

Nancy S. Grasmick State Superintendent of Schools

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TO:

Members of the State Board of Education

FROM:

Nancy S. Grasmick

DATE:

May 27-28, 2009

SUBJECT:

Results of the External Review of the Physical Education Voluntary State

Curriculum

PURPOSE:

The purpose of this item is to report the results of an external review of the Maryland Voluntary State Curriculum for Physical Education conducted by Westat and to seek the State Board's acceptance of this curriculum.

BACKGROUND/HISTORICAL PERSPECTIVE:

Impetus to develop the Voluntary State Curriculum (VSC) resulted from the call for rigorous content standards articulated in NCLB legislation and the 2002 Maryland report, *Achievement Matters Most: The Final Report of the Visionary Panel for Better Schools.* An important recommendation of the Visionary Panel report was for state and local school systems "to align every aspect of education...to support the classroom teacher." This initiative also recommended development of a statewide grade K – 12 curriculum that specifies by grade and subject area what students are expected to know and be able to do. The Physical Education VSC defines what students should know and be able to do at each grade level, Pre-K through 8, and for the one-half credit course required for high school graduation.

The physical activity and physical education of American school children has been the subject of both national and state legislation. In 2004 the United States Congress established a requirement that all school districts with a federally-funded school meals program develop and implement wellness policies by the start of the 2006-2007 school year. Among other critical elements, district policies must include goals for physical activity.

Maryland legislative efforts have included efforts to mandate minimum times for physical education to address student wellness. These legislative efforts resulted in the *Task Force to Study Student Fitness in Maryland Public Schools*. The final report of the Task Force was submitted to the General Assembly in November 2008. During the 2009 legislative session the *Gwendolyn Britt Student Health and Fitness Act Bill* was passed which authorizes LSS's to develop and implement certain Wellness Policy Implementation and Monitoring Plans. As part of

these wellness plans, districts are encouraged to collect baseline data on the health components of fitness.

EXECUTIVE SUMMARY:

In the 2004-2005 school year, MSDE began the work of drafting the Physical Education VSC. Representatives from Maryland's local school systems and institutions of higher education joined with MSDE staff to develop initial drafts. The documents underwent a series of subsequent reviews where scope, sequence, assessable content, and consistency were examined and revised by MSDE and selected physical education specialists.

The Physical Education VSC design efforts engaged processes similar to those used earlier by other core content VSC development teams. Similarities are particularly evident in the delineation of PreK – 8 grade-by-grade discrete instructional targets as well as in format. At the top level, *content standards* are broad statements of what students should know and be able to do. Within each content standard are *indicator statements* that vary in number within and across content standards and grades. Indicator statements break the content standards into "teachable components." Finally, *objective statements*, written with the most specificity, describe what students are expected to know and be able to at a given grade level. They are intended to guide teachers in the delivery of instructional activities and, therefore, should be measureable.

Representatives from the local school systems and higher education participated in the various steps of the development, review, and revision in the curriculum development process. During the spring semester of 2007, Division of Instruction staff conducted district visits to collect feedback and input from teachers, administrators and parent groups about the Physical Education VSC. Visitors to the mdk12 website have also had the opportunity to provide feedback of the document. In addition to collecting feedback, district visits and focus groups provided opportunities to observe curriculum implementation and to collaboratively determine professional development needs, and discuss possible MSDE and local school system partnerships to address identified needs.

In 2008, Westat was awarded the contract to review the Physical Education VSC through a competitive bid process. To carry out this review, Westat drew on the expertise of four nationally recognized content experts. The review team developed a series of rubrics to use in evaluating the Physical Education VSC and then summarized that information and provided specific discussion to Maryland's physical education leadership. As soon as the preliminary report was available, physical education coordinators, supervisors, and resource teachers from across the state began carefully reviewing and responding to the recommendations made in Westat's report.

ACTION:

I am recommending State Board acceptance of the Physical Education Voluntary State Curriculum.

NSG/dls

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Attachment A Executive Summary From the External Review of the Maryland Physical

Education Voluntary State Curriculum (VSC)

Attachment B Rationale Statements
Attachment C Physical Education VSC

• Prekindergarten – Grade 3 VSC

• Grade 3 - Grade 8 VSC

High School VSC

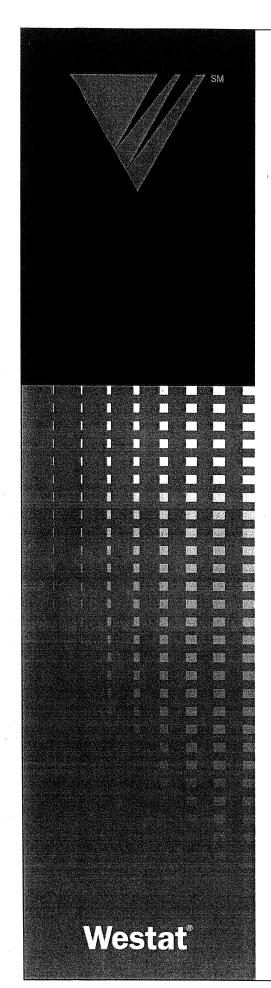
Attachment D Overview of Maryland's Wellness Policies

Attachment E Preventing Childhood Obesity, A School Health Policy Guide

NASBE 2009

Attachment F Bill Summary of the Gwendolyn Britt Student Health and Fitness Act

ATTACHMENT A



Findings From the External Review of the Maryland Physical Education Voluntary State Curriculum (VSC)

Executive Summary

Author

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July 2008

Prepared for:
Maryland State Department of
Education
Baltimore, Maryland

Prepared by: Westat 1650 Research Boulevard Rockville, Maryland 20850 (301) 251-1500

Findings From the External Review of the Maryland Physical Education Voluntary State Curriculum

The purpose of this report is to present findings of an external review conducted by Westat and its team of expert consultants for the grades PreK through 8 and high school Maryland physical education Voluntary State Curriculum (VSC). This task represents the concluding effort in finalizing the physical education state content standards before presentation to the State Board of Education for acceptance. Our report discusses:

- Westat and its qualifications for carrying out this work;
- An overview of the process for developing the VSC in physical education; and
- A summary of the findings of the external review. Information on the review panel is presented in the Appendix.

Westat

Headquartered in Rockville, Maryland, Westat is an employee-owned research firm known for its quality of work and professional staff in a broad range of research areas including statistical design, survey research, and program evaluation. Since 1961, Westat has grown steadily by serving federal and local government agencies, private businesses, and other clients. Westat's most important resource is its staff of more than 1,900 social scientists, statisticians, data processing professionals, program area specialists, survey operations experts, and support personnel who offer expertise in every aspect of program evaluation, survey design, and implementation.

We have a history of involvement with education projects that have received national recognition for their quality, relevance, and capacity to help instructional leaders improve student achievement. Among these projects is our longstanding work as contractors for sample selection and field administration for the National Assessment of Educational Progress (NAEP), including the 1997 NAEP Arts assessment, our evaluation of the city-state partnership between the Maryland State Department of Education (MSDE) and the city of Baltimore, and numerous evaluation projects addressing school improvement.

The external review of the Maryland physical education VSC draws on Westat's in-depth understanding and familiarity with instructional programs in Maryland, as well as the skills and knowledge of nationally recognized experts in health science and physical education who are supporting our efforts. Our review of state content standards for physical education is the third of such endeavors for the state of Maryland.

Westat's history with MSDE regarding the agency's efforts to develop grade-specific state content standards began with a review of Maryland's PreK-8 social studies standards. For this endeavor, we assembled an external review team with panel members of national repute. Each had expertise in a specialized area(s) of the social studies curriculum (i.e., economics, geography, history, political science, and government). Also included on this team was a child development specialist to evaluate the appropriateness of the instructional content for students in the intended grade and an educational measurement specialist to evaluate the extent to which the VSC addressed clarity and measurability. After analyzing their input, Westat produced a report of the findings that was presented to the State Board of Education.

For the review of the Maryland fine arts VSC, Westat refined this review process and implemented a more formalized structure to facilitate data collection, analyses, and reporting. Our extensive work as contractors for the assessment of Maryland fine arts education project and involvement in the early stages of development of the fine arts grade-by-grade PreK through 8 content standards in visual arts, music, dance, and theatre informed our work for this review. We developed scoring rubrics for each review criterion designated by MSDE to help ensure that reviewers were basing input on the same definition. Additionally, we developed a template of the VSC for content specialists to use to enter their scores along with brief explanations for their score assignments. The same procedures were used in the review of the Maryland physical education VSC.

Westat is also currently conducting external reviews of the Maryland foreign language and school library media VSC documents.

Development of the Physical Education Voluntary State Curriculum in Maryland

The physical education VSC was developed by MSDE as an outcome of the No Child Left Behind Act of 2001 requirement for rigorous content standards and the 2002 report A dieument Matters Most:

The Final Report of the Visionary Panel for Better Schools. The report challenged the state and local school systems to align all components of education—curriculum, assessment, teacher preparation and professional development, leadership, and funding—to support the classroom teacher. It recommended development of a statewide grade K-12 curriculum that specifies by grade and subject area what students are expected to know and be able to do.

The physical education VSC is similar to the VSC effort in other content areas in format and in delineating PreK-8 and high school grade-by-grade discrete instructional targets. At the top level, content standards are broad statements of what students should know and be able to do. Within each content standard are indicator statements that vary in number across both content standards and grades. Indicator statements break the content standards into "teachable" components. Finally, objective statements, written with the most specificity, describe what students are expected to know and be able to do at a given grade level. Objective statements are intended to guide teachers in the delivery of instructional activities and, as such, should be measurable.

The VSC development and review process for physical education is consistent with that of other core content areas. This external review by content specialists of national repute is one of the final activities before presentation to the State Board for acceptance and statewide implementation.

The review criteria address the following issues:

- Content rigor;
- Developmental appropriateness;
- Clarity of language;
- Measurability;
- Parallel levels of specificity in format;
- Scope and sequence;
- Alignment with the current national standards (National Association for Sport and Physical Education— NASPE); and
- Parallel levels of specificity in relation to the VSCs for reading/English language arts, science, and health education.

The External Review of the Physical Education VSC

The purpose of this review was to conduct an evaluation of the Maryland PreK through grade 8 and high school physical education content standards according to criteria specified by MSDE. To carry out this review, Westat drew on the expertise of recognized content experts in physical education and educational measurement. The physical education specialists independently reviewed the VSC for content rigor, developmental appropriateness, scope and sequence, and relation to national curricular expectations. A separate review of clarity of language, measurability, and parallel specificity was conducted by the measurement specialist.

To assist experts in their review and facilitate data collection, Westat developed two major review tools: Review Protocols, i.e., grade-specific templates of the physical education VSC, and scoring rubrics. We created two versions of the Review Protocol: one for physical education specialists to evaluate subject area content and one for the measurement specialist to assess clarity of language, measurability, and parallelism in the VSC.

The scoring rubrics provide reviewers with quantitative scales for assessing each criterion. They specify features to consider in assigning a rating and are based on dimensions and standards specified by MSDE in the scope of work for this activity, as well as language widely used in educational publications and current national discussions. Possible scores range from 1 to 4, with 4 being considered as *outstanding* or *exemplary* and *consistently* meeting criteria; 3, *satisfactory* and *generally* meeting criteria; 2, *weak* or *uneven* and only *sometimes* meeting criteria; and 1, *poor* and *rarely* or *never* meeting the criteria.

A holistic scoring method was used. Reviewers assigned a single score that reflected the "best overall fit" to the set of descriptors for each scale point. In addition, we required reviewers to provide comments and suggestions, particularly if their assigned score was less than 4 (exemplary). This requirement was to ensure that the panel provided MSDE not only with quantitative ratings of adequacy, but also a rationale for weaknesses noted and possible guidance for VSC refinement.

At the outset of the two-week review period, we provided the panel with documents critical to the VSC review. They included detailed written Instructions for Reviewers, a draft of the MSDE grade-by-grade physical education VSC including the Glossary, scoring rubrics, and 12 separate Review Protocol for each of grades PreK through 8 and high school. To ensure that reviewers clearly

understood our expectations, they were required to submit for approval a sample of their completed review for one content standard in one grade prior to beginning their review in earnest.

At the end of the review period, Westat staff examined the Review Protocols for completeness and, if necessary, contacted reviewers for clarification. When data resolution issues were resolved, we calculated mean scores for each criterion.

Findings and Recommendations¹

As evidenced by the scores assigned, reviewers found the physical education VSC to be generally satisfactory with some exceptions that bear further consideration by MSDE. The following is a summary of the findings and a profile of the review by criterion across grades.

- Content Rigor. Reviewers found the content rigor of the physical education VSC acceptable. All mean scores across grades were satisfactory and ranged from 3.01 in grade 2 to a high of 3.40 in PreK. However, a significant concern expressed was the predominance of cognitive knowledge and skills rather than those that are psychomotor in nature. Given that the Maryland content standards are intended for all students, this may be purposeful. If so, it should be made clear to the VSC reader.
- Developmental Appropriateness. The physical education VSC satisfactorily reflects content that is age-appropriate and targeted to the physical, emotional, social, cognitive, and aesthetic capabilities of students in the intended grade level. Mean scores ranged from 2.99 in grade 3 to 3.65 in PreK. Relative to this criterion and several others was the concern over identical or parallel wording of indicators and objectives across grades. This issue may be addressed in a foreword to the VSC document that explains the rationale and instructional expectations for such instances.
- Scope and Sequence. The width and breadth of the physical education VSC content is satisfactory and generally increases in complexity across grades. Mean scores ranged from 2.67 in grade 4 to 3.67 in grade K. Similar to developmental appropriateness, however, concern was expressed about redundancy and overlap of content evidenced by identical or parallel wording of indicators and objectives.
- Relation to National Curricular Expectations. Reviewers found that the VSC aligned with national curricular expectations. However, they suggested that the Maryland content standards are slightly narrower in scope than those established by the National Association for Sport and Physical Education, rely heavily on cognitive skills,

¹ The data in this summary present only part of the picture. A more detailed, informative, and practical source of information for MSDE to consult when considering document modifications is conveyed by reviewer comments and suggestions presented in each Review Protocol.

and lack requirements for psychomotor skills. The mean score for this criterion was 3.33.

Clarity of Language. Generally, clarity of language of the VSC was found satisfactory with some exceptions. Scores ranged from 2.91 in grade 2 to 3.50 in grade 5. The VSC indicator and objective statements often facilitate clear, uniform understanding of what students should know and be able to do as well as application to instruction, assessment, and curriculum development. However, there is some evidence of ambiguity, and the action verbs used do not always clearly or comprehensively convey the relationship between the content standard, indicator and objective statements.

Moreover, as previously mentioned, distinctions between parallel indicators and/or objectives across grades are not always clearly articulated, particularly when the same or nearly identical wording is repeated across grades. While there is nothing fundamentally incorrect in this repetition, reviewers felt that assumptions regarding the increase in content rigor from grade to grade should be made clear.

It would be worthwhile for MSDE to re-examine the instructional targets to ensure clear and unambiguous articulation of expected knowledge and skills, particularly with respect to use of punctuation, spelling, sentence construction, and terminology.

Measurability. Required knowledge and skills across the physical education VSC are generally identified through clear action statements that cue for observable and measurable behavior. All scores assigned were above 3.00.

Measurability is affected by clarity of language, particularly in instances where the relationship of VSC indicators, objectives, and their content standard is not transparent. In many cases across the physical education VSC, the indicator statements are often missing key language of the objective statement and/or visa versa. The reader, therefore, must sometimes infer the connections. MSDE may wish to re-examine these relationships, as one should be able to place any given objective under the intended indicator and any given indicator under the intended content standard.

- Parallel Levels of Specificity Within the VSC. The consistency of the hierarchal format within of the VSC is inconsistent and diminishes across ascending grades. Scores ranged only from 1.00 in grades 6 through 8 and high school to 2.00 for grades PreK through 5. Simple changes to the language of various indicators and objectives can easily resolve these concerns.
- Parallel Levels of Specificity in Relation to Reading/English Language Arts, Science, and Health Education VSC Documents. The physical education VSC shows consistency in relation to these VSC documents, with the exception of parallelism with the reading/ELA VSC at the high school level. Comparison with this VSC yielded a score of 2.00 in contrast to scores of 3.00 for that of the science and health education VSC documents.

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A lower score was assigned to parallelism with reading/ELA at the high school level because the reading/ELA VSC includes assessment limits rather than objectives. If MSDE considers the assessment limits to be an elaboration of the indicators (i.e., objectives), then this issue is moot and a higher score would have been assigned.

Given the existing variability in other state-adopted VSC documents, the variability in structure in the physical education VSC seems negligible.

