

LAUSD- Elective Course 3F, 11th – 12th Grade, Physical Education Matrix Chart
Instructional Component Weight Training and Fitness
Suggested Length of Unit: Eighteen Weeks

Grades 11-12

Course 3F Weight Training and Fitness

The major emphasis of this unit is to provide an opportunity for eleventh and twelfth grade students to develop physical fitness based on their individual needs and abilities. At this stage students assume responsibility for their own workouts. This elective course requires students to develop and maintain a personal physical fitness log as evidence that they have performed daily workouts. Students will have ample opportunities to engage in examining exercise physiology and the body's physiological response to different conditioning programs that may include general conditioning, weight training, rope jumping, jogging, continual rhythmical exercises, circuit training, physical fitness testing, and proper mechanics of movement. Teachers check student logs at the beginning of the course and monitor them on an ongoing basis. Periodically throughout the course, students and teachers discuss the student's progress using the data in the log.

In addition, this course provides students who have not passed the physical performance test with the opportunity to reassess their physical fitness level and take the *Fitnessgram*® again in an attempt to regain exemption status from physical education for the following year.

Standards for Instructional Component Course 3F: Weight Training and Fitness

Standard Set 1: Students demonstrate knowledge of and competency in motor skills, movement patterns, and strategies needed to perform a variety of physical activities.

1.1 Explain the principles of biomechanics of first-, second-, and third-class levers and apply those principles to a variety of lifting techniques.

1.3 Demonstrate proper spotting techniques for all lifts and exercises that require spotting.

Standard Set 2: Students achieve a level of physical fitness for health and performance while demonstrating knowledge of fitness concepts, principles, and strategies.

2.1 Establish a set of personal physical fitness goals, using the principles of training, and create a strength-training and conditioning program.

2.2 Identify the prime mover muscles, antagonistic muscles, and stabilizer muscles for each of the major weight-training exercises.

2.3 Assess multiple performances of another person in the following areas: muscular strength, muscular endurance, cardiorespiratory endurance, and flexibility.

2.7 Develop and use a personal physical fitness log to record all workout data on a daily basis.

Standard Set 3: Students demonstrate knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.

3.1 Display safe and responsible behavior while training.

3.4 Develop personal goals to improve performance in weight training and fitness.

3.9 Assist others in the achievement of their fitness goals.

Standards for Instructional Component Course 3F: Weight Training and Fitness

Content Standard Group	Analyzed Standard	Sample Performance Task	Sample Scoring Criteria for Performance Task
1.1	Students will be able to explain the principles of biomechanics of first-, second-, and third-class levers and apply those principles to a variety of lifting techniques.	In groups of three students will create a poster that illustrates the biomechanics of first-, second-, and third-class levers. Each student will apply one to three levers in 3-4 free weight lifting exercises in each exercise the students will give an oral explanation of the biomechanics of the lever (s) used in each exercise.	Student's product clearly and accurately illustrates the biomechanics of each of the three levers. Student demonstration shows how to properly apply the three levers in 3-4 free weight lifting exercises.
1.3	Students will be able to demonstrate the proper spotting techniques for all lifts and exercises that require spotting.	In groups of three, students will demonstrate the proper spotting techniques for bench press, incline press, squats, as well as other exercises that require spotting.	Student's demonstration includes the appropriate body positioning, alignment, hand placement and focus.
2.1	Students will set personal physical fitness goals, using the	Students will use their <i>Fitnessgram</i> scores to set an	Student's product includes a minimum of 6 goals, one goal for

	principles of training, and create a strength-training and conditioning program.	individual goal for each test. Students will create a month long strength-training and conditioning program for each goal. The program will include the principles of overload and progression.	each of the six areas of the <i>Fitnessgram</i> ® assessment, that are clearly defined, measurable and obtainable. Students scoring below the healthy fitness zone set goals to improve. Those scoring in the HFZ have goals of maintaining or improving their score. The strength-training and conditioning program must be one month in length and clearly depicts the principles of overload and progression.
2.2	Students will identify the prime mover muscles, antagonistic muscles, and stabilizer muscles for each of the major weight-training exercises.	After viewing a live demonstration or video of each of the major weight-training exercises, for each activity, students will place a "P" for prime mover, "A" for antagonist or a "S" for stabilizer on a diagram of the human body.	Student's response includes placing the appropriate letter on the diagram of the human body, which properly identify the prime mover, antagonist and stabilizing muscles.

