## **Southern York County School District Instructional Plan**

### Weight Training I <u>Grade</u> Level: 9, 10, 11, 12

Textbook(s)/Instructional Materials Used:

Dates: August (Semester 1), January (Semester 2)

Unit Plan: Fitness Assessment and Goal Setting

### Stage 1 - Desired Results

#### PA Standard(s)/Assessment Anchors Addressed:

**10.4.12.A:** Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.

**10.5.12.A:** Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.

Understanding(s):	Essential Question(s):
<ol> <li>Students will understand</li> <li>Their fitness levels compared to age and gender health standards.</li> <li>The five components of fitness.</li> <li>How to analyze data to make personal fitness goals.</li> <li>The scope and sequence of the Welnet program.</li> </ol>	<ul> <li>How can Welnet Fitness Testing assess my physical strengths and weaknesses?</li> <li>How can I use assessment results to set personal fitness goals to improve my overall health?</li> <li>How can I use my fitness assessment results to guide my program development?</li> <li>How is Welnet used to track personal growth?</li> </ul>
Learning Objectives: Students will know  The fitness testing parameters The Five Components of Fitness The SMART Goal-Setting Model	Students will be able to:  Analyze their fitness scores.  Associate a fitness test for each component of fitness.  Create fitness goals based on their data.  Navigate Welnet Fitness Module
Dates: September (Semester 1), February (Semester 2)	Unit Plan: Benefits and Safety in Weight Training

### Stage 1 – Desired Results

#### PA Standard(S)/Assessment Anchors Addressed:

10.1.12.B Evaluate factors that impact the body systems and apply protective/ preventive strategies.

10.3.12.B Analyze and apply strategies for the management of injuries.

10.3.12.D Evaluate the benefits, risks and safety factors associated with self-selected life-long physical activities.

10.4.12.B Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities.

- social
- physiological
- psychological

10.4.12.E Analyze the interrelationships among regular participation in physical activity, motor skill improvement and the selection and engagement in lifetime physical activities.

10.5.12.E Evaluate movement forms for appropriate application of scientific and biomechanical principles.

- efficiency of movement
- mechanical advantage
- kinetic energy

- potential energy
- inertia
- safety

### Understanding(s):

#### Students will understand

- 1. How weight training affects you physically, mentally and socially.
- 2. How weight training can improve performance in various sports.
- 3. That not adhering to proper safety practices can lead to serious injury to self and others.
- 4. The theory behind periodization.

#### **Essential Question(s):**

- How can weight training benefit your overall health?
- How can weight training impact athletic performance?
- How will demonstrating proper safety techniques enhance the weight training experience for you and others?
- How can progressing through proper weight training phases optimize the fitness results?

# Learning Objectives: Students will know...

### The short term physical benefits of weight training including reduced risk of injury; strengthening of muscle, bone and joint; improved body composition, increased energy and improved sleep patterns..

- The long term physical benefits of weight training including reduced risk of heart disease, obesity and diabetes.
- The mental benefits of weight training including reduced stress, improved self-esteem, increased focus and relief of depression and anxiety.
- The social benefits of weight training and partner training including increased motivation and accountability.
- How weight training can improve performance and reduce risk of injury in specific sports.
- Rules and procedures for the weight room that create a safe and productive environment for everyone involved. These include maintenance of equipment, proper exercise technique, spotting techniques, warm-up/cool-down procedures and proper movement of materials.
- The dangers associated with poor technique, lack of or improper spotting, and improper use of equipment. These include fractures, contusions, concussions, as well as more serious consequences.
- The order of periodization: stabilization, strength endurance, maximal strength, and power phase.
- The basic theories behind periodization training including reducing overuse injuries, improving muscle recruitment, and optimizing strength and endurance gains.