Summary

The findings of this external review show that the physical education VSC document adequately addresses the criteria specified by MSDE with few exceptions. Furthermore, many of the concerns referenced above may be addressed in a preface that articulates clearly the structure and organizing principles that guided development of the VSC. A preface would also help the reader understand the philosophical underpinnings that are reflected in the VSC. Such a foreword will help Maryland physical education content specialists and other stakeholders understand the standards as the developers intended. It will also serve as a valuable tool to help ensure that all Maryland students receive the quality instruction in this content area that the VSC prescribes.

Appendix External Review of the Maryland Physical Education Voluntary State Curriculum Project Staff

Westat Staff

Joy Frechtling Vice President Corporate Project Officer

Sandra Rieder Senior Study Director Project Director

Panel of National Content Experts

Sandra Bargainnier, CHES, joined the Pennsylvania State University faculty in 1999, where she specializes in Health and Physical Education K–12 teacher training. She has also taught at the State University of New York (SUNY) Oswego, SUNY Cortland, and Plymouth State College. Her prior experiences encompass more than 20 years in the fields of school health and physical education, worksite wellness and health promotion, and exercise science and athletic training. At Penn State University, Dr. Bargainnier teaches physical education courses in Curriculum Design and Assessment, Assessment and Evaluation, and Health-related Physical Fitness. She currently serves as the Coordinator for Student Teaching for the Department of Kinesiology and works extensively with over 100 school districts, 15 university supervisors, and 150 practicing mentor teachers throughout the Commonwealth of Pennsylvania.

In 2006, Dr. Bargainnier was selected by the Centers for Disease Control and Prevention (CDC), Division of Adolescent and School Health (DASH) to become one of the 13 national trainers for the Physical Education Curriculum Analysis Tool (PECAT). This tool is a first in the nation to help districts, states, curriculum coordinators, and physical education teachers evaluate written physical education curricula. As a trainer, she is responsible for teaching others to use the PECAT to evaluate the alignment of Physical Education Curricula with the National Physical Education Standards developed by the National Association of Sport and Physical Education (NASPE). She also recently trained with Dr. Grant Wiggins and is now certified to use the Understanding by Design process. This backward design process helps provide a curricular framework for planning, assessment, and alignment.

In addition to her publications, Dr. Bargainnier has made over 50 national, regional, state, and local conference presentations, many of which address physical education curriculum, instruction, and

assessment at the PreK-12 levels. She has been a curriculum consultant for ten years and provides training for K-12 in-service teachers and higher education faculty in physical and health education. She has consulted and provided technical reviews to over 20 different organizations, including PreK-12 public school teachers, administrators, university faculty, and administrators. Her scholarly interests and presentations are broad based: specific research studies, publications, and presentations have addressed Physical and Health Education Rubric Development and Use, Physical and Health Education Assessment Strategies, Improving Teaching and Learning K-College Physical and Health Education, and Physical Activity and Youth.

Jacalyn Lund is currently the Graduate Coordinator for the Health and Physical Education Program at Georgia State University. As a teacher educator at University of Louisville, she was a member of the NASPE National Content Standards Task Force, responsible for publishing the 1995 NASPE Content Standards for Physical Education. Since that time, Dr. Lund and her various coauthors have published three books: Performance based Assessment for Secondary Physical Education, Instructional Strategies for Secondary Physical Education (6th Ed.), and Standards Based Physical Education Curriculum Development.

She has made over 100 presentations for local, state, national, and international groups that focus on assessment, curriculum development, and effective teaching strategies in physical education. In 2006, she attended training sessions sponsored by the CDC for the Physical Education Curriculum Analysis Tool (PECAT), a document for school districts to use to evaluate physical education curricula. Since then, she has presented PECAT sessions at the 2007 Southern District AAHPERD annual conference in Chattanooga, Tennessee, and for the Massachusetts Department of Education.

Matthew Trout, M.Ed., is a practicing physical educator. He has 19 years of physical education teaching experience (K-12) in Pennsylvania and is currently the Supervisor for Health and Physical Education at Conestoga Valley School District, Lancaster, Pennsylvania. In this position, he supervises 15 physical education/health K-12 teachers and is responsible for Curriculum, Instruction, and Assessment within the health and physical education programs. Most recently, he lead his district's efforts to revise its K-12 health/physical education curriculum using a standards-based approach. Mr. Trout has been a trainer/consultant for 18 different school districts/organizations and is currently working with the Twin Valley School District in Pennsylvania as a consultant for curriculum revision.

For four years he was selected as an instructor for the Pennsylvania Governor's Institute for Health, Safety, and Physical Education. This six-day institute sponsored by the Pennsylvania Department of Education provides instruction to teachers from across the state in the academic standards for Health, Safety, and Physical Education. A respected practitioner, state physical education leader, and curriculum consultant, Mr. Trout has made numerous presentations at the local, district, and state levels and for the higher education community. His presentations have addressed Standards-Based Instruction in Physical Education, Strength Training, Exercise Science, Body Composition, Martial Arts, Fitness Assessment, and Using Technology in Physical Education.

Gail Goldberg, our MBE subcontractor, is an educational measurement specialist. Her areas of expertise are the design, development, and review of formative and summative assessments, scoring design, implementation processes for student assessments, and teacher professional development in

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instructional practice and assessment. Dr. Goldberg provided the technical review and scoring of fine arts assessments developed for the State of Maryland. She also was technical advisor to a consortium of Maryland school districts to develop an online profile of proficiency in instructional technology based on the Maryland Teacher Technology Standards (MTTS). In this capacity, she helped design assessment and profile instruments and provided input on effective ways to gather data based on the MTTS.

Dr. Goldberg has also served as a consultant for many state agencies including New Jersey, Pennsylvania, Indiana, Missouri, Ohio, and Colorado. She has served as an external reviewer of the Maryland social studies and fine arts VSC documents, for student assessments from grade 3 through grade 12, and for studies relating to curriculum alignment for national organizations such as Achieve, HumRRO, and the National Assessment of Educational Progress. Her work reflects familiarity with state curriculum standards and alignment with assessment and instructional practice. Dr. Goldberg is also the author of numerous publications and scholarly articles.

ATTACHMENT B

Physical Education Voluntary State Curriculum

Rationales

Standard 1: Skillfulness

A physically educated person demonstrates competency in many movement forms. The one attribute that differentiates physical education from all other academic areas is its unique kinesthetic contribution to the education of the whole child. In addition to physical development, physical education provides opportunities for students to be creative, cooperative and competitive, and to face different challenges as individuals, in pairs, and in small groups. Students are afforded multiple opportunities to learn, practice, and refine movement and skills as they evaluate actions, ideas, and performances that improve their quality of movement.

Standard 2: Biomechanical Principles

Biomechanics is the application of mechanical principles in the study of human movement. Biomechanical concepts provide a basis for understanding the ways in which human movement during exercise, sport, dance, and daily living activities can be executed safely. It is important for students to understand and apply these essential concepts: range of motion, force generation and absorption, inertia, momentum, balance, principles of rotation, torque, and velocity. As students apply these concepts, they improve their movement skills and maximize their performance and efficiency while minimizing the risk of injury.

Standard 3: Motor Learning Principles

Motor learning is the study of change in the ability of an individual to perform a skill. Successful performance is based on appropriate practices over time and corrective feedback during skill development. Physical education teachers are committed to teaching students fundamental and complex skills while providing ample opportunities to practice, refine, and master these skills. Helping students develop the ability to "learn how to learn" and giving students the knowledge they need to learn independently will help them later in life when they need to acquire and apply new skills.

Standard 4: Exercise Physiology

Exercise Physiology is the study of how the body systems of humans react and function during exercise and rest. Exercise physiology incorporates information from other disciplines such as: chemistry, physics, anatomy, and kinesiology as well as the current practices related to fitness and exercise. Health-related and skill-related fitness components and proper warm-up and cool down techniques, are important for recognizing effective training principles that are essential for safe participation in exercise routines.

Standard 5: Physical Activity

Physical activity includes any form of exercise or movement of skeletal muscles which results in an expenditure of energy. Physical activity offers many health benefits

including improved fitness levels, better weight control, and a lower risk for health related illnesses. Research suggests that regular physical activity assists in improved academic performance and reduces the risk for depression and the debilitating effects of stress. Physical activity during the school day that includes time spent in physical education class, classroom-based movement, and recess is a critical component of the instructional program. Additional opportunities for movement outside the school day should include intramural and interscholastic sports, walking or biking to school, recreational participation, or free-play. Special consideration should be given to those with unique physical activity needs and those who have greater risk for a sedentary lifestyle.

Standard 6: Social Psychological Principles

Social Psychology is the study of the social development of individuals. It examines the interaction of human beings and effects on thought, emotion, and behavior of self and others. The nature of physical activity and sport presents abundant opportunities for students to develop social psychological knowledge and skills. Physical education provides a learning environment that is conducive to building positive student self-concept and self-esteem while providing opportunities to help students interact cooperatively and respectfully, solve conflicts in constructive and peaceful ways, and safely participate in class. Physical education also provides opportunities to develop self-efficacy which relates to a person's perception of their ability to reach a goal or belief that one is capable of performing in a certain manner to attain certain goals.

ATTACHMENT C

Voluntary State Curriculum Pre-K-12 Physical Education Curriculum Framework

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. Standard I:

Pre-Kindergarten	Kindergarten	Grade 1	Grade 2	Grade 3	
	A. Fundamental Movement	A. Fundamental Movement	A. Fundamental Movement	A. Fundamental Movement	
I. Show fundamental movement skills.	I. Show fundamental movement skills.	I. Show fundamental movement skills.	1. Show fundamental movement skills.	1. Demonstrate and apply fundamental movement skills	
a. Demonstrate locomotor skills including walking, jogging,	a. Demonstrate locomotor skills including walking, jogging,	a. Demonstrate locomotor skills including walking, jogging,	a. Show proficiency in all locomotor skills.	in an authentic situation. a. Show non-locomotor and	
running, galloping, hopping, and jumping.	running, galloping, hopping, and jumping.	running, galloping, jumping, sliding, hopping, skipping, and leaping.		locomotor skills in complex movement patterns including the elements of speed, pathways.	
)		directionality, levels, and space.	
b. Use general spatial awareness and self-space awareness in	b. Use general spatial awareness and self-space awareness in	b. Exhibit general spatial awareness and self-space	b. Exhibit general spatial awareness and self-space	b. Identify and use fundamental movement skills such as:	
physical activity.	אוואזוכמו מבנועונץ	awareness, using a variety or directions, levels, and pathways.	awareness using various directions, levels, and pathways while performing different	throwing, catching, kicking, and striking in a game or an activity.	
			locomotor skills.		
c. Demonstrate non-locomotor skills of bending and stretching.	c. Demonstrate non-locomotor skills of bending, pulling,	c. Demonstrate the combination of non-locomotor and locomotor	c. Demonstrate and combine non-locomotor and locomotor	c. Identify and show activities that enhance the skill-related	
	pushing, and swinging.	patterns.	skins in physical activity settings.	fitness components: power, speed, reaction time, agility, balance, and coordination.	
	d. Demonstrate a variety of	d. Demonstrate proper	d. Demonstrate the fundamental		
	speeds.	techniques of take-offs and landings.	movement skills such as: throwing, catching, kicking, and striking.		
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Grade 3		B. Creative Movement	1. Demonstrate creative movement skills a. Use an individual movement sequence to exhibit emotions, expressions and feelings using implements each account.	hoops, balls, rhythm sticks, jump bands, and tinikling sticks.		C. Skill Themes	1. Demonstrate skill themes. a. Use individual skill themes while moving by including throwing, catching, and striking in group games or activities.	b. Show a mature pattern when catching and throwing.
Grade 2	e. Demonstrate evasion skills of chasing, fleeing, and dodging in a variety of physical activities.	B. Creative Movement	1. Show creative movement. a. Display a smooth transition between locomotor and non-locomotor skills in time to music.	b. Perform a variety of movements using the body and implements to interpret a given situation, such as: a poem, story, or song.	c. Move the body symmetrically and asymmetrically while traveling in general space.	C. Skill Themes	1. Show skill themes. a. Demonstrate catching an overhand thrown object while stationary.	b. Use and demonstrate opposition and shoulder rotation when throwing overhand.
Grade 1	e. Identify and perform movement skills of chasing and fleeing.	B. Creative Movement	1. Show creative movement. a. Perform a variety of movements using the body to interpret a poem, story, or song.	b. Move the body symmetrically and asymmetrically while maintaining balance in a stationary position.		C. Skill Themes	1. Show skill themes. a. Demonstrate catching a selftossed lightweight object such as: a scarf or a balloon.	b. Use and demonstrate opposition with hand/foot when using underhand tosses and overhand throws.
Kindergarten		B. Creative Movement	1. Show creative movement. a. Identify different body parts and demonstrate a variety of ways they can move.	b. Demonstrate spatial concepts of big, small, tall, and short in a variety of movement patterns.	c. Use the body to show a variety of different shapes such as: curved, narrow, and wide.	C. Skill Themes	1. Show skill themes. a. Demonstrate rolling a ball at an object.	b. Demonstrate striking a lightweight object with different body parts.
Pre-Kindergarten		B. Creative Movement	1. Show creative movement. a. Identify different body parts and demonstrate a variety of ways they can move.	b. Demonstrate spatial concepts of big, small, tall, and short in a variety of movement patterns.		C. Skill Themes	1. Show skill themes. a. Demonstrate rolling a ball at an object.	b. Demonstrate throwing a ball.

Grade 3	c. Use a tumbling sequence that includes balance, weight transfer, and various body shapes.				
Grade 2	c. Display transfer of weight when striking objects using various implements.	d. Display a tumbling sequence using balance, weight transfer, and rolling.			
Grade 1	c. Demonstrate striking objects with various body parts and short handled implements.	d. Exhibit maintaining balance on a base of support while changing body shapes.	e. Display transferring weight from feet to hand such as: a frog jump or cartwheel.	f. Demonstrate a variety of tumbling experiences.	
Kindergarten	c. Demonstrate catching a selfbounced ball.	d. Demonstrate throwing objects using an underhand and overhand throwing pattern.	e. Demonstrate balance on a variety of body parts.	f. Demonstrate transferring weight between different body parts.	
Pre-Kindergarten	c. Demonstrate striking a lightweight object with different body parts.				

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. Standard II:

Grade 3	A. Effects on Objects	change in the way objects change in the way objects move. a. Discuss and demonstrate how increasing or decreasing the size, number, or speed of body parts tends to increase or decrease the force generated.	b. Discuss and demonstrate how faster movement produces n greater force.	
Grade 2	A. Effects on Objects	1. Identify ways that people and objects move. a. Display how changing the angle of an object when thrown, kicked, or released changes the distance and direction it will travel.	b. Show how to reduce the speed of a thrown object such as: bending the elbows when catching a ball.	
Grade 1	A. Effects on Objects	1. Identify ways that people and objects move. a. Display how changing the force applied to an object changes the distance it will travel. (More force equals greater distance.)	b. Show how to reduce the impact of a force such as: bending the knees when landing after a jump.	
Kindergarten	A. Effects on Objects	1. Identify ways that people and objects move. a. Show how a body moves fast and slow.	b. Show how to move a body forward, backward, and sideways in open space. c. Show how an object's motion can be changed such as: speeding up from a standstill, slowing down to a stop, going faster, and going slower.	d. Display how lowering the body's center of gravity (bending the knees) and widening the base of support (stance) will help to stop the body safely and under control.
Pre-Kindergarten	A. Effects on Objects	1. Identify ways that people and objects move. a. Show how a body moves fast and slow.	b. Show how to move a body forward, backward, and sideways in open space.	