Standards for Instructional Component Course 3F: Weight Training and Fitness

Content Standard Group	Analyzed Standard	Sample Performance Task	Sample Scoring Criteria for Performance Task
2.3	Students will demonstrate the ability to assess multiple performances of another person in the following areas: muscular strength, muscular endurance,	Students will conduct a pre test, periodic test each eight weeks and a posttest between February 1 st and May 31 st on a partner in each component of the	Student assessments are done properly at the appropriate time intervals and according to the <i>Fitnessgram</i> ® administration manual.

	cardiorespiratory endurance, and flexibility.	<i>Fitnessgram</i> ®.	
2.7	Students develop and use a personal physical fitness log to record all workout data on a daily basis.	Students will develop and use a personal fitness log to record aerobic activities and strength and conditioning workout data on a daily basis.	Student's self generated individualized product should provide evidence of daily weight training exercises (aerobic, strength and flexibility exercises performed), number of repetitions, number of sets, and amount of weight lifted.
3.1	Students demonstrate safe and responsible behavior while training.	Students will follow the class safety rules and be responsible for setting up and cleaning an assigned area of the training area each day.	All class rules are followed and the area the students are responsible is neat, safe, clean and all equipment is accounted for.
3.4	Students develop personal goals to improve performance in weight training and fitness.	Students will develop personal goals based on their assessment evaluation, to improve their performance in weight training and fitness. Students will design a weight lifting and conditioning program using the principals of overload and progression for strength, flexibility, BMI, and aerobic capacity.	Student's individual goals are measurable, clear, obtainable and properly aligned to their <i>Fitnessgram</i> ® scores. The goals clearly describe the use of the overload and progression principals.
3.9	Students assist others in the achievement of their fitness goals.	Working in pairs students will review their partner's personal fitness goals, which are based on scores from the <i>Fitnessgram</i> ®. Each student assists the other in developing a workout program to achieve one's own goals. Then, students assist their partner by	The student's workout program will consist of the FITT principles for each component of <i>Fitnessgram</i> ®. The workout logs are legible, complete and accurate. The weekly evaluation accurately describes the student's ability to follow the prescribed workout.

		recording the sets and repetitions performed each day on strength training exercise log. Duration and average heart rate during aerobic training on the aerobic training log. Students will give a weekly evaluation of not met, met or exceeded workout goal, on their partner's ability to follow the prescribed workout program.	
--	--	---	--

Equipment and Instructional Materials

- Flat benches
- Strength training logs
- Aerobic workout logs
- Free weights
- Strength training machines
- Aerobic equipment
- Jump ropes
- Therapeutic balls
- Stretching mats

Pre-assessment

- Students will take the Fit Smart One test.
- Students will be pre-assessed on the *Fitnessgram* assessment

Sample Scaffolding Strategies

- Provide samples of workout logs
- Post the fitness principles
- Provide an example of the FITT principles for strength training
- Have students create a one day, one week and one month work out plan for strength training
- Post lists of aerobic exercise, flexibility exercises, and strength training exercises
- Provide the FITT principles for aerobic capacity and flexibility
- Define what goals are
- Define the steps of goal setting
- Define short term, medium and long term goals
- Provide instruction on weight training exercise for each part of the body with 3' plastic pipe as bar bells
- Stress the importance of progression

Learning Experiences

1. Break down of the skills and progression

A. Getting Started and Safety Considerations:

- Personal fitness is a personal matter
- What affects your attitude toward Physical Fitness
- What is Physical Fitness
- Primary Health Risk Factors
- Benefits of physical activity
- Pre-assessment considerations
- Your personal fitness program

