Aerobic Training & Conditioning Curriculum

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Aerobic Training and Conditioning

I. Students will examine and assess personal total body conditioning. (SM 1.4, 2.7, 3.3, 4.7)

A. Content and Skills (SMHPE 1, 4)

1. Cardiovascular assessments
2. Flexibility assessments
3. Muscular strength and endurance assessments

B. Facilitating Activities

Knowledge/Comprehension
Students will:
1. Describe/explain various assessments for flexibility, strength, endurance, and body composition.
2. Describe/explain factors that affect flexibility.
3. Describe/explain various stretching routines.

Application/Analysis
Students will:
1. Employ a variety of cardiovascular assessments using heart rate monitors and/or instapulses following fitness gram criteria. (pacer, mile)
2. Employ a variety of flexibility, muscular strength and endurance, and body composition assessments. (FitnessGram)
3. Analyze their fitness assessments based on FitnessGram criteria. (portfolio)

Synthesis/Evaluation
1. Students will create a personal fitness plan. (portfolio).

C. Application Level Assessment

1. Students will employ self-assessments of cardiovascular fitness, flexibility, muscular strength, muscular endurance and body composition using fitness testing criteria.
II. Students will identify and apply the principles of cardiovascular fitness and evaluate its impact on total fitness. (SM 4, 2.1, 2.7, 3.3, 4.7)

A. Content and Skills (SMHPE 1, 4)

1. Exercise heart rates
2. Target heart rate zones
3. Benefits of cardiovascular fitness
4. Cardiovascular programs

B. Facilitating Activities

Knowledge/Comprehension
Students will:
1. Explain the importance of exercise in the target heart rate zone. (written assessment)
2. Identify and discuss the benefits of cardiovascular fitness. (small group activity)
3. Identify various cardiovascular fitness programs.

Application/Analysis
Students will:
1. Demonstrate how to use the heart rate monitors and/or instapulses to assess exercise heart rates during participation. (portfolio assignments)
2. Employ the use of heart rate monitors to access personal heart rate zones through various cardiovascular exercises such as aerobics, swimming, power walking, circuit training and running.

Synthesis/Evaluation
1. Students will assess their cardiovascular fitness based on data from personal heart rate readings; resting heart rate, max heart rate, and recovery heart rate. (portfolio assignment)

C. Application Level Assessment

1. Students will demonstrate the benefits of cardiovascular fitness and employ self-assessments to determine exercise heart rate and training zones in order to create a personal cardiovascular program appropriate to their fitness level. (heart rate charts, written programs, portfolio assignment or checklist)
III. Students will identify and apply the principles of flexibility and evaluate its impact on total fitness. (SM 1.4, 2.1, 2.7, 3.3, 4.7)

A. **Content and Skill. (SMHPE 1, 4)**

1. Benefits of flexibility
2. Improving flexibility
3. Stretching techniques

B. **Facilitating Activities**

**Knowledge/Comprehension**
Students will:
1. Identify the benefits of flexibility
2. Identify a variety of stretching exercises; static, ballistic, PNF, Dynamic
3. Identify various assessments for flexibility.

**Application/Analysis**
Students will:
1. Demonstrate a variety of flexibility exercises for all the major muscle groups using proper techniques through self and peer assessments as part of a warm-up and cool down.
2. Employ flexibility assessments; box sit-reach test.

**Synthesis/Evaluation**
1. Students will create a personal flexibility program. (portfolio assignment)

C. **Application Level Assessment**

1. Students will interpret the benefits of flexibility and employ a personal flexibility program for their total body. (checklist)
IV. Students will identify and apply the principles of muscular fitness and evaluate its impact on total fitness. (SM 2.1, 3.3, 4.7)

A. **Content and Skills (SMHPE 1, 4)**

1. Weight room safety
2. Identification of major muscle groups
3. Muscular strength
4. Muscle toning
5. Muscle movement
6. Strength training

B. **Facilitating Activities**

**Knowledge/Comprehension**

Students will:

1. Identify the weight room rules.*
2. Identify proper spotting techniques for various exercises.*
3. Identify the major muscles of the body associated with specific strength exercises. (Diagrams, written assessments).
4. Identify the components of strength training.
5. Identify specific exercises for individual muscle groups.

*(Teacher observation, scoring guide)

**Application/Analysis**

Students will:

1. Practice a variety of strength training activities.*
2. Demonstrate proper strength training techniques.*
3. Demonstrate/practice proper weight room guidelines.*
4. Employ free weights and machines weights to increase muscular strength and body toning.*

*(Teacher observation, student performance scoring guide)

**Synthesis/Evaluation**

Students will:

1. Create their own muscular strength and endurance program showing proper technique and weight room safety. (portfolio assignment)
2. Assess the benefits of muscular strength and endurance and prescribe a personal strength training program for their total body. (written assessment)

C. **Application Level Assessment**

1. Students will demonstrate proper lifting technique for various strength exercises. (peer assessments and/or teacher scoring guides)
V. Students will identify and apply the principles of nutrition/weight management, abstaining from smoking and evaluate their impact on total fitness. (SM 1.5, 2.1, 3.3, 4.7)

A. Content and Skills (SMHPE 2, 4)

1. Balanced nutrition/food pyramid
2. Making healthy food choices
3. Analyzing nutritional values of foods
4. Dieting dangers and myths
5. Nutrition and exercise
6. Nutritional goal setting

B. Facilitating Activities

Knowledge/Comprehension
Students will:
1. Discuss a variety of fad diets, dangers, and myths.
2. Discuss the negative impact of smoking on cardiovascular fitness.
3. Identify current literature regarding nutrition and food choices, then give a report to the class (Written or oral presentation)
4. Explain how exercise and nutrition affects body composition.
5. Identify various weight loss programs and report to the class on trends/fads that are currently used.
6. Identify the components of the food pyramid.

Application/Analysis
Students will:
1. Calculate their BMI and/or body percentile fat and interpret the results.
2. Calculate their caloric intake with the use of caloric cost worksheet.
3. Record their body measurements throughout the semester and analyze their relationship to exercise and proper diet. (log & technical writing)

Synthesis/Evaluation
Students will:
1. Evaluate their personal caloric intake worksheet for strengths and weaknesses. (portfolio, written assessment).
2. Evaluate their personal diet and assess it for nutritional value. (portfolio, written assessment)
3. Develop a healthy diet plan including meals, snacks based on nutritional values. (portfolio, written assessment)

C. Application Level Assessment

1. Students will demonstrate the importance of exercise and nutrition as a part of total body fitness and illustrate a personal nutritional goal with a balanced nutritional plan. (chart, essay, portfolio assignment)