

Montgomery County Public Schools Grade 8 Physical Education Curriculum Framework

Standard I: Exercise Physiology
Students will demonstrate the ability to use scientific principles to design and participate in a regular, moderate to vigorous physical activity program that contributes to personal health and enhances cognitive and physical performance in a variety of academic, recreational, and life tasks.
1.8.1 Analyze the effects of physical activity on the body systems.
a. Explain and discuss how the muscular, skeletal, and nervous systems respond and adapt to the concept of progression and the overload principle. Clarifying Example: <i>The students will utilize dynabands to perform bicep curls. Over the course of several weeks students will monitor performance and adjust either the number of repetitions (progression) or the resistance (overload) to show how progression and overload lead to increased strength.</i>
1.8.2 Analyze and adapt components of the FITT principle to adjust levels of physical activity.
a. Establish individual fitness goals that reflect the importance of maintaining a healthy level of fitness. b. Design, implement, assess, and refine a personal fitness plan based on the FITT principle. Clarifying Example: <i>The students will use performance on the Fall Fitnessgram to identify areas in need of improvement, set goals, and design a program using the FITT principle for achieving those goals.</i>
1.8.3 Analyze the components necessary to design a fitness plan.
a. Justify the selection of activities that improve or maintain health related fitness. Clarifying Example: <i>The student will write a brief constructed response (BCR) to justify their choices of activities for their fitness plan.</i>
1.8.4 Investigate the benefits of physical activity.
a. Prioritize the personal benefits resulting from physical activity. Clarifying Example: <i>The student will list in descending order benefits that they derive from physical activity following a brainstorming activity.</i>
1.8.5 Analyze the relationship between nutrition and physical activity.
a. Examine the impact nutrients have on physical activity performance. <ul style="list-style-type: none">• Protein• Carbohydrates• Fats b. Distinguish between nutritional needs that maintain the average healthy body and those for athletic performance. Clarifying Example: <i>The student will learn through class discussion the role proteins, carbohydrates, and fats play in maintaining a healthy body composition.</i>
1.8.6 Examine the factors influencing exercise adherence.
a. Design and implement strategies to maintain and/or improve personal physical activity. Clarifying Example: <i>The student will develop an action plan to confront the obstacles that hinder their ability to participate in daily physical activity.</i>
1.8.7 Investigate the impact of cultural and media perceptions on physical activity.

a. Establish a set of criteria to evaluate the validity of personal fitness products.

Clarifying Example: *The student will create a wish list of items that they would want to have made available in their physical education facility. The students will justify their requests.*

b. Establish a set of criteria to evaluate health club facilities.

Standard II: Biomechanical Principles

Students will demonstrate an ability to use the principles of biomechanics to generate and control force to improve their movement effectiveness and safety.

II.8.1

Apply Newton's Laws of Motion to optimize movement and minimize injury.

- a. Interpret Newton's Laws of Motion as they relate to sport.
- b. Analyze and apply how internal and external factors are used to modify techniques to optimize movement.

Clarifying Example: *The student will experiment with shooting at archery targets of varying distances to discover the effects of gravity, air resistance, and action/reaction.*

- c. Apply and analyze the principles of absorption of force when receiving a moving object.
- d. Analyze the biomechanics of a specific skill and skill theme.

II.8.2

Analyze how the use of levers increases the effect of a force exerted on a body or increases the distance a body moves by increasing speed.

- a. Analyze and apply the increased effect on a body when force is applied while using a lever during a physical skill or skill theme.

Clarifying Example: *The student will experiment hitting a badminton overhead clear using limited (wrist), partial (wrist and elbow), and full range (wrist, elbow, and shoulder) of motion to analyze the distance, power, and speed generated.*

- b. Analyze and apply how the distance through which a body can be moved changes by increasing speed while using a lever during a physical skill or skill theme.

Standard III: Social Psychological Principles

Students will demonstrate the ability to use skills essential for developing self-efficacy, fostering a sense of community, and working effectively with others in physical activity settings.

III.8.1

Recognize the relationship between *effort* and improvement.

- a. Create a challenging, attainable personal physical activity goal.
- b. Participate in activities to attain the goal.
- c. Develop a plan to monitor progress.

Clarifying Example: *The student will collect and analyze data (pre- and post-testing) to set goals and to determine which goals were met.*

III.8.2

Work effectively with others in a variety of physical activity settings.

- a. Model strategies and practices related to self-regulation in a variety of challenging physical activity settings.

Clarifying Example: *The student will model behaviors consistent with teamwork and sportsmanship in which they demonstrate self-regulation. Peers will provide personal reflections based on how those behaviors added to their enjoyment of the activity.*

III.8.3

Build and maintain relationships which develop a sense of community and a peaceful, healthy environment for all.

- a. Employ strategies to resolve conflict and make healthy decisions that promote a sense of community and respect for others.

Clarifying Example: *The student will design methods of grouping for competitive play that foster a peaceful and healthy environment for all.*

III.8.4

Establish and modify personal physical activity goals while monitoring progress towards achievement.

- a. Establish a long-term physical activity goal for the school year.
- b. Evaluate progress towards goal achievement.

Clarifying Example: *The student will evaluate their progress towards his/her fitness goals, modify activities in those fitness areas where progress is not being made, and redesign their fitness plans.*

- c. Modify the method of achieving the goal to meet personal activity needs.

III.8.5

Apply effective time management strategies.

- a. Assess and evaluate the daily activity plan and use appropriate solutions and strategies to overcome personal time barriers.