B. Components of Fitness:

- Assessing Physical Fitness
- Health related fitness
- Skill related fitness
- Interpreting assessment results
- Goal setting
- Physical Fitness Programs

C. Guidelines for Exercise:

- **Appropriate attire**
- **Inclement weather**
- **Safety Precautions**
- **Warm-up**
- **Cool-down**
- **Common injuries**
- **Principle of Overload**
- **Principle of Progression**
- **Principle of Specificity**

D. Flexibility:

- **What is Flexibility**
- **Types of Stretching**
- **Application of FITT Principles**
- **Safety Precautions and Contraindicated Stretching**
- **Flexibility Assessments**
- **Goal Setting in Flexibility**
- **Flexibility Exercises**

E. Cardiovascular Fitness

- **Importance of Cardiovascular Fitness**
- **Monitoring the Heart**
- **Cardiovascular Disease**
- **Benefits of Cardiovascular Exercise**
- **Application of FITT Principles**
- **Goal Setting for Cardiovascular Improvement**

- **Muscular Fitness**
- **Defining Muscular Strength and Endurance**

- Myths About Weight Training
- Muscle Fiber Composition
- Methods of Developing Muscular Fitness
- Application of FITT Principles
- Goal Setting for Enduring Muscles
- Goal Setting for Major Muscles Groups
- Isotonic, Isometric, Isokinetic, Plyometrics

- Body Composition
- Nutrition
- Body Types
- Body Composition
- Methods of Measuring Body Composition
- Calorie Balance
- Benefits of Weight Control
- Goal Setting for Body Composition
- Eating Disorders
- Weight-Control Misconceptions

- Consumer Issues
- What Influences Your Buying Decisions?
- Have You Been Ripped Off?
- Spot Reduction
- False Advertising
- Exercise Gadgets and Gimmicks
- Fad Diets and Weight Loss Drugs
- Anabolic Steroids
- Selecting Fitness Equipment for your Home

- Designing Your Own Program
- Developing a Total Personal Fitness Program
- Steps In Designing Your Personal Fitness Program
- Starting Your Program

- Keeping It Going
- Evaluating Your Personal Fitness Program

Employing Specific Methods

- Teach students that personal fitness is personal, they are only competing against themselves
- Emphasis on the process of becoming physically fit
- Promote and reinforce a lifetime commitment to wellness through a physically active and healthy lifestyles
- Teach students the benefits of being physically fit
- Provide students a safe challenging, and enjoyable activities that will allow students to evaluate their lifestyles
- Teach students about the goals of the Surgeon General's Report on Physical Activity and Health

Enrichment/Differentiated Instruction

- A. Differentiated Instruction- it is important to distinguish the current skill level of your students in order to differentiate instruction and maximize learning. Teachers provide differentiated instruction and activities for multiple skill levels that address the needs of the students. Activities or drills should be challenging for students who have met the skill level and should offer additional practice opportunities for those that have not met the target skill level.
- B. Enrichment – Teachers can often give instruction that broadens and extends student's level of understanding. Encouraging the students to take fitness classes outside of school is extremely important for the real world experience. Have students identify places with fitness programs in the community that they can visit to experience physical activity to continue the student's active lifestyle outside of school. In addition, teachers can provide students with inter-mural programs for students that like to participate in teams but may not wish to compete on the schools inter-scholastic team.