Grade 3	B. Balance	1. Explain and demonstrate	static and dynamic balance in	various movement patterns.	a. Show the difference between	static and dynamic balance	while maintaining body control.	•			-					
Grade 2	B. Balance	1. Identify balance through	movement.	a. Show static balance using	symmetrical and asymmetrical	shapes.		b. Explain and display the	importance of a base of support	and center of gravity when	maintaining balance.	·				
Grade 1	B. Balance	1. Identify balance through	movement.	a. Show dynamic and static	balances through movement.			b. Display a base of support	when maintaining balance.	4		•		•		
Kindergarten	B. Balance	1. Identify balance through	movement.	a. Demonstrate static and	dynamic balance.		-	b. Show the ability to balance on	one or more body parts.						-	
Pre-Kindergarten	B. Balance	1. Identify balance through	movement.	a. Show the ability to balance on	one or more body parts.					•						

Motor Learning Principles – Students will demonstrate the ability to use motor skill principles to learn and develop proficiency through frequent practice opportunities in which skills are repeatedly performed correctly in a variety of situations. Standard III:

Grade 3 A. Appropriate Practices	1. Apply and show that skills will develop over time with appropriate practice. a. Use critical progression cues for object control skills in a variety of physical activities for skill improvement.	B. Corrective Feedback 1. Use corrective feedback for improvement in skill performance. a. Interpret and apply feedback using verbal and visual cues to show improved performance in a variety of skills.
Grade 2 A. Appropriate Practices	1. Recognize that skills will develop over time with appropriate practice and use of the correct cues. a. Name and demonstrate progression cues that will enhance various fundamental movement skills.	B. Corrective Feedback 1. Identify the importance of corrective feedback on performance. a. List and show examples of appropriate feedback using verbal and visual cues to improve performance in a specific skill.
Grade 1 A. Appropriate Practices	1. Recognize that skills will develop over time with appropriate practice and use of the correct cues. a. Identify and demonstrate the critical cues for fundamental movement skills.	B. Corrective Feedback 1. Identify the importance of corrective feedback on performance. a. Recall and show verbal and visual cues to improve personal performance in a variety of skills.
Kindergarten A. Appropriate Practices	1. Recognize that skills will develop over time with appropriate practice and use of the correct cues. a. Show basic motor skills, using imitation, as a means for motor skill improvement. b. Demonstrate fundamental movement skills and skill themes using teacher cues for skill improvement.	B. Corrective Feedback 1. Identify the importance of corrective feedback on performance. a. Use verbal and visual cues to improve skill performance.
Pre-Kindergarten A. Appropriate Practices	1. Recognize that skills will develop over time with appropriate practice and use of the correct cues. a. Show basic motor skills, using imitation, as a means for motor skill improvement.	B. Corrective Feedback 1. Identify the importance of corrective feedback on performance. a. Use verbal and visual cues to improve skill performance.

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. Standard IV:

A. E Activ	Kindergarten A. Effects of Physical Activity on the Body	Grade 1 A. Effects of Physical Activity on the Body	Grade 2 A. Effects of Physical Activity on the Body	Grade 3 A. Effects of Physical Activity on the Body
1. Identify the effects of physical activity on the body systems. a. Demonstrate how exercise affects the body. For example, the body sweats, the heart beats faster, and the lungs work harder.		1. Identify the effects of physical activity on the body systems. a. List and demonstrate the functions of specific muscles of the muscular system.	1. Identify the effect of physical activity on the body systems. a. Recognize the relationship between the muscular and skeletal systems during physical activity and show how the muscles move the bones.	1. Explain and demonstrate the effect of moderate to vigorous physical activity on the body systems. a. Identify selected bones such as leg, arm, spine, and ribs and show how these bones help move select body parts during exercise.
		b. Locate various places on the body to determine the heart's response to aerobic activity.	b. Locate various places on the body to determine the heart's response to anaerobic activity.	b. Discuss why the body needs more oxygen when exercising and show how exercise results in an increased breathing rate.
				c. Discuss the role of flexibility on the
	· · · · · · · · · · · · · · · · · · ·			muscular system during physical activity and show various stretching exercises.
B. FITT Guidelines	<u> </u>	B. FITT Guidelines	B. FITT Guidelines	B. FITT Guidelines
			1. Identify components of the FITT guidelines.	1. Explain and apply the components of the FITT guidelines.

1. Apply the relationship between	1. Kecognize the relationship	1. Kecognize the relationship	1. Necognize the relationship	1. Netognize me relationamp
		1 December 4 Lough 1.	1 Docognizo the veletionship	1 Recognize the relationship
E. Nutrition and Physical Activity	E. Nutrition and Physical Activity	E. Nutrition and Physical Activity	E. Nutrition and Physical Activity	E. Nutrition and Physical Activity
	endurance, and flexibility.			
strength, muscular endurance, flexibility and body composition	endurance/aerobic capacity, muscular strength, muscular			
endurance/aerobic capacity, muscular	cardio respiratory			
fitness components: cardio respiratory	related fitness components:	fitness.		
developed for each of the health related	developed for each of the health	from activities that will improve	benefits of exercise.	of exercise.
a. Discuss the physical benefits	a. State the physical benefits	a. State the physical benefits	a. Specify the physical	a. Specify the physical benefits
activity.	physical activity.	physical activity.	physical activity.	physical activity.
1. Explain the benefits of physical	1. Recognize the benefits of	1. Recognize the benefits of	1. Recognize the benefits of	1. Recognize the benefits of
D. Benefits of Physical Activity	D. Benefits of Physical Activity	D. Benefits of Physical Activity	D. Benefits of Physical	D. Benefits of Physical Activity
strength, muscular endurance, and flexibility.	muscular strength, muscular endurance, and flexibility.	endurance. ·	•	
improve cardio respiratory	that improve cardiorespiratory	that increase heart rate and	activities that promote fitness for a healthy lifestyle	activities that promote fitness for a healthy lifestyle
a. Choose and perform activities that	a. List and demonstrate activities	aList and demonstrate activities	a. List and demonstrate	a. List and demonstrate
1. Analyze the components necessary to improve fitness	1. Identify the components of fitness.	1. Identify the components of fitness.	1. Identify the components of fitness.	1. Identify the components of fitness.
C. Components of Fitness	C. Components of Fitness	C. Components of Funess	C. Components of rimess	C. Components of rimess
			Trans. C	ī
for the components: Type and Intensity.	for the component: Type.			
activities that show the FITT guidelines	that show the FITT guidelines			
a. Discuss and perform specific	a. Demonstrate specific activities			
Grade 3	Grade 2	Grade 1	Kindergarten	Pre-Kindergarten

				,		
Grade 3	nutrition and physical activity. a. Discuss the relationship between food intake and its effect on physical activity.	F. Exercise Adherence	1. Explain the factors influencing daily physical activity.	a. Discuss the factors that promote or limit physical activity for elementary	school students such as peers, parents/family, equipment, facilities,	motivation, recreational opportunities, and financial limitations.
Grade 2	between nutrition and physical activity. a. State why nutritious food provides a better source of energy for activity than junk food.	F. Exercise Adherence	1. Recognize the factors influencing daily physical activity.	a. Identify and perform physical activities that can be performed	with peers on a regular basis.	
Grade 1	between nutrition and physical activity. a. Identify foods that are the most efficient fuel for body (nutritious vs. junk food).	F. Exercise Adherence	1. Recognize the factors influencing daily physical activity.	a. Identify and perform physical activities that are fun and that	can be performed on a regular basis.	
Kindergarten	between nutrition and physical activity. a. Identify nutritious foods that fuel the body for activity such as fruits and vegetables.	F. Exercise Adherence	1. Recognize the factors influencing daily physical activity.	 a. Identify and perform physical activities that are fun, 	enjoyable, and promote fitness.	
Pre-Kindergarten	between nutrition and physical activity. a. Describe how food is fuel to the body as gas is fuel to a car.	F. Exercise Adherence	1. Recognize the factors influencing daily physical activity.	a. Identify and perform physical activities that are fun,	enjoyable, and promote fitness.	

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. Standard V:

Pre-Kindergarten	Kindergarfen	Frade	Grade?	Grade 3
A. Aerobic Fitness	A. Aerobic Fitness	A. Aerobic Fitness	A. Aerobic Fitness	A. Aerobic Fitness
1. Identify and show individual aerobic	1. Identify and show individual aerobic	1. Identify and show individual aerobic	1. Identify and show individual aerobic	1. Analyze individual aerobic
capacity/cardio respiratory	capacity/cardio respiratory	capacity/cardio respiratory	capacity/cardio respiratory	fitness.
a. Demonstrate activities that	a. Demonstrate activities that	a. Recognize and perform	a. Relate the importance of	a. Hivesugate various includes for measuring heart rate such as
improve aerobic capacity/cardio	improve aerobic capacity/cardio	various aerobic activities such	aerobic capacity/cardio	using a modified perceived
respiratory intriess.		relate their affect on heart rate.	body.	CACION SCARE HOM 1-3.
				b. Choose and perform activities
				using the concept of pacing and its importance for aerobic
				capacity/cardio respiratory
				fitness.
B. Muscular Strength and	B. Muscular Strength and	B. Muscular Strength and	B. Muscular Strength and	B. Muscular Strength and
Endurance	Endurance	Endurance	Endurance	Endurance
1. Identify and show activities	1. Identify and show activities	1. Identify and show activities	1. Identify and show activities	1. Analyze individual
for muscular strength and	for muscular strength and	for muscular strength and	for individual muscular	muscular strength and
a Demonstrate activities that	inuscular endurance.	muscular endurance.	strength and muscular	muscular endurance.
improve muscular strength	a. Demonstrate activities that improve miscular strength	annronriate activities that will be	endurance.	a. Choose and practice
through play.	through play.	used to improve muscular	appropriate activities that will be	activities that will improve
		strength.	used to improve muscular	muscular strength and muscular
			endurance.	endurance.
		b. Demonstrate how muscles or	b. Relate the importance of	b. Select and perform
		muscle groups move specific	muscular strength and muscular	developmentally appropriate
		body parts.	endurance for a healthy body.	muscular strength and muscular
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Pre-Kindergarten Kindergarten Grade 1 Grade 2 Grade 3 Flexibility C. Flexibility C. Flexibility C. Flexibility C. Flexibility C. Flexibility Indentify and show activities of rexibility. I. Identify and show activities for flexibility. I. Identify and show activities flexibility. I. Identify and s								
ndergarten Kindergarten Grade 1 C. Flexibility C. Flexibility I. Identify and show activities for flexibility. I. Identify and show activities for flexibility. i. a. Demonstrate activities that improve flexibility through play. a. Recognize and perform appropriate activities that improve flexibility through play. b. Show how the body is affected by muscles or muscle groups that lack flexibility.	Grade 3	specific muscle groups.	C. Flexibility	1. Analyze individual flexibility.	a. Distinguish and practice developmentally appropriate activities involving flexibility for various muscle groups.	b. Explore and perform specific stretches to enhance flexibility	of specific joints/muscle groups for injury prevention.	
nd show activities C. Flexibility C. Flexibility 1. Identify and show activities for flexibility. a. Demonstrate activities that improve flexibility through play.	Grade 2		C. Flexibility	1. Identify and show activities for flexibility.	a. Demonstrate developmentally appropriate activities involving flexibility.	b. Relate the importance of flexibility for a healthy body	and injury prevention.	
nd show activities . te activities that bility through play.	Grade 1		C. Flexibility	1. Identify and show activities for flexibility.	a. Recognize and perform appropriate activities that will be used to improve flexibility.	b. Show how the body is affected by muscles or muscle	groups that lack flexibility.	
Pre-Kindergarten Flexibility Identify and show activities r flexibility. Demonstrate activities that aprove flexibility through play.	Kindergarten		C. Flexibility	1. Identify and show activities for flexibility.				
in a 6 1. O	Pre-Kindergarten		C. Flexibility	1. Identify and show activities for flexibility.	a. Demonstrate activities that improve flexibility through play.			

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. Standard VI:

Pre-Kindergarten	Kindergarten	Grade 1	Grade 2	Grade 3
A. Safety in Physical Activity	A. Safety in Physical Activity	A. Safety in Physical Activity	A. Safety in Physical Activity	A. Safety in Physical Activity
1. Demonstrate safety in physical activity settings. a. Use personal and general	1. Demonstrate safety in physical activity settings. a. Use personal and general	1. Demonstrate safety in physical activity settings. a. Discuss and apply rules for	1. Demonstrate safety in physical activity settings. a. Discuss and apply rules for	1. Apply safety in physical activity settings. a. Classify safe and unsafe
space safely in a physical activity setting to avoid injury.	space safely in a physical activity setting to avoid injury.	participation to avoid injury of self and others.	equipment and general space safely to avoid injuries of self and others.	practices for personal safety in physical activity settings.
B. Effort and Improvement	B. Effort and Improvement	B. Effort and Improvement	B. Effort and Improvement	B. Effort and Improvement
		1. Explain the concept of effort. a. Discuss the concept of effort as it relates to more better barder	1. Explain the concept of effort.	1. Apply the relationship between effort and
		recinco to more, octor, namer.	effort as it relates to skill improvement.	a. Discuss and demonstrate the relationship between effort and
				improvement for a variety of activities.
				b. Explain the meaning of persistence as it relates to skill
				improvement.
C. Cooperation and Responsibility	C. Cooperation and Responsibility	C. Cooperation and Responsibility	C. Cooperation and	C. Cooperation and
, , , , , , , , , , , , , , , , , , ,		Carrottorio	ACSPOINSIONILY	Kesponsionity
1. Identify relationships and behavioral skills to develon a	1. Identify relationships and	1. Identify relationships and	1. Identify relationships and	1. Employ effective
sense of community in physical activity settings.	sense of community in physical activity settings.	sense of community in physical activity settings.	Denavioral skills to develop a sense of community in physical activity settings.	participation and cooperation skills in physical activity settings.

Grade 3	a. Choose appropriate rules for	participation and sportsmanship	in a variety of physical activity	settings.	b. Explore and practice ways to	encourage others during physical	activity.			c. Choose and demonstrate	socially acceptable methods of	conflict resolution.	
Grade 2	a. State the need for rules and	sportsmanship in physical	activity settings and demonstrate	appropriate behaviors.	Domonstrato conscioto strato	to show snortsmanshin	dividual aporto de la circo de		-	c. Show a variety of ways to	resolve conflicts.		
Grade 1	a. List and demonstrate the rules	for appropriate behaviors in	physical activity settings.		b. Model characteristics of	classmates who are positively	completing tasks in physical	education such as: kind, caring,	and helpful.		-		
Kindergarten	a. Imitate socially acceptable	behaviors of cooperation,	respect, and responsibility to	interact positively with others.			-						
Pre-Kindergarten	a. Imitate socially acceptable	behaviors of cooperation,	respect, and responsibility to	interact positively with others.					٠				

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. Standard I:

A Fundamental Movement	A Fundamental Movement	A Fundamental Movement	Olauce J	A Englemental Mercent
	A. Tundaniculal Movement 1. Demonstrate and apply	A. Fulldallielltal Movelliellt 1. Evaluate fundamental	A. Fundamental Movement 1. Evaluate fundamental	A. Fundamental Movement 1. Evaluate fundamental
skills	fundamental movement skills in an authentic situation.	movement skills in a variety of physical education activities.	movement skills in a variety of physical education activities.	movement skills in a variety of physical education activities.
	 a. Classify and show the fundamental movement skills 	a. Compare fundamental movement skills that will	a. Assess personal fundamental movement skills, skill	a. Assess a peer for fundamental movement skills, skill
movement conditions such as: n speed, force, pathways,	needed in a variety of physical activities such as: fitness.	enhance skill themes in physical activities such as: fitness.	combinations, and skill themes in a variety of small groun	combinations, and skill themes
ii.	adventure and cooperative	adventure and cooperative	physical activity settings such	group physical activity settings
fitness, adventure and tr	games, myunns and dance, tumbling and gymnastics,	games, rnythms and dance, tumbling and gymnastics,	as: fitness, adventure and cooperative games, rhythms and	such as: titness, adventure and cooperative games, rhythms and
	recreational games, individual	recreational games, individual	dance, tumbling and gymnastics,	dance, tumbling and gymnastics,
dance, tumbling and gymnastics, and recreational games, individual	and team sports.	and team sports.	recreational games, individual	recreational games, individual
				and team sports.
B	B. Creative Movement	B. Creative Movement	B. Creative Movement	B. Creative Movement
1. Demonstrate creative	1. Demonstrate creative	1. Evaluate creative skill	1. Evaluate creative skill	1. Evaluate creative skill
movement skills. a Derform creative movements	movement skills.	combinations in a variety of	combinations in a variety of	combinations in a variety of
**********	individual/partner/group	physical activities. a Compare and contrast two	pnysical activities. a Access an individual/nartner	physical activities.
sequence with or without the use m	movement sequence using a	creative movement patterns for	performance sequence that	a: Justily a Personal Opinion for
	movement theme, music, or	common themes such as: self	exhibits quality movement based	performance sequence that
ō ·	other rhythmic accompaniment.	expression, rhythmical	on common themes such as: self	exhibits quality movement based
		interpretation, form, or style.	expression, rhythmical	on common themes such as: self
		•	interpretation, form, or style.	expression, rhythmical
				interpretation, form, or style.
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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. Standard II:

Grade 8 A. Effects on Objects	1. Apply the concept of force in relationship to how objects move. a. Demonstrate how to change and control the amount of force applied to a projectile in order to move it toward a moving target.	b. Calculate and show how accuracy of projectiles is dependent on factors such as: speed of projectile, distance from target, weight of object, size of the implement, and number of body parts used.	c. Choose and integrate efficient movements in order to decrease injuries in a variety of activities.
Grade 7 A. Effects on Objects	1. Apply the concept of force in relationship to how objects move. a. Demonstrate how to apply and control force of a projectile in order to move it toward a stationary target.	b. Demonstrate and discuss how longer and/or heavier implements such as: bats and clubs tend to produce more force than shorter or lighter ones.	c. Demonstrate and discuss how efficient movements decrease injuries in a variety of activities to improve fitness such as: bending knees to only 90 degrees when completing a squat lift to develop muscular strength.
Grade 6 A. Effects on Objects	1. Apply the concept of force in relationship to how objects move. a. Calculate and demonstrate how applying force effects the movement of a projectile.	b. Explain and show how absorption of force increases control such as: sport examples of bunting a softball, collecting a soccer ball, catching a football.	c. Explain and show how efficient movements decrease injuries in a variety of activities such as: striking a soccer ball with the instep instead of the toes.
Grade 5 A. Effects on Objects	1. Explain how force causes change in the way objects move. a. Demonstrate and discuss how the changes in motion of objects are determined by the mass of an object and the amount of the force applied to it. Examples such as a yarn ball, whiffle ball, or softball (same size, different mass) will travel different distances when thrown with the same force.	b. Demonstrate and discuss how raising the body's center of gravity and narrowing the base of support allows for quicker starts such as: runners leaning forward to start a race.	
Grade 4 A. Effects on Objects	1. Explain how force causes change in the way objects move. a. Describe how the changes in motion of objects are determined by the mass of an object and the amount of the force applied to it.	b. Demonstrate and describe for every action there is an equal and opposite reaction such as: dribbling a ball with a light force produces a small rebound and a heavy force produces a large rebound.	