#### Students will be able to:

- Identify physical, mental, and social benefits of weight training.
- Differentiate between short-term and long-term benefits.
- Identify weight training benefits of specific sports.
- Compare the use of weight training for different sports (ie. football vs. soccer).
- Demonstrate proper maintenance of equipment.
- Demonstrate basic exercise technique principles including the use of an athletic stance, proper hand placement, and toe and knee alignment.
- Demonstrate proper spotting technique for upper body and lower body lifts.
- Create an effective warm-up and cool-down for weight training.
- Demonstrate proper movement of weight and equipment throughout the space.
- Identify the dangers associated with poor technique, lack of or improper spotting, and improper use of equipment.
- List the 5 phases of periodization in the proper order: stabilization, strength endurance, maximal strength, and power phase.
- Explain how proper periodization can reduce risk of injury, improve muscle recruitment, and optimize gains in strength and endurance.

Dates: September (Semester 1), February (Semester 2)

Unit Plan: Selectorized and Plate Loaded Equipment

#### Stage 1 - Desired Results

#### PA Standard(S)/Assessment Anchors Addressed:

10.3.12.D Evaluate the benefits, risks and safety factors associated with self-selected life-long physical activities.

10.4.12.A Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.

10.4.12.DEvaluate factors that affect physical activity and exercise preferences of adults.

- personal challenge
- · physical benefits
- motivation
- access to activity
- self-improvement

10.4.12.E Analyze the interrelationships among regular participation in physical activity, motor skill improvement and the selection and engagement in lifetime physical activities.

10.5.12.A Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.

10.5.12.E Evaluate movement forms for appropriate application of scientific and biomechanical principles.

- mechanical advantage
- kinetic energy
- potential energy
- inertia
- safety
- efficiency of movement

### Understanding(s):

#### Students will understand...

- 1. How selectorized and plate loaded equipment are used including adjusting load, adjusting pads and proper starting and stopping points.
- 2. How selectorized and plate loaded equipment isolate muscle groups.
- How selectorized and plate loaded equipment do not require extensive muscle recruitment or stabilization.

### **Essential Question(s):**

- How can the use of selectorized and plate loaded equipment help me reach my fitness goals?
- How do selectorized and plate loaded pieces compare to other fitness modalities in terms of safety?
- When is it appropriate or beneficial to choose selectorized or plate loads equipment.

## Learning Objectives:

### Students will know . . .

- The muscles activated with each piece of selectorized and plate loaded equipment in the weight room.
- The safety advantages to selectorized and plate loaded equipment including controlled technique, lack of need of a spotter, lack of weight transportation.
- The safety concerns with selectorized and plate loaded equipment including worn cables, proximity to others, and improper use of the pins when adjusting load.
- The advanatages of this equipment including comfort level for novice lifters, reduced safety concerns, and targeting of muscles for development and rehabilitation.
- The disadvantages of this equipment including lack of stabilization and muscle recruitment, load limitations, and lack of full-body or multiple muscle group exercises.

#### Students will be able to:

- Adjust load, pads and any other features on each of the pieces of selectorized and plate loaded equipment.
- Demonstrate how to use each piece of equipment including proper start/stop points, technique and maintenance.
- Demonstrate any and all safety techniques for each piece.
- Incorporate these pieces of equipment into a fitness program.
- Compare selectorized and plate loaded equipment to free weights in terms of safety and physical benefits.
- Identify appropriate times to use these pieces of equipment.
- Explain how each piece activates specific muscle groups.

Dates: October (Semester 1), March (Semester 2)

Unit Plan: Free Weights and Functional Equipment

#### Stage 1 - Desired Results

### PA Standard(S)/Assessment Anchors Addressed:

10.3.12.D Evaluate the benefits, risks and safety factors associated with self-selected life-long physical activities.

10.4.12.A Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.

10.4.12.DEvaluate factors that affect physical activity and exercise preferences of adults.

- personal challenge
- physical benefits
- motivation
- · access to activity
- self-improvement

10.4.12.E Analyze the interrelationships among regular participation in physical activity, motor skill improvement and the selection and engagement in lifetime physical activities.

10.5.12.A Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.

10.5.12.E Evaluate movement forms for appropriate application of scientific and biomechanical principles.