Culturally Relevant and Responsive Instruction

- Use cultural references to impart knowledge, skills, and attitudes
- Connect the learning to students' prior knowledge and experiences
- Literature can be used to build prior knowledge or enhance student's awareness of a variety of fitness experts, such Pricilla Tuft, Joe DiAngelo, Frederick Neal, Kia Fusser, Lynn Swan, Sandi Morais.
- Prior knowledge should be welcomed and acknowledged

Accommodating Students with Special Needs

1. Safety
 - Contact the school nurse or designee to obtain pertinent medical information

- Be aware of the students' medical ID tags for disability
- The teaching progression and learning tasks should be differentiated (when applicable) to fit student needs

2. Students in Wheelchairs

- Students in wheelchairs should participate in upper body exercises as appropriate
- Provide as many wheelchair access machines as possible
- Provide workout partners to wheelchair students to assist in easy access weight machines

Equipment Tips

- Old inner tubes may be used for resistance training
- Therapeutic balls can be used to work the core of the body and as benches for weight training
- Selecterized machines with stacks of weight beginning at five pound increments is advisable
- Partner strength training routines can also be used in place of resistance machines
- It is advisable to have a variety of strength training equipment (free weight, resistance bands, isokinetic, isotonic)
- Plastic (PVC) pipe or wood dowel, four feet in length, for teaching proper form of weight training exercises

Instructional Tips

- Plan lessons with high expectations that are obtainable
- Encourage early success with appropriate skill progression
- Teach the appropriate mechanics using light weight, wood or plastic dowels, or partner resistance
- Group students into groups of 3
- When teaching each exercise emphasize the spotting positions
- Provide direct instruction in an area away from distractions
- Create a video of all strength training exercises that you can use to introduce students to the array of skills

Communication Tips

- Praise even small steps of success
- Communicate using appropriate biomechanical, physiological and anatomical terminology
- Encourage social interaction with activities that emphasize working cooperatively with partners.
- Promote good sportsmanship and appropriate behavior during all conditioning activities
- Identify and post motivational slogans
- Post articles on fitness and conditioning on the bulletin boards

Suggested Lead-Up Activities

- Single day work out plans
- One week work out plans
- One month work out plans
- Provide students with samples of work out plans
- Partner resistance routines
- Body weight exercises (push-up, bench dips, modified pull-up)
- Resistance band routines
- Selecterized machine routines
- Contraindicated exercises
- One set work outs (Fitness Training)
- Workout partner roles and duties

Teaching Aids

1. Warm-up activities-

To increase body temperatures allow students to complete 3-5 minutes of brisk aerobic exercise in a gradual progression (light jog, brisk walk, jumping rope, rowing machine, or jumping jacks in place).

2. Stretches-

Should be specific to the muscles that you will use in the lesson and unit (movement of the muscles will be slow and move through a complete range of motion).

3. Cool Down-

Stretching while cooling down and reviewing the day's lesson is important. Allow students to repeat the stretches that were specific to the day's lesson.

4. Skill tests-

- Spotting techniques
- Proper lifting positions and techniques
- Muscle and body anatomy
- Anatomical movements
- Anatomical planes
- Basic math skills

Interdisciplinary Learning

Language arts

- Use a thesaurus to identify synonyms and antonyms for designated vocabulary words
- Maintain a physical education journal in which students write about their fitness levels
- Read a book related to strength training and conditioning activity and write a 2 page book report

Mathematics

- Find the perimeter of a designated weight room
- Use bar graphs and charts to record progress from individualized training programs
- Calculate target heart rate using the heart rate reserve formula
- Calculate Body Mass Index

History/Social Science

- Develop a personal strength training timeline
- Locate the home state of a famous Olympic weight lifter in the United States
- Research countries who have won the most Olympic medals and write a one page summary

Art

- Create a two or three-dimensional work of art that addresses healthy lifestyles.
- Design an advertising campaign for physical activity
- Create a flexibility training activity collage

Music-

- Create melodic and rhythmic improvisations in a style or genre within a musical culture (e.g., gamelan, jazz, and mariachi) that can be played during warm-up activities
- Create a circuit training CD with 30 second training and rest intervals

Science

- Apply the use of 3 types of levers in the human body to weight lifting exercises
- Explain the difference between white and red muscle fiber and the specificity of training those fibers
- Create a 2500 calorie diet in accordance with the American Heart Association guidelines

Technology

- Use heart rate monitors and pedometers in physical activity and interpret the data
- Videotape and analyze the Olympic movement skills
- Use a biomechanical movement analyzing software to research a partners clean exercise