	Grade 5 B. Balance	Grade 6 B. Balance	Grade 7 B. Balance	Grade 8 B. Balance
	1. Explain and demonstrate static and dynamic balance in	1. Analyze the concept of balance in complex movement	1. Analyze the concept of balance in complex movement	1. Analyze the concept of balance in complex movement
	various movement patterns.	patterns.	patterns.	patterns.
	a. Show a movement pattern that	a. Explore how the center of	a. Compare how changing levels	a. Investigate how changes in
	includes static and dynamic	gravity effects balance and	while moving effects your	the center of gravity affect
	balance such as: a throw or a	performance during a variety of	center of gravity and	balance and performance in a
	kick in a variety of physical	movement activities.	performance.	variety of physical activities.
	activities and describe how			
	balance affects performance.			
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Motor Learning Principles – Students will demonstrate the ability to use motor skill principles to learn and develop proficiency through frequent practice opportunities in which skills are repeatedly performed correctly in a variety of situations. Standard III:

Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
A. Appropriate Practices	A. Appropriate Practices	A. Appropriate Practices	A. Appropriate Practices	A. Appropriate Practices
1. Apply and show that skills will develop over time with appropriate practice. a. Demonstrate skill progressions to enhance personal skill development in a variety of settings.	1. Apply and show that skills will develop over time with appropriate practice. a. Employ a variety of acquired skills in order to demonstrate skill proficiency.	1. Justify that skills will develop over time with appropriate practice. a. Assess and rate improvement of skills learned in a closed or isolated environment (closed skills).	1. Justify that skills will develop over time with appropriate practice. a. Assess and rate improvement of skills learned in an open or changing environment (open skills).	1. Justify that skills will develop over time with appropriate practice. a. Rate and predict improvement for various personal skills learned in an open or changing environment.
B. Corrective Feedback	B. Corrective Feedback	B. Corrective Feedback	B. Corrective Feedback	B. Corrective Feedback
1. Use corrective feedback for improvement in skill performance. a. Interpret errors in personal skill performance based on corrective feedback.	1. Use corrective feedback for improvement in skill performance. a. Apply feedback to solve and correct errors in personal skill performance.	1. Investigate the importance of self-evaluation and feedback in the improvement of motor skills. a. Organize a checklist to correct errors in skills for improvement in personal performance.	1. Investigate the importance of self-evaluation and feedback in the improvement of motor skills. a. Organize a practice plan, based on a checklist, to correct errors in skills to improve performance for self or a peer.	1. Investigate the importance of self-evaluation and feedback in the improvement of motor skills. a. Analyze and appraise a practice plan for skill improvement based on a checklist for self or peers.
b. Provide feedback to illustrate errors in a peer's skill performance.	b. Provide feedback to solve and correct errors in a peer's performance.	b. Analyze and improve a specific motor skill based on feedback and discussion.	b. Analyze and improve a combination of motor skills based on peer feedback.	b. Analyze and improve a complex motor task based on a plan of improvement.

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 on a variety of academic, recreational, and life tasks. Standard IV:

Grade 8	A. Effects of Physical Activity on the Body	1. Analyze the effect of moderate to vigorous physical activity on the body systems. a. Investigate the function of the brain when the body is participating in physical activity such as: cerebellum controls balance and coordination, the brain stem controls digestion, and heart beat, and the cerebral cortex controls the senses.		
Grade 7	A. Effects of Physical Activity on the Body	1. Analyze the effect of moderate to vigorous physical activity on the body systems. a. Discuss the function of neurons such as: carrying information from the rest of the body to the spinal cord and bringing messages from the spinal cord to the appropriate body parts.	b. Investigate the function of the spinal cord such as: taking information from the neurons to the brain and taking messages from the brain back to the neurons.	
Grade 6	A. Effects of Physical Activity on the Body	1. Analyze the effect of moderate to vigorous physical activity on the body systems. a. Discuss the three components of the central nervous system, brain, spinal cord, and neurons.	b. Discuss the functions of the central nervous system needed for physical activity such as: sending and receiving messages from other body systems and controlling all thoughts and movements.	
Grade 5	A. Effects of Physical Activity on the Body	1. Explain the effect of moderate to vigorous physical activity on the body systems. a. Discuss the function of the components of the skeletal and muscular systems such as: bones, cartilage, ligaments, and tendons.	b. Demonstrate how the cardio respiratory and muscular systems respond to exercise during the warm-up, aerobic, and cool-down phases of physical activity.	c. Classify and demonstrate activities that develop the cardiorespiratory and muscular systems.
Grade 4	A. Effects of Physical Activity on the Body	1. Explain the effect of moderate to vigorous physical activity on the body systems. a. Discuss the function of the components of the cardiorespiratory system such as: the heart, lungs, blood vessels and describe how each functions during exercise.	b. Describe the role of the muscles and skeleton in the protection of the internal organs such as: the rib cage protecting the heart and lungs.	c. Select and show activities that develop the cardiorespiratory and muscular systems.

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Grade 8	B. FIIT Guidelines	1. Analyze and evaluate components of the FITT guidelines to adjust levels of physical activity. a. Revise personal fitness goals based on a fitness assessment.	b. Choose, implement, and assess, a personal fitness plan based on the FITT guidelines.	c. Defend the relationship between improved health related fitness and the principles of overload, progression, specificity, regularity, and individuality.	C. Components of Fitness	1. Evaluate the components necessary to design a fitness plan.	a. Defend the selection of	maintain health-related fitness.
Grade 7	B. FIII Guidelines	1. Analyze and evaluate components of the FITT guidelines to adjust levels of physical activity. a. Identify personal fitness goals based on a fitness assessment.	b. Choose and implement a fitness plan using the FITT guidelines.	c. Compare the principles of overload, progression, specificity, regularity, and individuality to improve health related fitness.	C. Components of Fitness	1. Evaluate the components necessary to design a fitness plan.	a. Justify activities chosen to	health-related fitness components.
Grade 6	B. FIII Guidelines	1. Analyze and evaluate components of the FITT guidelines to adjust levels of physical activity. a. Develop and explore personal fitness goals.	b. Organize a fitness plan using the FITT guidelines.	c. Investigate the principles of overload, progression, specificity, regularity, and individuality.	C. Components of Fitness	1. Evaluate the components necessary to design a fitness plan.	a. Predict activities that	health-related fitness components: cardio respiratory endurance/aerobic capacity,
Grade 5	B. FILL Guidelines	1. Explain and apply the components of the FITT guidelines. a. Describe the relationship between the FITT guidelines for the components: Frequency, Intensity, Type and Time.	b. Discus and use the components of the FITT guidelines to develop a shortterm fitness goal.		C. Components of Fitness	1. Analyze the components necessary to improve fitness. a. Investigate activities that will	improve the health-related fitness components: cardio	respiratory endurance/aerobic capacity, muscular strength, muscular endurance, flexibility,
Grade 4	B. FILT Guidelines	1. Explain and apply the components of the FITT guidelines. a. Discuss and perform specific activities that include the FITT guidelines for the components: Type, Intensity, and Time.			C. Components of Fitness	1. Analyze the components necessary to improve fitness. a. Classify and show activities	for each health-related fitness component: cardio respiratory	endurance/aerobic capacity, muscular strength, muscular endurance, flexibility, and body

Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
composition.	and body composition.	muscular strength, muscular endurance, flexibility, and body composition.		
b. Classify and show activities according to the skill-related components of fitness: agility, balance, coordination, power, speed, and reaction time.	b. Use the skill-related fitness components: agility, balance, coordination, power, speed, and reaction time through participation in selected activities.	b. Identify, compare, and implement the components of a fitness plan such as: goals, baseline scores, and physical activity log.	b. Choose, implement, and assess a fitness plan using the health-related fitness components.	b. Choose, implement, assess, and defend a personal fitness plan using the health-related fitness components.
		c. Assess for improvement the skill-related fitness components: agility, balance, coordination, power, speed, and reaction time	c. Choose activities that will provide opportunities to improve or maintain specific personal skill-related fitness components	c. Justify the selection of the activities performed to improve or maintain skill-related fitness.
		using standard performance measurements such as: 40 yard dash, shuttle run, vertical jump, and balance beam travel.	as part of personal goal setting.	d. Assess a peer's personal goals to improve or maintain the skill- related components of fitness through selected activities.
D. Benefits of Physical Activity	D. Benefits of Physical Activity	D. Benefits of Physical Activity	D. Benefits of Physical Activity	D. Benefits of Physical Activity
1. Explain the benefits of physical activity. a. Discuss the physical benefits of participation in physical activity in the development of improved flexibility and body composition ratios.	1. Explain the benefits of physical activity. a. Express the emotional benefits developed through physical activity such as stress reduction.	1. Analyze the benefits of physical activity. a. Classify the effects of physical activity on personal wellness such as: relaxation, healthy attitude, and self-image.	1. Analyze the benefits of physical activity. a. Compare personal wellness and identify those components that can benefit from physical activity.	1. Analyze the benefits of physical activity. a. Investigate how physical activity improves overall health and wellness.
E. Nutrition and Physical Activity	E. Nutrition and Physical Activity	E. Nutrition and Physical Activity	E. Nutrition and Physical Activity	E. Nutrition and Physical Activity
1. Apply the relationship between nutrition and physical activity.	1. Apply the relationship between nutrition and physical activity.	1. Evaluate the relationship between nutrition and physical activity.	1. Evaluate the relationship between nutrition and physical activity.	1. Evaluate the relationship between nutrition and physical activity.

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a Defend a nerconal auticition	a. Determ a personal mutition log to determine ways to improve on diet and exercise.	b. Assess a personal nutrition log to determine appropriateness of using performance enhancing drinks and foods.		F. Exercise Adherence	1. Analyze the factors influencing daily physical activity. a. Compare and choose strategies to address personal, environmental, and/or social factors that effect maintaining or improving personal physical activity.	G. Media and Physical Activity 1. Analyze how the media impacts attitudes towards
a Choose an exercise and	a. Choose an exercise and nutrition log for recording personal caloric expenditure and caloric intake and analyze the log for caloric balance.	b. Assess various types of performance-enhancing drinks and energy drinks and their effect on the body.	c. Assess various types of nutritional supplements and performance enhancing foods such as energy bars and their effect of the body.	F. Exercise Adherence	1. Analyze the factors influencing daily physical activity. a. Organize strategies to address the environmental factors that limit physical activity. b. Organize strategies to address the social factors that limit physical activity.	G. Media and Physical Activity 1. Analyze how the media impacts attitudes towards
Grade 0 a Investigate mutrition logs for	recording personal caloric intake and analyze the logs for balance using the "My Food Pyramid."	b. Explore the importance of monitoring hydration based on levels of physical activity.	c. Investigate the impact nutrients such as protein, carbohydrates, and fats have on physical activity performance.	F. Exercise Adherence	1. Analyze the factors influencing daily physical activity. a. Categorize factors affecting daily physical activity as personal, environmental, or social.	1. Analyze how the media impacts attitudes towards
Uranet the relationshin	between caloric expenditure and caloric intake in relationship to body composition including maintaining weight and modifying weight.	b. Classify various forms of hydration such as water, sports drink, juice, soda, milk, tea, coffee and their effects on physical activity.		F. Exercise Adherence	1. Explain the factors influencing daily physical activity. a. Discuss factors that limit physical activity and describe strategies to address the factors.	
a Classify various types of	a. Classiffy and the effect on caloric expenditure.	b. Relate why water consumption is important during physical activity.		F. Exercise Adherence	Explain the factors influencing daily physical activity. Classify factors affecting physical activity as either promoting or limiting.	

Grade 8	physical activity	a. Investigate various marketing	practices and strategies	influencing consumer decisions	on the selection of exercise	equipment and programs.	-	
Grade 7	physical activity	a. Compare ads/commercials that	focus on physical activity and	target specific audiences such as	runners, weight lifters, to	determine the level of influence	the media has on participation.	
Grade 6	physical activity.	a. Discuss various marketing	practices and strategies aimed at focus on physical activity and	people interested in improving	their fitness levels.			
Grade 5								
Grade 4								,

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. Standard V:

Grade 7 Grade 8	ness A. Aerobic Fitness	1. Evaluate individual aerobic capacity/cardiorespiratory fitness. a. Assess and predict aerobic capacity/cardiorespiratory fitness through standardized fitness tests.	b. Assess and use aerobic activities to improve personal goals related to aerobic capacity/cardio respiratory fitness.	c. Choose technology to assess individual heart rates for various activities using heart rate monitors or instapulses.	d. Choose and use principles of overload, progression, specificity, regularity, and individuality to enhance aerobic capacity/cardiorespiratory fitness.
.	A. Aerobic Fitness		•		
Grade 6	A. Aerobic Fitness	1. Evaluate individual aerobic capacity/cardiorespiratory fitness. a. Assess and predict aerobic capacity/cardiorespiratory fitness through standardized fitness tests.	b. Choose and use aerobic activities to improve personal goals related to aerobic capacity/cardio respiratory fitness.	c. Choose technology to assess individual heart rate during the three phases of an aerobic workout.	d. Compare and use principles of overload, progression, specificity, regularity, and individuality to enhance aerobic capacity/cardiorespiratory fitness.
Grade 5	A. Aerobic Fitness	1. Analyze individual aerobic capacity/cardiorespiratory fitness. a. Calculate personal aerobic capacity/cardiorespiratory fitness through standardized fitness tests.	b. Categorize activities to compare the difference between aerobic and anaerobic activity and the effect on heart rate.	c. Use various methods for measuring individual heart rate.	d. Distinguish between the three parts of an aerobic workout while performing an aerobic activity.
Grade 4	A. Aerobic Fitness	1. Analyze individual aerobic capacity/cardiorespiratory fitness. a. Calculate personal level of aerobic capacity/ cardiorespiratory fitness through a systematic approach using a standardized fitness test.	b. Compare and perform various aerobic and anaerobic activities and the effect on heart rate.	c. Compare various methods for measuring heart rate such as: an instapulse or a stethoscope.	d. Categorize and demonstrate the three parts of an aerobic workout including warm-up, aerobic phase, and cool down.

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Grade 8	heart rate for improvement of aerobic capacity and fitness.	f. Assess recovery time and its relationship to improved fitness and increased physical activity.	B. Muscular Strength and Endurance	2. Evaluate individual muscular strength and muscular endurance. a. Assess and predict muscular strength and muscular endurance fitness through standardized fitness tests.	b. Justify and use developmentally appropriate activities to improve personal goals related to muscular strength and endurance fitness.	c. Assess and use the principles of overload, progression, specificity, regularity, and individuality to enhance muscular strength and muscular endurance.
Grade 7	evaluate improvement in aerobic capacity and fitness.	f. Investigate recovery time in relationship to target heart rate and resting heart rate.	B. Muscular Strength and Endurance	2. Evaluate individual muscular strength and muscular endurance. a. Assess and predict muscular strength and muscular endurance fitness through standardized fitness tests.	b. Assess and use developmentally appropriate activities to improve personal goals related to muscular strength and endurance fitness.	c. Choose and use the principles of overload, progression, specificity, regularity, and individuality to enhance muscular strength and muscular endurance.
Grade 6	target heart rate, and maximum heart rate.		B. Muscular Strength and Endurance	2. Evaluate individual muscular strength and muscular endurance. a. Assess and predict muscular strength and muscular endurance fitness through standardized fitness tests.	b. Choose and use developmentally appropriate activities to improve personal goals related to muscular strength and endurance fitness.	c. Compare and use the principles of overload, progression, specificity, regularity, and individuality and how they enhance muscular strength and muscular endurance.
Grade 5			B. Muscular Strength and Endurance	2. Analyze individual muscular strength and muscular endurance. c. Calculate muscular strength and muscular endurance through standardized fitness tests.	b. Compare developmentally appropriate muscular strength and muscular endurance activities.	c. Organize and use muscular strength and muscular endurance task for specific muscle groups of the lower body.
Grade 4			B. Muscular Strength and Endurance	2. Analyze individual muscular strength and muscular endurance. c. Calculate personal level of muscular strength and muscular endurance through a systematic approach using a standardized fitness test.	b. Categorize muscular strength and muscular endurance activities.	c. Organize and use muscular strength and muscular endurance tasks for specific muscle groups of the upper body.

Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
		e. Investigate core strength and proper posture when performing exercises to increase muscular strength and muscular endurance.	e. Justify and perform various exercises that help develop core strength and proper posture for personal fitness and safety.	e. Defend personal exercises in a daily exercise program that address the need for core strength development, proper posture, and safety.
C. Flexibility	C. Flexibility	C. Flexibility	C. Flexibility	C. Flexibility
3. Analyze individual flexibility. a. Calculate personal level of flexibility through a systematic approach using a standardized fitness test.	3. Analyze individual flexibility. a. Calculate flexibility through standardized fitness tests.	3. Evaluate individual flexibility. a. Assess and predict flexibility through standardized fitness tests.	3. Evaluate individual flexibility. a. Assess and predict flexibility through standardized fitness tests.	3. Evaluate individual flexibility. a. Assess and predict flexibility through standardized fitness tests.
b. Categorize lower and upper body stretches to improve flexibility.	b. Distinguish between static and dynamic stretches for the upper and lower body.	b. Choose and use appropriate activities to improve personal goals related to flexibility.	b. Assess and use appropriate activities to improve personal goals related to flexibility.	b. Justify and use appropriate activities to improve personal goals related to flexibility.
c. Investigate the use dynamic stretches for flexibility.	c. Investigate range of motion as it relates to flexibility and safety.	c. Compare and use the principles of overload, progression, specificity, regularity, and individuality to enhance flexibility.	c. Choose and use the principles of overload, progression, specificity, regularity, and individuality to enhance flexibility.	c. Assess and use the principles of overload, progression, specificity, regularity, and individuality to enhance flexibility.
	d. Investigate contraindicated exercises for flexibility and their relationship to safe stretching.	d. Criticize the use of contraindicated exercises for flexibility and their relationship to safe stretching.	d. Investigate various examples of specific stretching techniques to enhance personal flexibility such as: partner assisted stretching.	d. Justify examples of sport/activity specific stretches to enhance personal flexibility.

Grade 8	D. Body Composition	4. Examine body composition. a. Identify and discuss the term somatotype and discuss various body types such as: ectomorph, mesomorph, and endomorph and their relationship to physical activity selection.	
Grade 7	D. Body Composition	4. Examine body composition. a. Identify different methods of measuring body composition such as: calipers, bio-impedance equipment, scales, and underwater weighing for accuracy, cost, and reliability in identifying personal body composition and maintaining a healthy body.	
Grade 6	D. Body Composition	4. Examine body composition. a. Identify the need for measuring body composition and its relationship to maintaining a healthy body.	
Grade 5	D. Body Composition	4. Identify body composition. a. Define elements of body composition and its relationship in maintaining a healthy body.	
Grade 4	D. Body Composition	4. Identify body composition. a. Define elements of a body mass index (BMI) and its importance in maintaining a healthy body.	

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. Standards VI:

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A. Safety in Physical Activity	A. Safety in Physical Activity	A. Safety in Physical Activity	A. Safety in Physical Activity	A. Safety in Physical Activity
1. Apply safety in physical activity settings. a. Demonstrate safe practices for self in physical activity settings.	1. Apply safety in physical activity settings. a. Demonstrate safe practices for self and others in physical activity settings.	1. Analyze the relationship between exercise, physical activity, and safety. a. Investigate and perform exercises that improve proper posture to minimize injury.	1. Analyze the relationship between exercise, physical activity, and safety. a. Categorize and perform exercises that improve core strength for lower back care.	1. Analyze the relationship between exercise, physical activity, and safety. a. Choose and perform exercises to improve posture and core strength for lower back care as part of a personal fitness plan.
		b. Investigate rules, procedures, and etiquette for safe physical activity settings.	b. Choose and use rules, procedures, and etiquette for safe physical activity settings.	b. Compare and use rules, procedures, and etiquette for safe physical activity settings.
B. Effort and Improvement 1. Apply the relationship	B. Effort and Improvement 1. Apply the relationship	B. Effort and Improvement 1. Evaluate the relationship	B. Effort and Improvement 1. Evaluate the relationship	B. Effort and Improvement 1. Evaluate the relationship
improvement.	between enort and improvement.	between enort and improvement.	between ettort and improvement.	between effort and improvement.
a. Choose personal skills and fitness data and calculate the relationship to improved performance through effort.	a. Show the relationship between effort and skill improvement over a determined amount of time through charting a performance.	a. Assess the relationship between effort and skill improvement in a variety of physical activities.	a. Defend the relationship between effort and persistence as they relate to skill improvement.	a. Predict the relationship between effort and persistence as they relate to the development of self-confidence.

Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
C. Cooperation and	C. Cooperation and	C. Cooperation and	C. Cooperation and	C. Cooperation and
Responsibility	Responsibility	Responsibility	Responsibility	Responsibility
3. Employ effective participation and cooperation skills in physical activity	3. Employ effective participation and cooperation skills in physical activity	3. Evaluate effective relationship skills in physical activity settings.	3. Evaluate effective relationship skills in physical activity settings	3. Evaluate effective relationship skills in physical activity settings
settings. a. Use appropriate strategies to maintain self-control in group settings and to promote good	settings. a. Discuss appropriate cooperative strategies in a variety of physical activity.	a. Choose and compare cooperative strategies employed in physical activity settings.	a. Assess effectiveness of cooperative strategies employed in physical activity settings.	a. Justify strategies and practices related to self-regulation in a variety of challenging physical
sportsmanship.	settings.			activity settings.
b. Demonstrate a variety of ways to show consideration for	b. Discuss and use problem- solving techniques which build	b. Choose and use problemsolving techniques which	b. Justify conflict resolution skills and negotiation tactics	b. Defend choice of strategies to resolve conflict and make
others, to maximize personal potential, and build and	and maintain healthy relationships and promote good	maximize personal potential and demonstrate sensitivity to the	which promote a peaceful and positive classroom environment	appropriate decisions that promote a sense of community
maintain neaitny relationships.	sportsmanship.	rights and feelings of others while promoting good	tor all.	and respect for others.
		sportsmanship.		
		c. Assess cooperation with peers who are using verbal and		
		nonverbal behaviors.		
			-	
D. Compassion and Inclusiveness	D. Compassion and Inclusiveness	D. Compassion and Inclusiveness	D. Compassion and	D. Compassion and
			TICITOT VOICES	TICLUSIACIOSS
1. Identify ways to develop compassion and inclusiveness	1. Identify ways to develop compassion and inclusiveness	1. Evaluate effective inclusiveness skills in physical	1. Evaluate effective inclusiveness skills in physical	1. Evaluate effective inclusivenes
in physical activity settings.	in physical activity settings.	activity settings.	activity settings.	activity settings.
a. Show respect and caring for	a. Show a variety of ways to	a. Organize different activities	a. Assess different activities as a	a. Justify the need to change
peers unough verbal and nonverhal encouragement and	consideration and respect for	Irom a variety of cultures as a	means for developing	activities to develop
assistance.	self and others.	inclusiveness in classroom	settings such as: wheelchair	inclusiveness in classroom settings.
		settings.	basketball.	

management strategies. a. Demonstrate and modify a daily personal activity plan to overcome personal time barriers for daily physical activity.	a. Identify and put into place a strategies to overcome personal time barriers for daily physical activity in a personal activity for the plan.	a. Identify and demonstrate strategies for effective time management to allow for daily physical activity in a personal activity plan.	management strategies. a. Develop and implement a personal activity plan to allow opportunities for daily physical activity.
E. Time Management 1 Annly effective time	E. Time Management E. Time Management 1. Annly effective time 1.	E. Time Management1. Apply effective time	E. Time Management1. Demonstrate effective time
b. Justify strategies that allow participation from individuals with varying ability in physical activity settings.	b. Organize and assess strategies b to maximize participation for individuals with varying wabilities in a physical activity a setting.	b. Investigate challenges that people with varying abilities face when participating in physical activity.	b. List ways to include students with different abilities into group and individual activities.
Grade 8	Grade 7	Grade 6	Grade 5

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. Standard I:

 A. Fundamental Movement 1. Choose and analyze fundamental movement skills in a variety of physical education activities. a. Demonstrate and differentiate fundamental movement skills, skill combinations, and skill themes while participating in physical activity. b. Categorize and perform a selection of activities that improve or maintain skill-related components of fitness. B. Creative Movement 	
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rm a selec	****
B. Creative Movement	
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1. Develop and critique creative skill combinations in a variety of physical activities. a. Design, demonstrate, and evaluate a group creative performance sequence that exhibits quality movement based on common themes such as:	***************************************
self expression, rhythmical interpretation, form, or style.	
C. Skill Themes	T
1. Evaluate the performance and strategies used to solve tactical game problems. a. Justify and use different concepts and strategies for each category of strategic games (net/wall, invasion, striking/fielding, and target activities) such as: offensive and defensive strategies or on and off the ball movements.	

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.

High School

A. Effects on Objects

1. Analyze how muscle characteristics influence force production.

- a. Categorize and demonstrate how the number of muscles engaged in a movement affects force production.
 - b. Choose and demonstrate how the size of muscle engaged affects the force produced.
- c. Contrast and demonstrate how the distance through which a muscle contracts affects the force produced.
- d. Investigate and demonstrate how forcefully stretching a muscle immediately before a concentric contraction increases the force of that contraction such as in plyometrics.

2. Analyze how force is effectively applied to projectiles.

- a. Distinguish and demonstrate how projection speed and projection angle are related to accuracy such as: striking a tennis ball using a smash or a lob to have it land in the back corner of the court.
- b. Calculate and demonstrate the concept of projection angles such as changing the projection angle to discover the influence on distance
- c. Investigate and demonstrate the effect of spin such as in tennis when topspin rebounds on a higher trajectory and backspin rebounds on a lower trajectory.
 - d. Investigate and demonstrate how balls can generate lift by spinning such as in soccer.

B. Balance

1. Analyze the concept of balance in complex movement patterns.

a. Investigate changes in the center of gravity and balance of a dynamic skill such as a basketball lay-up.

Motor Learning Principles - Students will demonstrate the ability to use motor skill principles to learn and develop proficiency through frequent practice opportunities in which skills are repeatedly performed correctly in a variety of situations. Standard III:

High School

A. Appropriate Practices

- 1. Design a practice plan in order to acquire a skill and apply the skill in a game.
 - a. Compare the similarities and differences between closed and open skills.
- b. Discuss and demonstrate how proficient performance of closed skills results in sustained quality performance in game situations.
 - c. Predict factors to consider when performing open skills in a game situation such as the environment and skill level.
 - d. Develop a practice plan to progressively introduce closed skills into open skill environments.
- B. Corrective Feedback
- 1. Justify the importance of self-evaluation and feedback in the improvement of motor skills.
- a. Create, perform, and evaluate a practice plan for skill improvement based on a checklist developed from an evaluation by self or peers.

Exercise Physiology - Students will demonstrate the ability to use scientific principles to design and participate in a regular, moderate Standard IV:

to vigorous physical activity program that contributes to personal health and enhances cognitive and physical performance on a variety of academic, recreational, and life tasks.

High School

- A. Effects of Physical Activity on the Body
- 1. Evaluate the effects of moderate to vigorous physical activity on the body systems.
- a. Defend a fitness plan using knowledge of the body systems and principles of overload, progression, specificity, regularity, and individuality.
- B. FITT Guidelines
- 1. Evaluate the components of the FITT guidelines to adjust levels of physical activity.
 - a. Justify personal fitness goals based on fitness assessments.
- b. Defend the use of components of the FTTT guidelines in a personal fitness plan for consistency with fitness levels and goals.
- C. Components of Fitness
- 1. Evaluate the various components necessary to design a personal fitness plan.
- a. Assess the physiological benefits achieved through the implementation of a personal fitness plan.
- b. Defend a personal fitness plan based on an assessment of the health-related fitness components and personal fitness goals.
- c. Justify activities chosen to improve or maintain specific skill-related fitness components agility, balance, coordination, reaction time, strength, and power as part of a personal fitness plan.
- D. Benefits of Physical Activity
- 1. Justify the benefits of physical activity.
- a. Assess the benefits of physical activity as a motivating factor to positively affect exercise adherence.
 - b. Evaluate the value of physical activity for lifelong health and wellness.
- E. Nutrition and Physical Activity
- 1. Support the relationship between nutrition and physical activity.
- a. Design a personal nutrition log to correlate with current physical activity levels and nutritional needs.
- b. Discuss causes and effects associated with eating disorders such as: anorexia, bulimia, and binge eating

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- c. Compare popular diets in relationship to the "My Food Pyramid."
- d. Compare various nutritional ergogenic aids and discriminate between the real and implied impacts on the body.

F. Exercise Adherence

- 1. Evaluate the factors influencing daily physical activity.
- a. Assess the effectiveness of strategies for overcoming personal, environmental, and/or social factors affecting physical activity level and revise those strategies that have been ineffective.
 - b. Rate and prioritize personal motivating factors for adhering to a physically active lifestyle.

G. Media and Physical Activity

- 1. Evaluate the impact of cultural and media perceptions on physical activity.
- a. Assess various marketing practices and strategies that influence consumer decisions on the selection of exercise equipment, programs, and health clubs.
- b. Justify the benefits of current fitness trends.
- c. Discriminate between fitness products and programs that are based on scientific principles and those that are not scientifically based.
 - d. Determine a set of criteria to evaluate the validity of personal fitness products.
 - e. Determine a set of criteria to evaluate health club facilities.

Standard V: Ph

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.

High School

A. Aerobic Fitness

1. Analyze and evaluate individual aerobic capacity/cardiorespiratory fitness.

- a. Perform a variety of activities designed to enhance aerobic capacity/cardiorespiratory fitness.
 - b. Assess personal levels of aerobic capacity/cardiorespiratory fitness using a standardized test.
- c. Design, execute and revise a personal plan for aerobic capacity/cardiorespiratory fitness based on a fitness assessment and incorporating the principles of overload, progression, specificity, regularity, and individuality.
 - d. Use technology to monitor and assess individual heart rate.
 - e. Calculate target heart rate to reflect personal activity goals.
- f. Investigate and assess sport/activity specific aerobic capacity/cardiorespiratory fitness programs.
- g. Justify the importance of maintaining a healthy level of cardiorespiratory fitness.

B. Muscular Strength and Endurance

1. Analyze and evaluate individual muscular strength and muscular endurance.

- a. Perform a variety of activities designed to enhance muscular strength and muscular endurance.
- b. Assess personal level of muscular strength and muscular endurance using a standardized test.
- c. Design, execute and revise a personal plan for muscular strength and muscular endurance based on principles of overload, progression, specificity, regularity and individuality.
 - d. Assess concepts important for safe participation in everyday muscular strength and endurance activities.
 - e. Investigate and assess sport/activity specific muscular strength and muscular endurance programs.
 - f. Justify the importance of maintaining a healthy level of muscular strength and muscular endurance.

C. Flexibility

1. Analyze and evaluate individual flexibility.

- a. Perform a variety of activities designed to enhance flexibility for various muscle groups.
 - b. Assess personal level of flexibility using a standardized test.
- c. Design, execute and revise a personal plan for flexibility based on principles of overload, progression, specificity, regularity and individuality.
 - d. Assess concepts important for safe participation in everyday flexibility activities.
 - e. Investigate and assess a sport/activity specific flexibility programs.

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- f. Justify the importance of maintaining a healthy level of flexibility.
- D. Body Composition
- 1. Analyze and evaluate individual body composition.
- a. Perform a variety of activities designed to improve body composition.
- b. Assess personal level of body composition using a standardized test such as BMI or through the use of technology.
- c. Design, execute, and revise a personal plan for body composition based on principles of overload, progression, specificity, regularity, and individuality.
 - d. Assess concepts important for safe weight management programs.
- e. Investigate and assess sport/activity specific body composition programs.
- f. Justify the importance of maintaining a healthy level of body composition.