- mechanical advantage
- kinetic energy
- potential energy
- inertia
- safety
- efficiency of movement

### Understanding(s):

#### Students will understand . . .

- How free weights and functional equipment are used including proper transportation, proper grip/positioning, spotting, and proper starting and stopping points.
- 2. How free weights and functional equipment present increased safety concerns compared to selectorized and plated loaded equipment.
- How free weights and functional equipment increase the body's need for stabilization and increases muscle recruitment.

### **Essential Question(s):**

- How can the use of free weights and functional equipment help me reach my fitness goals?
- How do free weights and functional equipment compare of other fitness modalities in terms of safety?

#### Learning Objectives:

#### Students will know . . .

- The muscles activated with each exercise using free weights and functional equipment.
- The importance of proper spotting, grip, technique and transportation of weights to ensure the safety of everyone in the weight room.
- The safety concerns with free weights and functional equipment including injuries due to the dropping of heavy weights, muscles and joint injuries associated with poor technique, and injuries specific to lack of or poor spotting.
- The advantages of this equipment including increased need for core stabilization, joint stabilization, muscle recruitment, functional strength and power exercises.
- The disadvantages of this equipment including decreased comfort level for novice lifters, need for a spotter, increased safety concerns, and an increased need for proper technique.

#### Students will be able to:

- Transport weight, adjust load, adjust benches and apply clips when applicable on each of the pieces of free weights and functional equipment.
- Demonstrate how to use each piece of equipment including proper start/stop points, technique and maintenance.
- Demonstrate any and all safety techniques spotting techniques for each piece.
- Incorporate these pieces of equipment into a fitness program.
- Compare selectorized and plate loaded equipment to free weights in terms of safety and physical benefits.
- Identify appropriate times to use these pieces of equipment.
- Explain how each exercise activates specific muscle groups.

Dates: October-November (Semester 1), March-April (Semester 2)

**Unit Plan: Stabilization Training** 

#### PA Standard(S)/Assessment Anchors Addressed:

10.3.12.D Evaluate the benefits, risks and safety factors associated with self-selected life-long physical activities.

10.4.12.A Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.

10.4.12.B Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities.

- social
- physiological
- psychological

10.4.12.E Analyze the interrelationships among regular participation in physical activity, motor skill improvement and the selection and engagement in lifetime physical activities.

10.5.12.A Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.

10.5.12.B Incorporate and synthesize knowledge of motor skill development concepts to improve the quality of motor skills.

- open and closed skills
- short-term and long-term memory
- aspects of good performance

10.5.12.D Incorporate and synthesize knowledge of exercise principles, training principles and health and skill-related fitness components to create a fitness program for personal use.

10.5.12.E Evaluate movement forms for appropriate application of scientific and biomechanical principles.

- efficiency of movement
- mechanical advantage
- kinetic energy
- potential energy
- inertia
- safety

#### Understanding(s):

#### Students will understand . . .

- 1. How stabilization training can be the foundation for strength training.
- 2. Stabilization exercises recruit multiple muscles and joints to help with movement.
- 3. How to increase the stabilization demand of an exercise.
- 4. How to incorporate core, plyometric, and SAQ training into a stabilization program.

### **Essential Question(s):**

- How can stabilization training help me reach my fitness goals now and in the future?
- How do exercise selection and acute variables in stabilization training compare to other modes or phases of training?
- How can I increase the stabilization demand of an exercise?
- Is my program helping me move towards my goals?

### **Learning Objectives:**

### Students will know . . .

- The benefits of stabilization training.
- The acute variables needed for appropriate stabilization training.
- Stabilization exercises for all muscle groups.

### Students will be able to:

- Develop a 4 week stabilization program geared towards their personal fitness goals.
- Alter exercises to increase the stabilization demand as needed.
- Incorporate core, plyometric and SAQ training into their program as need.
- Complete their program and all exercises with proper technique and safely.

