> strength and conditioning programs decrease the risk of injury.</p>	<ul style="list-style-type: none"> • What factors must be considered when developing an individualized strength and conditioning program to help individuals perform their best?
<p><u>Knowledge</u> <i>Students will know . . .</i></p> <p><i>EU 1</i></p> <ul style="list-style-type: none"> • the various training principles. (2.2.12.PF.3) • the differences between muscular strength, endurance, and power. (2.2.12.PF.5) • the difference between aerobic and anaerobic conditioning. (2.2.12.PF.3) <p><i>EU 2</i></p> <ul style="list-style-type: none"> • the importance of proper warm ups and cool downs. (2.2.12.PF.5) • the importance of cardiovascular conditioning. (2.2.12.PF.5) • there are a variety of ways to train. (2.2.12.PF.3) 	<p><u>Skills</u> <i>Students will be able to . . .</i></p> <p><i>EU 1</i></p> <ul style="list-style-type: none"> • apply each training principle to individual athletes and/or sports. (2.2.12.PF.3) • apply muscular training programs to individual athletes and/or sports. (2.2.12.PF.4) <p><i>EU 2</i></p> <ul style="list-style-type: none"> • develop appropriate warm ups and cool downs. (2.2.12.PF.5) • Apply cardiovascular conditioning to individuals and/or sports. (2.2.12.PF.4) • distinguish between the training methods needed for individuals and/or sports. (2.2.12.PF.4)
<p>Stage Two - Assessment</p>	
<ul style="list-style-type: none"> • 	

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**

- Discuss individual factors (i.e. gender, age, health, motivation, time, financial considerations) that can affect a training goal. **(A, EU1)**
- **Discuss muscle function – motor units and threshold stimulus; types of contractions; strength, power & endurance; aerobic 6vs. anaerobic metabolism. (A, EU1)**
- **Utilize the internet to research the various training principles (Overload, SAID, Specificity, FITT, Reversibility, Variation and Periodization) and how they affect training success. (A, EU1)**
- Video clips on a variety of current training programs. **(A, EU1)**
- Guest speakers from a related sports medicine field. **(A, EU 1, 2)**
- Analyze various popular training programs for examples of training principles and evaluate their effectiveness. **(M, EU 1,2)**
- **Analyze sports and events for their physical requirements. (M, EU 1, 2)**
- Create a list of activities that would specifically match a given sport/position or event. **(M, EU2)**
- Develop a list of activities/exercises that would be good examples of cross training for a given sport/position or event. **(M, EU 2)**
- Field trip to Velocity Sports Performance Center and/or The Training Room. **(M, EU 1, 2)**
- **Weight room activity. Be able to match a resistance exercise with a specific sport technique and describe the best way to complete the exercise for maximum benefit. (M, EU2)**
- **Develop a strength workout for a specific sport (and position) or event. (T, EU 2)**
- **Develop a conditioning program for a specific sport (and position). (T, EU2)**
- Identify the specific strength and/or conditioning necessities when given a specific sport. **(T, EU2)**

Pacing Guide

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

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

Instructional Materials

Projector
Weight Room
Colored Pencils

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.