Standa

I: 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.
dard VI	

High School A. Safety in Physical Activity

1. Support the understanding of safety in physical activity settings.

- a. Evaluate safe practices for a variety of physical activities.
- b. Discuss the relationship between core strength and proper posture in minimizing injury such as: lifting, carrying, and lower back care.
- B. Effort and Improvement

1. Predict the relationship between effort and improvement.

- a. Create challenging, attainable personal physical activity goals and make revisions based on personal values.
 - b. Discuss how effort and motivation in a self-directed activity leads to attainment of a goal.
 - c. Self evaluate, design, and revise a plan for attainment of personal goals.
- C. Cooperation and Responsibility

1. Devise a plan to foster a sense of community in physical activity settings.

- a. Create and evaluate strategies to resolve conflict and implement changes in a physical activity setting to foster a sense of community.
- D. Compassion and Inclusiveness

1. Develop a plan to foster compassion and inclusiveness in physical activity settings.

- a. Design strategies for a diverse group of individuals to encourage effective participation in physical activity settings.
- E. Time Management

1. Evaluate time management strategies.

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

ATTACHMENT

D

Attachment D

History of Wellness Policies

In the Child Nutrition and WIC of 2004, the United States Congress established a new requirement that all school districts with a federally-funded school meals program develop and implement wellness policies by the start of the 2006-2007 school year. Policies must include goals for: nutrition guidelines, nutrition education, physical activity, other school based activities, and establish a plan for measuring implementation. In January 2007, a multidisciplinary team from MSDE and local school systems met with all Maryland school systems' to review their wellness policies. On April 24, 2007, the results of the policy reviews were presented to the State Board of Education. In June 2007, each school superintendent received a letter from Dr. Grasmick with feedback on their Wellness Policy.

All Wellness Policies in Maryland school systems were found to include the required goals in the Reauthorization Act. However, most school systems' Wellness Policies did not fully address the process of implementation, monitoring, and evaluation plans, or addressed them in general terms. Nationally, a major concern surrounding Wellness Policies is the wide variance in both quality of goals and implementation plans. The gap between written Wellness Policy goals and the actions that support the implementation, monitoring and evaluation of the Policy goals is a real shortcoming in the process of creating a healthy school environment.

Importance of Monitoring and Review of Wellness Policies

A 2009 publication by the National Association of State Boards of Education (NASBE) entitled, *Preventing Childhood Obesity, A School Health Policy Guide*, states "as schools receive no incentive or penalty around local wellness policies, they often are ignored or implemented only to meet the minimum standard as required under the policy. Indeed, a nationwide survey of school and community health professionals found that at least 70 percent do not feel that schools are adequately implementing wellness policies."

One policy option as suggested by the NASBE publication is to "integrate local wellness policies, school nutrition policies, and school physical activity and education policies into the overarching school improvement plan process. Arkansas, South Carolina, and Rhode Island are three states that currently require local wellness policies be addressed in this process. This strategy places nutrition and physical activity on equal standing with math, science, and reading in terms of state accreditation and/or funding."

There is a major opportunity to impact the healthy school environment by monitoring of school system's Wellness Policy implementation, monitoring, and evaluation activities. The Fall 2008, Action for Health Kids Report: *Progress or Promises* stated, "Clearly, effective systems for monitoring and evaluating policy implementation would enable stakeholders to more accurately assess progress, and, more importantly, develop and improve ongoing, targeted intervention strategies".

Implementation and Monitoring of Maryland's Wellness Policies

In November 2007, a multidisciplinary team from MSDE and local school systems began designing a *Guide to Implementing and Monitoring Wellness Policies in Maryland*. In April 2008, in collaboration with the Department of Health and Mental Hygiene, MSDE provided training to introduce the draft wellness monitoring guide to six school systems' wellness policy teams. These school systems piloted the guide, and provided feedback on their activities to the MSDE wellness team. In April 2009, MSDE co-sponsored a conference with the State School Health Council to introduce the wellness monitoring guide to all Maryland school systems. The guide is designed to be used as a template for implementation and monitoring school system Wellness Policies. It contains sample goals, implementation activities, steps to support implementation, expected outcomes, and monitoring opportunities.

Attachment D

The Center for Disease Control and Prevention's (CDC) coordinated school health program has eight interactive components consisting of: health education, physical education, nutrition, school environment, mental health, community/family involvement, health services and staff wellness. Many of the wellness policy activities in *Guide to Implementing and Monitoring Wellness Policies in Maryland* consistent with the CDC coordinated school health program.

During the 2008 legislative session a Task Force to study Student Fitness in Maryland Public Schools was established. The work of this Task Force led to the creation and passage of The Gwendolyn Britt Bill, SB 879. The bill requires school systems that develop an implementation and monitoring plan for their wellness policy shall submit to MSDE a wellness policy implementation and monitoring plan with: policy goals, activities, expected outcomes, and measurements for physical activity and physical education. In addition, they shall submit an annual report on the local school system's progress toward achieving the policy goals of the implementation plan.

Connecting Health and Physical Education to Wellness Policies

The Child Nutrition and WIC Act of 2004 requires goals for nutrition education, physical activity, and other school based activities that promote student wellness and a plan for implementation and monitoring. Maryland's VSC for physical education addresses the health related components of fitness in Standard 5 Physical Activity and provides students the knowledge to address improving their health and wellness in Standard 4 Exercise Physiology. The ultimate goal is to have students assess their own fitness levels, develop personal fitness plans to address areas for improvement, examine principles for healthy weight management, and to embrace the value of physical activity. This goal is consistent with the NASBE *School Health Policy Guide* concerning key components of a quality physical education curriculum.

In the Fit, Healthy and Ready to Learn 2000, NASBE recommends that:

Health-related fitness testing shall be integrated into the curriculum as an instructional tool, except in the early elementary grades. Tests shall be appropriate to students' developmental levels and physical abilities. Such testing shall be used to teach students how to assess their fitness levels, set goals for improvement, and monitor progress in reaching their goals.

As health related physical fitness is influenced by factors beyond the control of students and teachers (such as genetics, physical maturation, disabling conditions, and body composition), test results shall not be used to determine course grades or to assess the performance of individual teachers.

Model school wellness policies also recommend integrating physical activity into the classroom setting during the school day. For students to receive the U.S Department of Health and Human Services 2008 *Physical Activities Guidelines for Americans* recommended moderate and vigorous intensity activity for periods of time that add up to 60 minutes and for students to fully embrace regular physical activity as a personal behavior, they need opportunities for physical activity beyond physical education class. The "new physical education program" needs to encourage students to be active even outside of the physical education class. The physical educator will be instrumental in working as an integral member of a school physical activity committee to develop strategies for increasing physical activity before, during, and after the school day.

Maryland's Health Education VSC addresses Nutrition and Fitness in Standard 6. This standard provides students information on nutrition and fitness skills and strategies to promote a healthy lifestyle. Negative health behaviors are interrelated and it is important to focus on the whole child with nutrition and physical activity as one component. That is why the NASBE Policy Guide recommends addressing nutrition and physical activity as part of a comprehensive health education course. A comprehensive health education

Attachment D

course addresses intellectual, social, emotional, and physical health. Health and physical education are the foundation for a healthy school environment and improving student health behaviors.

It is important to note, however, schools cannot and should not be expected to address improving student health alone. Instead, schools have a responsibility to work with parents, state and local government, and communities to take the necessary steps to truly address a healthier future for our youth.

Through the careful implementation and monitoring of wellness policies, schools will help close the gap between written policy and actions to support students in achieving the knowledge and skills required to lead a healthy life.

ATTACHMENT

ATTACHMENT E





Preventing Childhood Obesity A School Health Policy Guide





Preventing Childhood Obesity A School Health Policy Guide

by Colin Pekruhn Director, Obesity Prevention Project

Center for Safe and Healthy Schools

National Association of State Boards of Education





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Leadership for Healthy Communities

Advancing Policies to Support Healthy Eating and Active Living

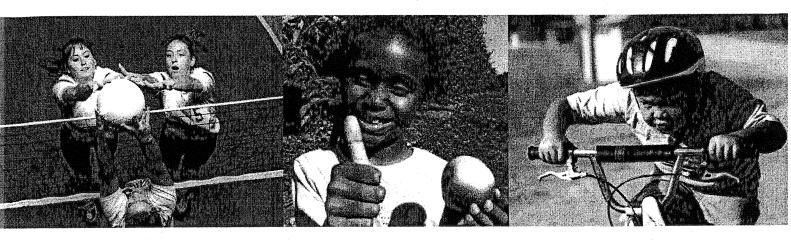
Support for this policy guide was provided by the Robert Wood Johnson Foundation as part of its Leadership for Healthy Communities national program.

The model policies contained in this guide are derived from research findings, existing policy examples, and best practices as described in the narrative. The model policies do not necessarily represent the views of the National Association of State Boards of Education. NASBE's Public Education Positions are available at www.nasbe.org/index.php/about/37-policy-positions.

Copies of *Preventing Childhood Obesity: A School Health Policy Guide* are available for \$12.00 plus \$4.50 shipping and handling from the National Association of State Boards of Education. To order this as well as other guides in NASBE's *Fit, Healthy, and Ready to Learn* series, call (800) 220-5183, order online at www.nasbe.org/bookstore/category/path/20, or write to NASBE at 2121 Crystal Drive, Suite 350, Arlington, Virginia, 22202. Orders less than \$50.00 must be prepaid; purchase orders, VISA, and MasterCard are accepted. Volume discounts are available.

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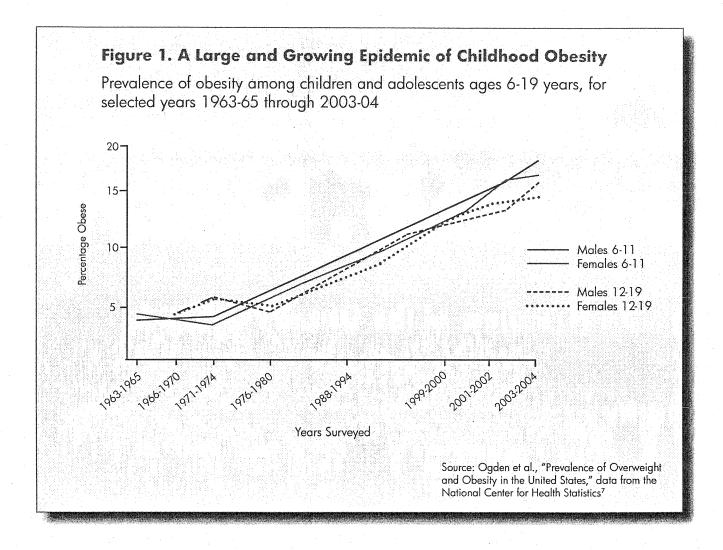
1. An Overview of the Obesity Epidemic

his nation is facing a serious childhood obesity epidemic. Today 16.3 percent of children and adolescents ages 2 to 19 are obese, and 31.9 percent are obese or overweight. This translates into 12 million children and adolescents who are obese and more than 23 million who are either obese or overweight.2 During the past four decades, the obesity rate for children ages 6 to 11 has more than quadrupled (from 4.2 to 17 percent) and more than tripled for adolescents ages 12 to 19 (from 4.6 to 17.6 percent).3 Obese and overweight children are likely to suffer health consequences not only during childhood and adolescence, but also throughout their adult lives. They are at greater risk as children and as adults for bone and joint problems, sleep apnea, social and psychological problems (e.g., stigmatization and poor self-esteem), heart disease, type 2 diabetes, stroke, cancer, and osteoarthritis.4

The childhood obesity epidemic cuts across all categories of race, ethnicity, family income and locale, but some populations are at higher risk than others. Low-income individuals, African Americans, Latinos, Native Americans and those living in the southern part of the United States are among those affected more than

their peers. For example, Mexican American children are more likely to be obese or overweight than white and African-American children. Thirty-eight percent of Mexican American children are obese or overweight, while 34.9 percent of African-American and 30.7 percent of white children are obese or overweight. Thus, in many cases those children who are most at-risk academically are also those who are facing the obesity crisis at a disproportionate rate.

Schools have many powerful tools at their disposal to serve as one of the primary agents to address the obesity crisis (e.g., access to children for significant amounts of time in their daily lives, mechanisms for education and reinforcement of healthy behaviors, and are portals to accessing the community at large). This policy guide is based on the National Association of State Boards of Education's *Fit, Healthy, and Ready to Learn: A School Health Policy Guide,* a comprehensive document developed in cooperation with the Division of Adolescent and School Health of the U.S. Centers for Disease and Control and Prevention (CDC) divided into several chapters addressing various student health needs and the school's role in addressing those needs.



The goal of this guide is to offer the latest policy updates and recommendations about how to promote physical education and activity and healthy eating policies in schools. To accomplish this goal, the guide refocuses the research and policy recommendations in these chapters to provide specific models for schools to address the

childhood obesity epidemic. It is important to note however, schools cannot and should not be expected to conquer this crisis alone. Instead, schools have a responsibility to work with parents, state and local government, and communities to take the necessary steps to truly address the epidemic.



2. Rationale for Obesity Prevention

reventing childhood obesity is a pivotal issue for the United States that requires top-priority attention from policymakers at all levels of government. An ever-expanding base of credible evidence indicates the childhood obesity epidemic has far-reaching consequences for the nation's public health system, economy, and overall prosperity. The epidemic is even more pronounced for children, whose development is being adversely impacted not only physically and mentally but also academically. The following sections explore the key consequences of childhood obesity in more detail.

Public Health Impact

At its most basic level, preventing childhood obesity is a public health issue. Obesity and overweight are risk factors for myriad diseases, many of which are crippling or fatal and telling signs of these impending diseases are manifesting at earlier ages than ever before. People begin to acquire and establish health-related behaviors as children, and these patterns profoundly affect their chances of dying prematurely in adulthood.⁸ For example, early indicators of atherosclerosis, which

is associated with poor dietary habits and is the most common cause of heart disease, can already be found in many children and youth. In fact, a recent study conducted by the University of Missouri Kansas City's School of Medicine shows that obese children as young as 10 had thickened arteries more commonly seen in 45-year-old adults. The findings, one researcher said, suggest that cardiovascular disease could someday become a pediatric illness. 10

Children and adolescents who are overweight are more likely to be overweight or obese adults. ¹¹ In fact, research shows that children who become overweight by age 8 are more severely obese as adults. ¹² Given that obesity in adults is associated with increased risks of premature death, heart disease, type 2 diabetes, stroke, several types of cancer, osteoarthritis, and many other health problems, it is critical to prevent obesity and overweight in childhood before these chronic health problems arise. ^{13,14}

Of particular concern is the rapidly rising rate of diabetes. Overweight and obesity, especially at younger ages, substantially increase a person's lifetime risk of "This [obesity epidemic] may
be the end of the trend
toward increased lifespan
that we have seen in this country
for the last century. And it
may in fact actually shorten
lifespan by two or three
years, which is more than
the effect of all cancers
combined."

Dr. David Ludwig, Boston Children's Hospital¹⁷

diagnosed diabetes; the risk of diabetes among 18 yearolds who are obese is 70 percent for men and 74 percent for women. ¹⁵ American Indians, Alaska Natives, Native Hawaiians, and other Pacific Islanders are at particularly high risk. ¹⁶

The U.S. Centers for Disease Control and Prevention (CDC) has *conservatively* estimated that 1 in 3 American children born in 2000 are likely to develop diabetes in their lifetime, with the odds being especially high for minority children. The life expectancy of those who develop diabetes is projected to be 13 years less than the national average. Thus, 1 in 3 children born in the new millennium can be expected to live substantially shorter lives than those in the previous generation.

Economic Impact

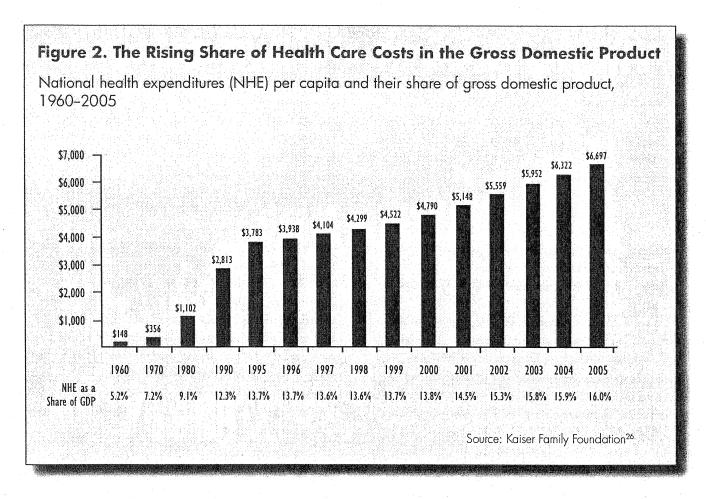
Policymakers and education leaders need to be concerned about the impact of childhood obesity on government budgets at all levels over the long term. Obese children are two to three times more likely to be hospitalized and are about three times more costly to care for and treat than the average insured child. In 2004 alone, the United States spent an estimated \$98 to \$129 billion on direct and indirect health care costs associated with obesity. With obese children likely to remain as such into adulthood, these costs will continue to persist if not increase over time.