Dates: November-December (Semester 1), April-May (Semester 2) **Unit Plan: Strength Endurance Training** 

#### Stage 1 – Desired Results

#### PA Standard(S)/Assessment Anchors Addressed:

10.3.12.D Evaluate the benefits, risks and safety factors associated with self-selected life-long physical activities.

10.4.12.A Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.

10.4.12.B Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities.

- social
- physiological
- psychological

10.5.12.A Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.

10.5.12.B Incorporate and synthesize knowledge of motor skill development concepts to improve the quality of motor skills.

- · open and closed skills
- short-term and long-term memory
- aspects of good performance

10.5.12.D Incorporate and synthesize knowledge of exercise principles, training principles and health and skill-related fitness components to create a fitness program for personal use.

10.5.12.E Evaluate movement forms for appropriate application of scientific and biomechanical principles.

- efficiency of movement
- mechanical advantage
- kinetic energy
- potential energy
- inertia
- safety

#### Understanding(s):

#### Students will understand . . .

- 1. How strength endurance is a progression from stabilization training.
- 2. How to incorporate stabilization and strength exercises into the same program.
- 3. How to use supersets to increase the efficiency of a program.
- How to modify the program as needed to increase demand.
- 5. How to incorporate core, plyometric, and SAQ training into a strength endurance program.

### Essential Question(s)

- How can strength-endurance training help me reach my fitness goals now and in the future?
- How do exercise selection and acute variables in strength endurance training compare to other modes or phases of training?
- How can I incorporate supersets into my program to help me reach my goals?
- Is my program helping me reach my goals?

### **Learning Objectives:**

#### Students will know . . .

- The benefits of strength endurance training.
- The appropriate acute variables needed in strength endurance training.
- Stabilization and strength exercises for all muscle groups.
- How to use supersets.

#### Students will be able to:

- Develop a 4 week strength endurance program geared towards their personal fitness goals.
- Alter acute variables to increase the demand as needed.
- Incorporate core, plyometric and SAQ training into their program as need.
- Properly incorporate supersets into their program.
- Complete their program and all exercises safely and with proper technique.

Dates: December-January (Semester 1), May-June (Semester 2)

**Unit Plan: Hypertrophy Training** 

#### Stage 1 - Desired Results

#### PA Standard(s)/Assessment Anchors Addressed:

10.3.12.D Evaluate the benefits, risks and safety factors associated with self-selected life-long physical activities.

10.4.12.A Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.

10.4.12.B Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities.

- social
- physiological
- psychological

10.5.12.A Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.

10.5.12.B Incorporate and synthesize knowledge of motor skill development concepts to improve the quality of motor skills.

- · open and closed skills
- short-term and long-term memory
- aspects of good performance

10.5.12.D Incorporate and synthesize knowledge of exercise principles, training principles and health and skill-related fitness components to create a fitness program for personal use.

10.5.12.E Evaluate movement forms for appropriate application of scientific and biomechanical principles.

- efficiency of movement
- mechanical advantage
- kinetic energy
- potential energy
- inertia
- safety

### Understanding(s):

#### Students will understand . . .

- How hypertrophy is a progression from stabilization and endurance training.
- How to incorporate strength exercises into a hypertrophy program.
- How to modify the program as needed to increase demand.
- How to incorporate core, plyometric, and SAQ training into a hypertrophy program.

## Learning Objectives: Students will know . . .

- The benefits of hypertrophy training.
- The appropriate acute variables needed in hypertrophy training.
- Strength exercises for all muscle groups.
- Safety concerns specific to hypertrophy training.

### **Essential Question(s)**

- Why would hypertrophy training be appropriate/inappropriate for my needs and goals?
- How can hypertrophy training help me reach my fitness goals now and in the future?
- How do exercise selection and acute variables in hypertrophy training compare to other modes or phases of training?
- Is my program helping me reach my goals?

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#### Students will be able to:

- Develop a 4 week hypertrophy program geared towards their personal fitness goals.
- Alter acute variables to increase the demand as needed.
- Incorporate core, plyometric and SAQ training into their program as need.
- Complete their program and all exercises safely and with proper technique.