

Climbing Wall, Trust Swing, Power Pole

Correlated Standards by Grade

NGSS=Next Generation Science Standards, ACOS=Alabama Course of Study, GPS=Georgia Performance Standards, GSE=Georgia Standards of Excellence, MSF=Mississippi Science Framework, TASS=Tennessee Academic Standards for Science



Grade 5

NGSS

5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.

ACOS

SC.5.6. Construct an explanation from evidence to illustrate that the gravitational force exerted by Earth on objects is directed downward toward the center of Earth.

Alabama Physical Education

10.) Explain good sportsmanship techniques for use in settling disputes.

MFS

1.P.2.D. Categorize examples of potential energy as gravitational, elastic, or chemical.

Mississippi Physical Education

2. Demonstrate an understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities. (C, L, GM, FM)

5. Exhibit responsible personal and social behavior that respects self and others in physical activity settings. (P, S, L, AP)

6. Value physical activity for health, enjoyment, challenge, self-expression, and/or social interaction. (S, C, F, L, P, A)

TASS

5.PS2.3. Use evidence to support that the gravitational force exerted by Earth on objects is directed toward the Earth's center.

Tennessee Physical Education

PSR.1.5 Exhibits respect for self and others with appropriate behavior while engaging in physical activity.

PSR.2.5 Provides corrective feedback respectfully to peers.

PSR.3.5 Encourages the movement performance of others.

GSE

GPS

Georgia Physical Education

PE5.3: Participates regularly in physical activity.

PE5.5: Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

PE5.6: Values physical activity for health, enjoyment, challenge, self expression, and/or social-interaction.

Middle School

NGSS

MS-PS2-2. Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.

Climbing Wall

MS-PS3-5. Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

ACOS

SC.8.8. Use Newton's first law to demonstrate and explain that an object is either at rest or moves at a constant velocity unless acted upon by external forces.

SC.8.9 Use Newton's second law to demonstrate and explain how changes in an object's motion depend on the sum of the external forces on the object and the mass of the object.

SC.8.14. Use models to construct an explanation of how a system of objects may contain varying types and amounts of potential energy.

SC.8.16. Apply the law of conservation of energy to develop arguments supporting the claim that when the kinetic energy of an object changes, energy is transferred to or from that object.

Alabama Physical Education

6th Grade

6.) Explain the importance of repetition and practice as a means for skill improvement..

8.) Explain sport-specific etiquette and good sportsmanship for team, individual, and dual sports.

9.) Demonstrate positive social interactions in situations that include members of different genders, cultures, ethnicities, abilities, and disabilities.

7th Grade

1.) Apply coordinated movements, strategies, and rules to achieve success in a variety of sports and activities.

12.) Demonstrate elements, including sport competency, literacy, and enthusiasm, needed to accomplish a team goal in competitive and cooperative environments.

8th Grade

1.) Demonstrate skills utilized in lifetime health-enhancing activities.

3.) Demonstrate combinations of balancing and supporting skills.

5.) Demonstrate skills associated with adventure, outdoor, and recreational activities.

10.) Solve problems in physical activity settings by identifying cause and potential solutions.

12.) Apply positive reinforcement to enhance peer physical performance during physical activity.

MFS

6.PS.2.F. Develop a logical argument to explain how the forces which affect the motion of objects has real-world applications including (but not limited to) examples of Mississippi's contributions.

8.PS.1.F. Recognize Newton's 3 Laws of Motion and identify situations that illustrate each law.

6.PS.2.C. Investigate and describe the effects of forces acting on objects.

Mississippi Physical Education

2. Demonstrate understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities. (C, F, L, GM)

5. Exhibit responsible personal and social behavior that respects self and others in physical activity settings.(S, P, L)

6. Value physical activity for health, enjoyment, challenge, self-expression, and/or social interaction. (P, L, F, C)

TASS

6.PS3.3. Analyze and interpret data to show the relationship between kinetic energy and the mass of an object in motion and its speed.

8.PS2.3. Create a demonstration of an object in motion and describe the position, force, and direction of the object.

Tennessee Physical Education Standards

MS.24 Outdoor Pursuits

CC.1 Peer Assessment (demonstrates higher level learning, offers feedback to peers)

Climbing Wall

CC.2 Peer Assessment (demonstrates higher level learning, offers feedback to peers)

CC.10 Outdoor Pursuits/Movement Concepts

PSR.1 Personal and Social Responsibility

PSR.3 Rules & Etiquette

PSR.4 Cooperation

VPA.1 Appreciation

VPA.2 Challenge

GSE

S8P3. Obtain, evaluate, and communicate information about cause and effect relationships between force, mass, and the motion of objects.

S8P2. Obtain, evaluate, and communicate information about the law of conservation of energy to develop arguments that energy can transfer from one form to another within a system.

Georgia Physical Education

PE6-8.1: Demonstrates competency in motor skills and movement patterns needed to perform a variety of activities.

PE6-8.2: Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

PE6.5: Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

PE6-8.6: Values physical activity for health, enjoyment, challenge, self expression, and/or social interaction

GPS

S8P3. Student will investigate relationships between force, mass, and motion of objects.

S8P2. Students will be familiar with the forms and transformations of energy.

High School

NGSS

HS-PS2-1. Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.

ACOS

SC.HS.8. Apply Newton's laws to predict the motion of a system by constructing force diagrams that identify the external forces acting on the system, including friction.

MFS

HS.PS.2.A. Demonstrate and explain the basic principles of Newton's three laws of motion, including calculations of acceleration, force, and momentum. HS.P.2.A. Use inquiry to investigate and develop an understanding of the kinematics and dynamics of physical bodies.

Mississippi Physical Education

2. Demonstrate understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities. (C, L, P, AP)

5. Exhibit responsible personal and social behavior that respects self and others in physical activity settings. (C, S, P, L GM, AP)

6. Value physical activity for health, enjoyment, challenge, self-expression, and/or social interaction. (S, L, F, GM, AP)

TASS

Tennessee Physical Education

Climbing Wall

PSR.6. Provide support and encouragement for classmates (e.g., acknowledge good play, accept success/performance limitations).

PSR.7. Display acceptance of individual differences (e.g., ability level, cultural background, gender, interest, age).

PSR.8. Demonstrate conflict resolution skills.

GSE

SP1. Obtain, evaluate, and communicate information about the relationship between distance, displacement, speed, velocity, and acceleration as functions of time.

SP2. Obtain, evaluate, and communicate information about how forces affect the motion of objects.

Georgia Physical Education

PEHS.1: Demonstrates competency in motor skills and movement patterns needed to perform a variety of activities.

PEHS.2: Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

PEHS.5: Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

PEHS.6: Values physical activity for health, enjoyment, challenge, self expression, and/or social interaction

FPA.4. Participate in skill-related fitness activities (e.g., agility ladder, yoga, plyometric).

PSR.1. Demonstrate responsible independent behaviors (e.g., best effort, compassion, initiative).

CC.1. Analyze movement concepts and principles to improve performance (e.g., pathways, force, center of gravity).

GPS

SP1. Students will analyze the relationships between force, mass, gravity, and the motion of objects.