Inclement Weather

Create a repertoire of instructional lessons related to this unit that can take place in sheltered areas during inclement weather. This will ensure continuation of standards-based instruction. Suggested activities include:

- Circuit training
- Flexibility stations
- Aerobic stations
- Fitness assessment stations

Suggested Homework

- Write a two page expository composition, which explains the difference between strength training and power training
- Create and describe a new anatomically safe and correct strength training exercise
- Create and describe a strength training program for a person 45 years of age
- Research and make a list of resources in the community available for fitness training

Resources

- Men'sHealth Power Training by Robert dos Remedios, MA, CSCS
- Personal Fitness Looking Good Feeling Good by Williams, Smith, Johnson and Harageones
- Fitness for Life by Chuck Corbin
- Fitnessgram Activitygram
- Maintaining the Miracle, An Owner's Manual for the Human Body

Teacher Reflections

Good teaching should include ample time to reflect on the unit or lesson at the conclusion. Determine what worked well, what you might change and/or improve the next time you teach the unit. Focus on methods for grouping students, facilities, equipment, and the distribution of equipment, written assignments, handouts, visual aids and any other instructional aids that could enhance your instruction.

Physical Education Lesson Plan

Grades 11-12

Course 3- Weight Training and Fitness

Description:

Students will participate in a variety of push-up activities for the purpose of strength development. The emphasis of the lesson is on the strength principles of progression and overload. Students will prepare a one-week personal fitness plan emphasizing push-ups.

Objectives:

Students will use their scores from the *Fitnessgram*© assessment to set a goal for the push up test. Students will create a one month strength-training and conditioning program, which uses the principles of overload and progression to assist them in achieving their desired outcomes.

Standards Addressed:

- 2.1 Establish a set of personal physical fitness goals, using the principles of training, and create a strength-training and conditioning program.
- 3.1 Display safe and responsible behavior while training.
- 3.9 Assist others in the achievement of their fitness goals.

Materials:

- Sound System, if possible for playing active, positive lyric music during exercises.
- Elastic resistance/Stretch bands
- 24" large therapeutic balls
- Flat benches – for bench dips
- Stretching mats

Set-up:

Have the sound system and CD in place. Stretch bands should be attached to chain link fence/wall, etc. in advance. Therapeutic balls are to be in the two designated areas.

Attendance & Warm Up

Attendance will be taken and recorded by the teacher while students are engaged in warm-up activities.

Fitness Activity

Have students do a warm-up jog around a predetermined area. Review the F.I.T.T. principles related to endurance/cardio, stretching, and muscular strength activities with the students. Explain the benefits of warm-up aerobic and elasticity training on the body as it pertains to weight training and fitness. Make sure that students stretch the muscles to be used in the push up, include a general group, such as the spinal twist, deltoid,

triceps, hamstring, and quads, also include curl-ups on a cadence similar to that in the *Fitnessgram*®.

Learning Experiences

The teacher elicits responses from the class that detail how students first learned to do a push-up.

The students will participate in the following teacher lead activities to the best of their ability:

1. Partner push-up hand slaps, in proper push up position – alternating slapping hands for twenty times each hand.
2. 30 second aerobic exercise created and/or lead by a student.
3. Individual one-knee push ups – 20 times.
4. 30 second aerobic exercise created and/or lead by a student.
5. Individual two-knee push ups – 10 times.
6. Thirty second aerobic exercise created and/or lead by a student.
7. Twenty out-breath count for stretching the triceps – each side.
8. Partner push-up shoulder taps - for each push-up, alternately tap your partners shoulder. If student needs a therapeutic ball for their feet they may use one to keep proper push-up form.
9. Thirty second aerobic exercise created and/or lead by a student.
10. Discuss what muscles are being exercised and the feelings that are happening in the body with your partner/class. 2 minutes.
11. Using stretch bands, face away from the attached band far enough to enable a complete reach, and do repetitions until exhaustion.
12. Thirty second aerobic exercise created and/or lead by a student.
13. Using the benches, do triceps dips to exhaustion – count them.
14. While the students are Cooling Down- Stretching and reviewing the day's lesson, repeat stretches that were specific to the day's lesson, AND discuss the strength training concepts of progression and overload.
15. Students are given a teacher generated sheet for developing their goal for push-ups, the students will create a strength-training and conditioning program, one week in length, using the principles of overload and progression.

