10th Grade PE - Unit 7-9 weight training and aerobic Exercise

Content Area: **Health & PE**
Course(s):
Time Period: **November**
Length: **5 Weeks**
Status: **Published**

Targeted Standards

2.1.12.EH.1	Recognize one's personal traits, strengths, and limitations and identify how to develop skills to support a healthy lifestyle.
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.
	The quality of feedback from others, self-assessment as well as effort and repetition influences movement skills, concepts, and performance.
	Physical and emotional growth often relies on taking personal responsibility for developing and maintaining physical fitness levels that also provide opportunities for self-expression, enjoyment, and emotional satisfaction.
2.2.12.PF.1	Compare the short- and long-term benefits of physical activity and the impact on wellness associated with physical, mental, emotional fitness through one's lifetime.
2.2.12.PF.2	Respect and appreciate all levels of ability and encourage with care during all physical activities.
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.
2.2.12.LF.1	Apply and share a movement and physical fitness vocabulary that is intrinsic to motivate oneself, to impact family, and others in a community.
2.2.12.LF.2	Develop a sense of openness and willingness when participating in physical fitness activity to share and learn experiences from your own and other cultures.
2.2.12.LF.3	Examine building to a level of fitness to successfully participate in a range of different physical activities during a lifetime.
2.2.12.LF.4	Exhibit responsible social behavior by including and cooperating with classmates of all skill levels, assisting when needed, and collaborating respectfully to solve problems in groups, teams, and in pairs during physical activity.
2.2.12.LF.5	Describe the social benefits gained from participating in physical activity (e.g., meeting someone, making friends, team work, building trust, experiencing something new).

Rationale & Transfer Goals

Weight training promotes self-confidence and accomplishment. By gaining strength and endurance students will be more confident in their abilities. By designing workout plans students can promote healthy activities

for people outside of the school classroom. All workouts can be modified for any individual to succeed in bettering their health. Aerobics is designed to improve cardiovascular endurance. Participants will burn fat calories while improving their capacity for exercise. Tabata style workouts are a fun way of doing cardiovascular exercise.

Enduring Understandings - What are the most essential conclusions that students should be guided towards throughout this unit?

Mentally preparing for weight training can improve performance.

Rules and regulations have an impact on the health and safety of participants.

Poor form and technique can lead to injuries.

Factors such as health status, interests, environmental conditions, and available time have impact on personal fitness.

The impact of weight training in one's health?

Long-term effects of weight training.

Content/Objectives

Content - What students will know

Major muscle groups of the body.

What exercises will work the appropriate body part.

How to measure maximum strength.

Proper form and technique for each exercise.

Safety techniques and procedures.

How to safely "spot" another classmate

Skills - What students will be able to do

Employ strategies to improve communication and listening skills and assess their effectiveness.

Engage in a variety of vigorous physical activities to enhance each component of fitness.

Perform at a level needed to enhance cardiovascular fitness.

Evaluate, monitor, and improve their fitness level.

Be able to design and perform a weight training program

Essential Questions - What are the questions that will guide critical thinking about the content in this unit? Essential Questions should be thought starters toward the enduring understandings.

What is a set?

What is a Rep?

What are some different ways you can measure an individual's fitness level?

What are the basic components of physical fitness?

What is muscle Endurance?

What is muscle strength?

How can weight training improve personal health?

Name the essential muscle groups of the body.

Instructional Activites

Evidence (Assessments) - How we know students have learned

Outcomes related to personal lifting goals

Written assessments for weightlifting safety, etc.

Activities/Strategies - How we teach content and skills

Introduction to machines and exercises

Students create workout plan

Student implement workout plan

circuit training

Split routine

Upper/lower body

Anaerobic /Aerobic training

Spiraling for Mastery - Where does this unit spiral back to other units or previous years?

Content or Skill for this Unit

*Students will appropriately participate in activities that promote lifetime wellness. These activities include muscular strength, endurance, body comp., and flexibility.

*Students will display respectful behaviors towards classmates while in the weight room.

*Students will set short and long term goals to improve results.

*Students will be able to recognize and perform exercises to increase strength and/or endurance.

Spiral Focus from Previous Unit

*Locomotive Skills

*Flexibility

*Weight Lifting

*Locomotive Skills

*Agility

*Components of Fitness

Instructional Activity

*Daily Warm Up Activities

-Sit Ups, Push Ups, Planks

-High Knees, Butt Kicks

-Jumping Jacks, Running, Shuffle

*Lap Running/Walking

*Partner Pedometer Activities

*Weight Lifting

*Jog/Walk the track

*Circuits

*Jump Rope

*Presidential Fitness Testing

*Marker Relay

*Step Aerobics

21st Century Skills - What are the 21st Century Skills that are a part of this unit?

- • 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
- • 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).
- • 9.4.8.GCA.1: Model how to navigate cultural differences with sensitivity and respect (e.g., 1.5.8.C1a).
- 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
- • 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).

Interdisciplinary Connections - How does this content impact the following groups

ELA

NJSLSA.R1. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

RH.9-10.7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text, to analyze information presented via different mediums.

RST.9-10.2. Determine the central ideas, themes, or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

RST.9-10.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

RST.9-10.7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research

process, based on focused questions, demonstrating understanding of the subject under investigation.

- standards supporting written and print communication across all areas of the course

Science

HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. [Clarification Statement: Examples of investigations could include heart rate response to exercise]

HS-LS2-3. Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.

HS-LS2-8. Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce.

- Connections to study of exercise physiology and associated anatomy
- Basic understanding of communicability of diseases in discussion of wellness

Math

Creating Equations A -CED

A. Create equations that describe numbers or relationships. 1. Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.

Modeling with Geometry G-MG

A. Apply geometric concepts in modeling situations. 1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).

Interpreting Categorical and Quantitative Data S-ID N-ILN

A. Summarize, represent, and interpret data on a single count or measurement variable

1. Represent data with plots on the real number line (dot plots, histograms, and box plots).

Making Inferences and Justifying Conclusions S-IC

B. Make inferences and justify conclusions from sample surveys, experiments, and observational studies

- math processes related to fitness and health data, geometry in gameplay, and quantitative representations

Key Resources

www.presidentschallenge.org

www.fitness.gov

www.pecentral.com

www.sparkpe.org