Of particular note for governments are the health care costs for obese children. Childhood obesity alone is estimated to cost \$14 billion annually in direct health expenses. Children covered by Medicaid account for \$3 billion of those expenses. Annually, the average health expenses for a child treated for obesity under Medicaid is \$6,730, while the average expenditure for all children on Medicaid is \$2,446. Further, the average health expenses for a child treated for obesity under private insurance is \$3,743, while the average health cost of a child under private insurance is \$1,108.21 Direct state-level estimates of medical expenditures attributable to obesity in 2002 ranged from \$87 million in sparsely populated Wyoming to \$7.7 billion in densely populated California.²² Thus, childhood obesity places substantial strain on the cost of health care at every level.

Since 1970, health care costs have grown on average 2.5 percentage points faster than the U.S. gross domestic product (GDP); by 2005, the health care portion of the GDP was 16 percent (fig. 2).²³ The U.S. Centers for Medicare and Medicaid Services (CMS) projects that health spending will be nearly 20 percent of GDP by the year 2016.²⁴ Although obesity is not the only reason for this steady increase, the Council of State Governments (CSG) warns that, "The economic burden of obesity and the associated chronic diseases will continue to rise if work is not done today to reduce the childhood obesity epidemic, even though the positive benefits of these efforts may not be fully realized until today's children reach adulthood."²⁵

Overall, the amount spent on health care will continue to rise dramatically as the current generation of children enters adulthood with higher rates of overweight and obesity, increasing the rates of and decreasing the age of onset for heart attacks, strokes, diabetes, hypertension, and cancer.

Health care costs are not the only cause for concern. With the rise in obesity and its related health issues, employers will be faced with an ever-growing problem related to the productivity of their workforce. Recent studies have found that obesity results in about



\$117 billion in lost wages and other indirect costs to employers annually. These losses are even greater than those accrued as a result of smoking.²⁷

The consequences of obesity are significant for the government, employers, and families because the associated costs will force reductions in government budgets for other services and programs like education, may result in decreased productivity and profits for business and industry. Likewise, obesity may cause families to have less disposable income for savings, consumption, and investment due to increased spending on health care and lost wages due to obesity-related illnesses.

Academic Impact

A student's weight status can affect academic performance in a variety of ways, as described below.

Absenteeism

One well-documented impact is obesity's effect on student absenteeism. A recent study of 1,069 students in grades 4 through 6 in nine low-income Philadelphia elementary schools found that on average, obese schoolchildren were absent two school days more than their normal-weight classmates. Furthermore, obesity was a better predictor for absenteeism than any other factor. ²⁸ This increase in absenteeism is directly tied to the myriad health issues associated with obesity and overweight that was discussed in the previous section. Thus, overweight and obese children are less likely to be in school regularly, impeding their ability to learn.

Emotional and Health Effects

Emotional effects resulting from obesity also exists, impeding students' academic performance. Studies have

documented that overweight students are more likely to be teased, be depressed, and have poor self-esteem, which keeps these students away from the classroom.²⁹ As one researcher said, overweight students are "missing school because they don't want to be bullied and called names."³⁰ The emotional health problems caused by this type of stigmatization and chronic bullying have been found to significantly affect student attendance rates and academic performance, especially in girls.^{31,32}

The emotional and health effects of obesity on student academic performance were quite evident in a study of Philadelphia area students. A Temple University research team found that the grade point averages of overweight middle school students in a Philadelphia suburb were half a grade point lower than those students whose weight was normal. Overweight students also scored lower in reading comprehension on national standardized tests, were five times more likely to have six or more detentions, were absent more often, scored lower in physical fitness, and were less likely to participate in athletics than their normal-weight peers.³³

Academic Achievement

On the other hand, several studies have found positive academic and other gains from implementing policies and practices that promote physical activity and nutrition. Researchers are continually finding that students who are healthy and physically active are more likely to be motivated, attentive, and successful academically.34,35 For example, a national study conducted in 2008 of more than 5,300 elementary school students found a small but significant increase in both math and reading test scores among girls who spent the most amount of time in physical education (P.E.) compared to girls who spent the least amount of time in P.E.³⁶ Another study conducted in 2005 included a systematic evaluation of the evidence on the effects of physical activity. The study found that physical activity has a positive influence on concentration, memory, and classroom behavior and that the addition of P.E. to the curriculum can result in small positive gains in academic performance.37

The CDC has reported that regular physical activity in childhood and adolescence helps to reduce anxiety and stress and to increase self-esteem, mood, and concentration—all factors that influence learning. Some researchers suggest that physical activity enhances academic performance by increasing the flow of blood to the brain, which can in turn enhance mood and increase mental alertness; however, more evidence is needed to conclusively prove this hypothesis. Some researchers are physical activity enhances academic performance by increasing the flow of blood to the brain, which can in turn enhance mood and increase mental alertness; however, more evidence is needed to conclusively prove this hypothesis.

There is further evidence that school meals can play a critical role in improving academic performance as well. A recent Harvard study of more than 100 studies of the School Breakfast Program found that serving nutritious breakfasts to children who were not getting breakfast otherwise had significant impacts on cognitive abilities, including increased attention span, heightened alertness, and improved reading, math, and other standardized test scores. Thus, by ensuring students receive nutritious meals, especially those who would not otherwise have access, schools can potentially see profound impacts on achievement in student populations who are more likely to be at-risk for underperforming.⁴⁰

Although general awareness about obesity and its consequences have increased, in many cases long-term policies and practices have not been adjusted or fully implement to help prevent childhood obesity. For example, the latest findings from the third School Nutrition Dietary Assessment Study (SNDA-III), which is sponsored by the USDA's Food and Nutrition Service, shows that among schools participating in the National School Lunch Program, only 6 percent offered lunches that met all of the School Meal Initiative (SMI) standards for energy, fat, saturated fat, protein, Vitamin A, Vitamin C, calcium and iron. Other SNDA-III findings showed that 42 percent of schools did not offer any fresh fruits or raw vegetables in the reimbursable school lunch on a daily basis. In addition, the study indicated that one or more sources of competitive foods, typically characterize as low-nutrient, energydense foods and beverages, were available in 73 percent of elementary schools, 97 percent of middle schools and 100 percent of high schools.⁴¹ Additionally, a large number of

students still do not receive opportunities to be physically active, as 64 percent of high school students do not meet their quota for daily recommended physical activity.⁴²

To effectively fight and prevent obesity, policymakers face a daunting challenge that requires action in

schools, communities, and in homes. Because schools are singular entities where the interests of community, families, and government intersect, we can start to reverse the obesity epidemic by implementing and enforcing positive policies and practices in schools nationwide.

Principles of Obesity Prevention in the School Environment

Prevention, not treatment of obesity, is the goal of school interventions. In framing the childhood obesity problem, prevention needs to be clearly differentiated from medical treatment for children who are already obese.

Prevention requires small but consistent changes in schools. Normal-weight children need only small daily changes to achieve a balance between calories consumed and calories expended through physical activity.

Prevention requires environmental changes to achieve consistent effects. Most school-based programs that focus solely on individual change have relatively small effects or no effect on obesity-related behaviors, while programs that include environmental changes generally have larger effects.

A variety of environmental changes are needed in schools. No quick fixes or single policy solutions exist for the school environment.

Prevention will be best served when children's environments give them a variety of opportunities to consume healthy food and to be physically active. An abbreviated logic model might be as follows:

The physical activity connection:

- If time is made for physical education and supervised recess, then kids are more physically active; and
- If they are more physically active, then they expend more calories and are closer to achieving an energy balance.

The food environment connection:

 If schools limit competitive foods and provide appetizing school meals that meet dietary guidelines, in appealing circumstances with sufficient time to eat, then they will consume appropriate calories and come closer to achieving an energy balance.

The school environment:

• If schools have a healthy environment for eating and physical activity, and community and family environments are also healthy, then children will achieve an energy balance and maintain healthy weight.

Laura C. Leviton, Robert Wood Johnson Foundation⁴³



3. Policies to Promote Physical Education and Activity

olicymakers can have a significant impact on the level of quality and quantity of physical education and activity in schools. The following model policy is based on the best evidence and practices in the field. The goal is to create a culture or environment in schools that promotes physical activity that will instill students with an ethic that lends itself to being physically active into adulthood. At the heart of any comprehensive physical activity and education policy are three things:

- 1. Providing students with the knowledge and skills necessary to remain physically strong and healthy;
- 2. Providing opportunities for students to be active during the school day; and
- 3. Motivating students to be active on a daily basis every day.

To these ends, education policymakers and leaders can enact policies that promote multiple opportunities in

addition to physical education (P.E.) for students to be physically active. Daily recess periods, promoting student and staff walking or biking to school, and offering after-school intramural programs, interscholastic athletics, and other school-sponsored or community-based sports and recreation programs are all ways in which schools can contribute.

Physical Activity

A scientific consensus has emerged that every young person needs to participate in at least 60 minutes of moderate to vigorous physical activity daily. 44 Given that schools can provide multiple means by which students can be active and that students are in school for a large portion of the waking day, the Institute of Medicine recommends that schools at every level should aim to provide students with at least half of the total, or 30 minutes of physical activity every school day. 45

Several strategies are available to policymakers and school administrators to get students active. One of the

most common is recess, which has social and cognitive benefits for younger children in addition to the positive effects on physical health. Supporting intramural and interscholastic sports, promoting physical activity breaks during and between classes, and establishing safe and accessible walk-to-school routes are other opportunities that schools have successfully implemented. Policymakers need to note that many of these strategies require teachers and staff to be provided with professional development if they are to be successful.

Physical Education

P.E. has also played a strong role in keeping students active and teaching them skills; however, the current state of inactivity of children requires that P.E. be more than what it has been in years past. High-quality standards-based P.E. now focuses on imparting the skills, knowledge, and motivation for children to remain active even outside of school and into adulthood. Key components of high-quality P.E. curriculum include: ⁴⁷

- what being physically fit means and the importance of fitness;
- how to interpret fitness test results and use the information to develop scientifically based personal fitness goals;
- how to develop personal activity plans that include enjoyable activities and sports to help achieve and maintain personal fitness goals;
- lessons about the safety issues and protocols that exist within a variety of physical activities, fitness assessments, games, and sports; and
- principles of healthy weight management and reasons to avoid unhealthy weight loss practices.

Experts agree that P.E. should be offered on a daily basis for grades PK-12 by certified instructional staff that is provided with consistent, high-quality professional development opportunities. Additionally, many of the

concepts in a standards-based P.E. curriculum can and should be incorporated into the core curriculum (e.g., benefits of physical activity in science class).

Body-Mass Index Screening

One of the most controversial issues facing policymakers in regards to obesity prevention policy is body-mass index (BMI) screening. Arkansas' Act 1220 was the first state policy to mandate BMI screenings in school.⁴⁸ The results are kept confidential and sent to the parents in a Child Health Report that contains evidence-based guidance for parents to help improve their child's weight status, tailored to the individual students' BMI screening results. The goal is not only for schools to identify students who are or are at risk for becoming overweight or obese but also to raise family and community awareness of the epidemic. Recent studies have found that many families of overweight and obese children do not recognize that fact, with most families underestimating the severity of their child's weight situation. 49 Thus, BMI screening can prove to be a powerful tool for both schools and families.

However, concerns about using mandatory BMI screenings have arisen. Many parents worry that their child, if labeled as obese or overweight, will be subject to bullying and harassment. A University of Arkansas study of the Act 1220 policy has found that there has yet to be any increase in teasing since the state implemented mandatory BMI measurement.⁵⁰ Another issue to consider in addition to the cost and logistics of implementing mandatory measurements is the use of the information once it is collected. Some worry that this data could be used in the future—for example, by insurance companies to deny coverage, using overweight or obesity as a pre-existing condition. Therefore, states and districts must seriously consider the confidentiality of the results of such measurements, and some may wish to consider implementing a surveillance program instead of screenings where only a random sample of students are measured and identities are kept confidential. While such a surveillance approach fails to provide help for students who need it directly, the data collected can inform schools and policymakers as to which student populations are most in need of intervention. Whichever BMI measuring approach a state or district chooses to take, the research is clear that follow-up with parent and student education is critical if there are to be lifestyle changes.⁵¹

The following model policy provides a framework for adopting an integrated policy that promotes physical activity and education in schools. It addresses the issues raised above and others that lay the groundwork for creating a positive, health-promoting school environment. Policymakers are urged to use this model policy as a guide in a collaborative policymaking process that involves all stakeholders. Additional details and in-depth discussion can be found in *Fit, Healthy, and Ready to Learn, Chapter D: Policies to Promote Physical Education and Physical Activity.*

Integrated Policy for Physical Education and Physical Activity

Note: Users will need to adapt this model policy to fit their unique education governance structure and established policy format, particularly the phrases in italics.

GOALS. An active lifestyle at every age is essential to health, well-being and the enjoyment of life. Every student shall develop the knowledge and skills necessary to perform a variety of physical activities, maintain physical fitness, regularly participate in physical activity, understand the short-and long-term benefits of physical activity, and value and enjoy physical activity as an ongoing part of a healthy lifestyle.

RATIONALE. All schools need to promote physically active lifestyles among young people for the following reasons:

- through its positive effects on concentration, attention, mood, anxiety and stress, physical activity
 can help increase students' capacity for learning;
- the evidence is compelling that regular physical activity improves academic performance;
- physical activity has substantial health benefits for children and adolescents, including favorable effects on endurance capacity, muscular strength, body weight, and blood pressure;
- regular physical activity reduces the risk of premature death in general and of heart disease,
 high blood pressure, colon cancer, diabetes, and osteoporosis in particular; and
- positive experiences with physical activity at a young age help lay the basis for a person to become physically active throughout life.

INTEGRATED POLICY. With guidance from the <u>school health advisory council</u>, each <u>school</u> <u>district/school</u> shall develop and implement a multifaceted, integrated policy to encourage physical activity that incorporates the following components:

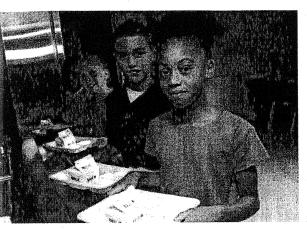
- a sequential program of physical education for all students on a daily basis in grades PK-12 that teaches knowledge, motor skills, goal-setting, self-management skills, and positive attitudes; provides moderate to vigorous physical activity; promotes activities and sports that students enjoy and can pursue throughout their lives; is taught by qualified, well-prepared, and well-supported physical education specialists; and is coordinated with the health education curriculum;
- adapted physical education lessons for students with disabilities or chronic health conditions;
- a sequential program of PK-12 health education that reinforces the knowledge and selfmanagement skills needed to maintain a physically active lifestyle, maintain a healthy weight, and reduce time spent being sedentary;
- collaboration with community planning and public safety agencies to establish safe routes
 for walking and biking to schools and promote active commuting by students and staff
 members;
- daily periods of supervised recess in elementary schools, which may not be denied for disciplinary reasons or to make up lessons;
- opportunities and encouragement for students to participate in before- and after-school physical
 activity programs, including activity clubs, intramural sports, and interscholastic athletics that
 equitably serve the needs and interests of all students;
- coordinated school and community recreation activities at times when school is not in session;
- opportunities and encouragement for staff members to be physically active;
- strategies to encourage students' families to support their children's participation in physical activity and to be involved in program development and implementation;
- designation of one or more persons charged with operational responsibility for policy implementation; and
- a plan to measure policy implementation fidelity and policy effectiveness.

EFFECTIVE DATE. Each <u>district/school</u> shall submit its integrated physical activity policy to <u>whom</u> by <u>date</u>. The policy shall be implemented by <u>date</u>.

REPORT TO THE COMMUNITY. At the end of each school year, the <u>physical education</u> <u>coordinator/school health program coordinator/other</u> shall submit an annual report to the <u>school health advisory council/board of education</u> on the implementation and effectiveness of the physical activity policy with recommendations for improvement. The report shall be posted on the Internet for easy public access.

POLICY DEFINITIONS. Optional: Many state and local policies incorporate definitions of key terms.

- Active commuting: Modes of transportation to and from school that involve physical activity, including walking, biking, skating, and rollerblading.
- Adapted physical education: Physical education programs that include guidance on how to appropriately modify physical activities, equipment, and assessments for students with a disability or chronic health condition in ways that provide them with the same instruction and opportunity to develop skills that other students receive.
- Extracurricular activities: School-sponsored voluntary programs that supplement regular
 education and contribute to the educational objectives of the school.
- Interscholastic athletics: Organized and coached individual and team sports that involve
 competition between schools according to rules established by
- Intramural sports: Organized, supervised sports programs of within-school teams that provide opportunities for all students to participate.
- Moderate physical activity: Physical exertion that is equivalent in intensity to brisk walking.
- Physical activity clubs: Organized or informal groups of students or staff who wish to pursue shared interests in physical activities such as yoga, dance, aerobics, martial arts, weightlifting, or active "exergames."
- Physical education: A planned, sequential PK-12 program of curricula and instruction that
 helps students develop the knowledge, attitudes, motor skills, self-management skills, and confidence
 needed to adopt and maintain physically active lifestyles.
- Recess: Regularly scheduled periods within the school day for supervised physical activity and play.
- Regular physical activity: For youth ages 6-19, participation in moderate to vigorous physical activity for at least 60 minutes per day on most, preferably all, days of the week.
- Vigorous physical activity: Physical exertion that makes a person sweat and breathe hard, such as basketball, soccer, running, swimming laps, fast bicycling, fast dancing, and similar aerobic activities.