Assessment:

- Teacher observations and feedback
- Peer observations and feedback
- Student completion of a teacher generated strength training sheet for push-ups.
- Learning Logs could assess the fun and/or self-development achieved.

Closure

Have students return to the line-up area. Have students stretch to cool down while having students provide feedback on their successes, which may include the muscles exercised and pulse rate. Reiterate that their task is to try and improve their *individual* ability. Have students analyze feedback they received from their partner to determine what they need to do to improve their performance.

Teacher Reflection

Evaluate student progress from peer/group evaluations and teacher skills test to identify parts of the skills that need improvement so that additional practice can be provided during the next lesson. Determine what worked well, what you might change and/or improve the next time you teach the lesson. Focus on methods for grouping students, facilities, equipment, and the distribution of equipment, written assignments, handouts, visual aids and any other instructional aids that could enhance your instruction.

If possible create a DVD/video of students doing the various developmental push-up motions to show the class (parental permission is required prior to video taping any student). It could be shown while the students are stretching after their initial warm-up jog and while attendance is being taken.

Scaffolding Strategies: Suggested concepts and skills to support student success on the performance task/assessment. Review/explain:

- Muscular Strength and Endurance
- Myths about Weight Training
- Muscle Fiber Composition
- Methods of Developing Muscular Fitness
- What goals are
- The steps of goal setting
- Short term, medium and long term goals
- The importance of progression
- Goal Setting for Enduring Muscles
- Goal Setting for Major Muscles Groups
- Isotonic, Isometric, Isokinetic, Plyometrics
- Samples of workout logs
- The fitness principles and post
- An example of the FITT principles for strength training
- Have students create a one day work out plan for strength training
- Post lists of strength training exercises
- Practice by holding the straight body position for the push-up
- One knee push-ups
- Double knee push-ups
- Push-up hand slaps
- Push-up war
- Push-up anatomy tag
- Push-up soccer
- Practicing the basic skills in slow motion allows for greater initial success

- Partner push-up shoulder taps - for each push-up, alternately tap your partners shoulder. If student needs a therapeutic ball for their feet they may use one to keep proper push-up form.
- Create a cadence for the push-ups... using a tape/CD that you create. Make it at the same cadence as the Fitnessgram.
- Perform on floor/ground, benches/bleachers, use stretch bands or large therapeutic balls
- End unit with visit to a local fitness center (preferably at a college/university) for culminating activities.

Enrichment:

Field Trip: visit a local college to see the variety of activities available for students – from professional classes to *Fit 4 Life* general Physical Education classes. Take a look at the fitness center and if possible get permission to participate in a full circuit. Encourage students to use the internet to research fitness strategies and to identify local places where they can go, with parental approval, to improve or maintain fitness levels.

Extending the Lesson:

- Join a fitness/bodybuilding center with parental approval.
- Investigate and report on opportunities outside of school for keeping fit, include the locations of fitness centers, the costs, and evaluations of each site.
- Turn in a report on the evolution of fitness concepts and practices.
- Complete a written report on the fun you and your friends shared in learning how to improve fitness levels.

Resources

- Men's Health Power Training by Robert dos Remedios, MA, CSCS
- Personal Fitness Looking Good Feeling Good by Williams, Smith, Johnson and Harageones
- Fitness for Life by Chuck Corbin
- Fitnessgram Activitygram
- Maintaining the Miracle, An Owner's Manual for the Human Body
- Fitness Centers/Colleges/Universities
- YM/WCA
- Strength and fitness websites
- Books
- Charts
- Videos/DVD's