Clarifying Example: *The student will identify and differentiate factors that are personal time barriers versus excuses for not being physically active. Students will then list three strategies for becoming more physically active on a daily basis.*

Standard IV: Motor Learning Principles

IV.8.1

Evaluate stages of learning.

a. Evaluate personal complex motor tasks using a rubric.

Clarifying Example: *The student will use a rubric to assess a partner's ability to perform a basketball lay-up off the dribble.*

b. Evaluate a peer's complex motor tasks using a rubric.

IV.8.2

Develop and implement an appropriate practice plan for skill proficiency.

a. Develop a plan to improve a complex motor task based on feedback. .

b. Modify and perform a complex motor task based on their plan of improvement.

Clarifying Example: *The student will perform a tumbling routine stressing variety and flow. A partner will provide feedback using a rubric and the student will modify practice plans based on that feedback.*

Standard V: Physical Activity

Students will demonstrate the ability to use the principles of exercise physiology, social psychology, and biomechanics to design and adhere to a regular, personalized, purposeful program of physical activity consistent with their health, performance, and fitness goals in order to gain health and cognitive/academic benefits.

V.8.1

Assess and analyze individual aerobic capacity/cardio/respiratory endurance.

- Perform a series of activities to enhance circulatory fitness.
- Use technology to monitor individual heart rate.
- Calculate target heart rate to reflect personal activity goals.
- Assess personal level of aerobic capacity/cardio/respiratory fitness using a standardized test.
- Apply personal assessment to developing personal goals and a plan to enhance aerobic capacity/cardio/respiratory endurance.

Clarifying Example: The student will perform a criterion referenced cardio respiratory test. (Fitnessgram)

Clarifying Example: The student will use results from their criterion referenced cardio respiratory test and personal fitness goals, students will construct a four-week fitness plan that concentrates on improving aerobic capacity and cardiovascular endurance. The plan should include a minimum of 30 minutes of aerobic activity outside of physical education class for a minimum of three days per week.

V.8.2

Assess and analyze individual muscular strength and muscular endurance.

- Perform a variety of activities to enhance muscular strength and muscular endurance.
- Define the principles of overload, specificity, and, progression in relation to muscular strength and muscular endurance.
- Assess your personal level of muscular strength and muscular endurance using a standardized test.

Clarifying Example: The student will Use the results from the criterion referenced muscular strength and endurance tests and personal fitness goals and construct a four-week fitness plan that concentrates on improving muscular strength and endurance. The plan should include a minimum of 20 minutes of muscular strength and endurance activities outside of physical education class for a minimum of two days per week.

- Explain the importance of maintaining a healthy level of muscular strength and muscular endurance.
- Develop personal goals to enhance muscular strength and muscular endurance.
- Design and execute a personal plan for muscular strength and muscular endurance based on principles of overload, specificity and progression.

V.8.3

Assess and analyze individual flexibility.

- Perform a variety of activities to enhance **flexibility** for various muscle groups.

Clarifying Example: The student will perform a criterion referenced flexibility test for shoulder, hamstring, and trunk flexibility. (Fitnessgram)

- Assess personal level of **flexibility** using a standardized test.
- Explain the importance of maintaining a healthy level of **flexibility**.
- Establish goals to increase flexibility as part of a fitness plan.

Clarifying Example: The student will construct a four-week fitness plan that concentrates on improving flexibility using the results from their criterion referenced flexibility tests and personal fitness goals. The plan should include a minimum of 10 minutes of activity-related stretching for all physical activities done

outside of physical education class.

Standard VI: Skillfulness

Students will demonstrate the ability to enhance their performance of a variety of physical skills by developing fundamental movement skills, creating original skill combinations, combining skills effectively in skill themes, and applying skills.

VI.8.1

Develop fundamental movement skills and apply them to a variety of recreational and daily life experiences.

a. Justify the selection of activities that improve or maintain skill related fitness.

b. Refine fundamental movement that will enhance physical skills and **skill themes**.

Clarifying Example: *The student will use two or three different volleyball contacts before playing the ball over the net in a modified volleyball activity. Emphasis is on ball placement rather than just placing the ball over the net.*

VI.8.2

Develop creative skill combinations and apply them to a variety of recreational and daily life experiences.

a. Refine creative performance sequences that exhibit quality movement based on self-expression.

Clarifying Example: *The student will work within a small group to choreograph a two-minute dance presentation depicting a theme (emotions, activities, movies, etc.).*

VI.8.3

Record and evaluate skillful movements to maintain and or improve personal motor ability and fitness levels.

a. Formulate and implement an activity plan that will improve personal motor ability and fitness levels.

Clarifying Example: *The student will construct a two-week plan that incorporates motor skills with fitness using the results from their criterion referenced fitness tests, motor skills portfolio, and personal goals. The student is encouraged to include organized activities outside of physical education class (intramurals, sport leagues, karate, fitness centers, etc.).*

VI.8.4

Develop the ability to solve tactical game problems (scoring and preventing scoring) using on-the-ball skills and off-the-ball movements.

a. Analyze and apply different concepts/strategies for each game category.

Clarifying Example: *The student will participate in a activity, "Strategy Charades" - The teacher distributes task cards to student groups highlighting specific strategies (Example - give and go). Each group demonstrates the strategic concept. The other students observe the performance of each group to identify the specific strategy.*

Clarifying Example: *The student will participate in a activity which the teacher designs a strategy checklist for the student to use while observing game play. The students will summarize results and make recommendations to improve team performance.*