4. Policies to Promote Nutrition and Healthy Eating

s with physical activity and education, policy-makers can have a significant impact on the quality and nutrition of food available in schools and the habits students form in their food selection. The following model policy is based on the best evidence and practices in the field. The goal is to create a culture or environment in schools that encourages students to make healthy food choices now and into adulthood.

A comprehensive, integrated school nutrition policy should include the following:

- the purpose and goals of school nutrition programs and practices;
- guiding principles for school food service staff, nutrition educators and professional pupil service staff;

- standards for all food and beverages served or sold at school and the conditions under which they are served or sold; and
- responsibilities for implementation, accountability and ongoing policy evaluation.

Federal Meal Programs

The goal of any nutrition policy should be to help students and staff meet the *Dietary Guidelines for Americans* (DGA) developed by the U.S. Departments of Agriculture (USDA) and Health and Human Services (DHHS).* One excellent way to do this is encouraging participation in federal school meals programs, which include the National School Lunch Program, the National School Breakfast Program, and other federal

^{*}The DGA are updated every five years by the Dietary Guidelines Advisory Committee, selected by both the USDA and DHHS, which is composed of medical and scientific experts in the fields of dietary intake, human metabolism, behavioral change, and physical activity. The Committee, which received public comment in addition to its own deliberations, reports its recommendations to both USDA and DHHS for updating the DGA, which both agencies then use to create the new DGA. The next iteration of the DGA will be released in 2010.

nutrition and meals programs. Participants are required to adhere to the DGA, and evidence points to these programs as being more effective in providing students with nutritious meals. ^{52,53} Furthermore, these meals are reimbursable and the rate of reimbursement for school districts increases as the number of students participating increases, creating a win-win situation for students and schools. A major issue facing schools, however, is the fact many students, especially those eligible for free or reduced-price meals, are not enrolling or participating in these programs. ⁵⁴ Thus, a key goal of any nutrition policy should be to increase participation in federal school meals programs, including efforts to assist families whose children are eligible for free- and reduced-price meals enroll in the program.

Competitive Foods

Addressing the problem of unhealthy competitive foods in schools is another major concern nutrition policies need to address. As much as one-fifth of the average increase in adolescent weight can be attributed to increased availability of junk food in schools.55 In 2006, 33 percent of elementary schools, 71 percent of middle schools, and 89 percent of high schools either had a vending machine or a school store, canteen, or snack bar where students could purchase foods or beverages in competition with the school meals program.⁵⁶ Even more schools sell foods and beverages á la carte (i.e., extra entrées, side items, and beverages on a per-item basis) in the cafeteria outside of the school meals program. Although most schools have fruit available for sale, á la carte items do not have to meet USDA nutrition standards.⁵⁷ Therefore, if schools are to make a serious impact, provisions must be put into place that set nutritional standards for these competitive foods.

Nutrition Education

Policies should also include the provision of comprehensive, standards-based nutrition education that is integrated throughout the school curriculum. While providing students with healthy meals and limiting their access to unhealthy competitive options are important, none of

that will matter in the long run if students do not make healthy food choices outside of the school setting. As a recent study of 5th graders nationwide found, banning sugary, high-calorie soft drinks alone only led to a 4 percent reduction in student consumption of these drinks. An American Dietetic Association (ADA) review of 12 rigorously evaluated school nutrition education programs found that nine had positive effects and five had a measurable impact on children's weight status. The researchers hypothesize that those programs that did not correlate with positive impacts on students eating habits had insufficient student exposure to the programs. Therefore, simply implementing a policy for foods in schools is not enough to combat the obesity epidemic: education must be a critical component.

Policymakers must note that traditional, knowledge-based programs and curricula have been found to be less effective (e.g., learning and memorizing the food pyramid) than behavior-directed programs and curricula. Such programs and curricula include components aimed at changing group views and norms about eating healthy foods, providing practical health information and strategies, changing personal values to support healthy lifestyles, and including families in the process. Policies that support this type of integrated, behavioral-directed education strategy are critical to the sustainability of obesity prevention efforts.

Health Education

Nutrition education should not be taught as a distinct program; rather, it should be one module within a greater comprehensive health education program. Student health behaviors tend to be interrelated, and combined messages can address multiple student health behaviors. For example, adolescent smoking is linked to poorer diet and unhealthy eating habits. Coupling tobacco prevention education with nutrition education can produce positive spill-over effects that benefit both efforts. Additionally, nutrition education and physical education should be closely aligned to reinforce the importance of the "calories-in/calories-out" energy balance equation that is critical to maintaining healthy weight.

The following model policy provides a framework for adopting an integrated policy that promotes healthy eating in schools. It addresses the issues raised above and others that will lay the groundwork for creating a positive, health-promoting school environment.

Policymakers are urged to use this model policy as a guide in a collaborative policymaking process that involves all stakeholders. Additional details and in-depth discussion can be found in *Fit, Healthy, and Ready to Learn, Chapter E: Policies to Promote Healthy Eating.*

Integrated Policy to Promote Healthy Eating

Note: Users will need to adapt this model policy to fit their unique education governance structure and established policy format, particularly the phrases in italics.

GOAL. Schools share responsibility with families and the community to help students meet the Dietary Guidelines for Americans. All schools shall encourage and provide opportunities for students and staff members to practice making healthy eating choices on a daily basis, and shall educate every student on essential knowledge and skills for a lifetime of healthy eating. Nutritious school meals should be the main source of foods and beverages available at school; other foods and beverages that may be available shall also provide necessary nutrients.

RATIONALE. The link between nutrition and learning is well documented. Healthy eating is essential for students to achieve their academic potential, full physical and mental growth, and lifelong health and well-being. Well-planned and implemented school meals programs have been shown to positively influence students' health, academic performance, and eating habits. The overall school environment plays a significant role in teaching and modeling eating and health behaviors.

HEALTH-PROMOTING SCHOOL CULTURE. Each school, in consultation with <u>the school</u> <u>health advisory council/staff members/family representatives/student government</u>, shall foster and actively promote a safe, supportive, and health-promoting social environment for student growth and learning. School leaders shall emphasize respect, support, caring, academic achievement, and healthy lifestyles, and adopt a mission statement and code of conduct that includes expectations and standards of behavior for students and staff. Teasing or bullying based on weight, body size, or other personal attributes shall not be tolerated.

INTEGRATED POLICY. <u>The state department of education/All school districts</u> shall develop, adopt, and implement a multifaceted, integrated policy to help students and staff members meet the Dietary Guidelines for Americans and prepare students for a lifetime of healthy eating. The integrated policy shall include the following elements:

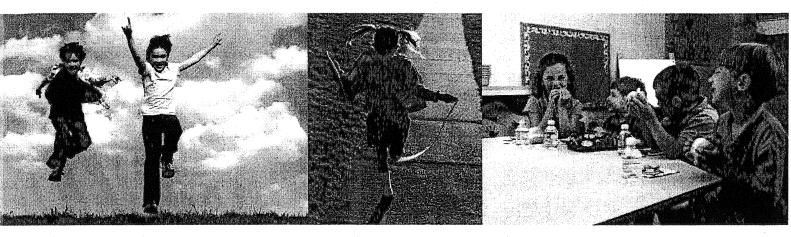
 school meals programs with well-prepared staff who efficiently serve a variety of healthy and nutritious meals that meet federal nutrition standards and appeal to students;

- active encouragement for students and staff members to participate in reimbursable school meals programs;
- pleasant dining areas with drinking water and hand-washing facilities;
- adequate time for unhurried eating;
- nutrition standards for all foods and beverages sold or offered at school that are not part of reimbursable school meals programs;
- a sequential program of behavior-focused nutrition instruction that aims to influence students' knowledge, attitudes, planning skills, and eating habits; is part of the comprehensive school health education curriculum; is taught by qualified staff; and is coordinated with school meals programs;
- encouragement and opportunities for school staff to model healthy eating habits;
- procedures to ensure that students with diabetes, special nutritional needs, eating disorders, and other nutrition-related health problems are provided with or referred to appropriate counseling or medical treatment services;
- collaboration with related agencies and programs in the community; and
- [Optional] procedures to screen students for weight disorders every year, with results and recommendations for appropriate action provided confidentially to parents/guardians.

ACCOUNTABILITY. The <u>state/tribal/district</u> board of education and local school administrators shall comply with the provisions of this policy and ensure proper accountability for all funds received from food and beverage sales.

The <u>Child Nutrition Director/School Nutrition Manager/School Health Program Coordinator/Team Leader</u> shall be held responsible for the following:

- ensuring the implementation of all elements of the integrated policy;
- providing information about best practices to staff implementing the policy;
- facilitating communication among child nutrition, physical education, school health program, and other school staff as well as collaborating agencies;
- conducting policy evaluation activities, such as student, family, and staff satisfaction surveys; and
- submitting an annual progress report that includes recommendations for policy improvement to the <u>state board of education/district board of education/school health advisory council</u>.



5. Next Steps for Policymakers

he model policies contained within this guide provide a solid foundation for states and school districts to address many of the issues around childhood obesity, but they are only a first step. The following are important next steps for policymakers to consider after these policies have been developed and approved.

Implementation of Local Wellness Policies

On the surface, implementation is an obvious next step for any policymaker to be concerned with, but given all that schools are held accountable for under the No Child Left Behind Act, it is easy for nutrition and physical activity and education policies to fall by the wayside. Therefore, it is imperative that policymakers find ways to hold state agencies, local school districts, and individual schools accountable for properly implementing these policies.

Local wellness policies, mandated for all schools under Section 204 of the Child Nutrition and Women, Infants, and Children Reauthorization Act of 2004 (PL 108-265), are required to have provisions addressing nutrition and physical activity. Many states and districts have used Section 204 to push through school health and nutrition policies where there either was little or no policy guidance in place. However, as schools receive no incentive or penalty around local wellness policies, they often are ignored or implemented only to meet the minimum standard as required under the policy. Indeed, a nationwide survey of school and community health professionals found that at least 70 percent do not feel that schools are adequately implementing wellness policies.⁶⁴

One policy option is to integrate local wellness policies, school nutrition policies, and school physical activity and education policies into the overarching school improvement plan process. Arkansas, South Carolina, and Rhode Island are three states that currently require local wellness policies be addressed in this process. This strategy places nutrition and physical activity on equal standing with math, science, and reading in terms of state accreditation and/or funding.⁶⁵

Other states have implemented public reporting requirements around local wellness policies that compel districts to report on the progress of implementation not only to the state department of education, but in some cases to the general public as well.* In this way, districts not only have to ensure they are implementing their nutrition and physical education and activity policies but also collect data on the effects of such policies. 66 Even if the policies are not successful at the time, such data can prove useful to policymakers in adapting current policies to meet the challenges districts face.

Professional Development/Support for Teachers and Staff

While it is relatively easy for policymakers to develop and approve health-related policies and for those policies to be implemented and assessed, school staff and administrators are left with the challenge of actually finding a way to meet those expectations without compromising their core academic mission. Therefore, it is imperative for policymakers to provide ample opportunities via funding and/or directives to the department of education for teachers, school support staff, and administrators to receive professional development around the provision of quality physical education, physical activity, nutrition, and nutrition education. For many, these areas and the best practice strategies for providing these services and opportunities to students were not part of their training. Professional development, then, is not only needed to impart the skills necessary for school staff to properly and successfully implement policy, but to improve staff and administrator confidence in being able to do so without undue stress on their core responsibilities.

Engaging Families and Communities

While schools play a key role in combating the obesity epidemic, they cannot singlehandedly reverse it. Parents and the community at-large have a major responsibility for developing the habits of children, as any progress made in schools can easily be undone as soon as students step off campus. Education policymakers can encourage and provide guidance to schools as they offer parent education programs around nutrition and physical activity and partner with community organizations (especially those that work extensively with at-risk student populations) to provide before- and after-school opportunities for physical activity and nutrition.

One successful strategy for community and parental partnership has been the implementation of school health advisory councils. These councils are comprised of school administrators, teachers, school staff, parents, public health community members, and others from the community at-large. They offer a forum for open dialogue in addressing health and safety issues for schools, and provide recommendations to school boards to address the issues particular to each school and school district. They also can act as an oversight committee for the implementation and evaluation of school nutrition, physical activity, and other critical health policies.

These recommendations will provide the foundation for improved services and results for the nation's youth as we move further into the 21st century. It is vital not only to the health and success of our children but that of the entire nation that policymakers seriously undertake the challenge of reversing the obesity epidemic.

^{*}Alabama, Florida, Kentucky, Indiana, New Mexico, Mississippi, and Tennessee have state requirements for local accountability for the implementation of local wellness policies; Colorado, Kansas, New Jersey, New Mexico, Pennsylvania, North Carolina, Hawaii, and Maryland require state-level review and evaluation of local wellness policies; and Kentucky, Nevada, North Carolina, Oklahoma, and Tennessee require school districts to regularly report to the state on the implementation of local wellness policies.

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ATTACHMENT

ATTACHMENT F

Senate Bill 879/House Bill 1264 Gwendolyn Britt Student Health and Fitness Act Bill Summary

- Authorizes LSS's to develop and implement certain Wellness Policy Implementation and Monitoring Plans
- MSDE will develop a procedure to monitor and measure the implementation of a LSS's Wellness Policy Implementation and Monitoring Plans
 - Provide feedback and technical assistance
 - Identify and distribute effective wellness practices for physical activity and physical education
 - Provide staff support to each LSS
- Each LSS that implements a Wellness Policy Implementation and Monitoring Plan shall submit their plan to the Department.
 - Plan must include:

Policy Goals

Activities

Expected Outcomes

Measurements for Physical Activity and Physical Education

- LSS's submit annual report on progress
- MSDE shall establish an Advisory Council on Health and Physical Education (membership listed in attached legislation on pages 4-5)
 - Council shall meet at least twice a year
 - Council objectives are listed on page 6 of legislation

SENATE BILL 879

F1

9lr2780 CF HB 1264

By: Senator Harrington

Introduced and read first time: February 6, 2009

Assigned to: Education, Health, and Environmental Affairs

Committee Report: Favorable with amendments

Senate action: Adopted

Read second time: March 24, 2009

CHAPTER

1 AN ACT concerning

2

21

Gwendolyn Britt Student Health and Fitness Act

3 FOR the purpose of requiring certain authorizing local school systems to develop and 4 implement certain physical fitness measurement programs Wellness Policy 5 Implementation and Monitoring Plans to be used for certain purposes; requiring 6 the State Department of Education to take certain steps to support certain 7 fitness measurement programs Wellness Policy Implementation and Monitoring 8 Plans; requiring each certain local school systems to submit certain 9 plans and certain reports to the Department; requiring the Department to 10 establish a certain Advisory Council; providing for the membership, election of 11 officers, and staff of the Advisory Council; prohibiting certain members of the 12 Advisory Council from receiving certain compensation; authorizing certain 13 members of the Advisory Council to receive certain reimbursement; requiring 14 the Advisory Council to meet certain times per year; requiring the Advisory 15 Council to develop and coordinate certain educational programs for students; authorizing the Advisory Council to seek, accept, and expend certain funds and 16 17 to seek, accept, and use certain services; and generally relating to the 18 development and implementation of physical fitness measurement programs 19 Wellness Policy Implementation and Monitoring Plans.

20 BY repealing and reenacting, with amendments,

Article – Education

22 Section 7–409

23 Annotated Code of Maryland

24 (2008 Replacement Volume)

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.

Underlining indicates amendments to bill.

Strike out indicates matter stricken from the bill by amendment or deleted from the law by amendment.

34 7–409.

1	Preamble
2 3 4	WHEREAS, Maryland was recently rated number 1 by Education Week in Quality Counts, and the physical education programs of Maryland should also be first in the nation; and
5 6 7	WHEREAS, Schools play an important role in partnership with parents, health professionals, and the community in addressing the issues that support the health and wellness of Maryland's public school students; and
8 9 10	WHEREAS, Inadequate participation in physical activity is a significant contributor to the "epidemic of obesity" that has plagued the nation's young people during the past 2 decades; and
11 12 13	WHEREAS, Physical education and nutrition education are key components in providing students with the skills and knowledge to develop a healthy lifestyle in youth which promote healthier lifestyles in adulthood; and
14 15 16 17 18	WHEREAS, Physical activity offers young people many health benefits, including improving aerobic capacity, muscular strength, and endurance, helping to control weight, building lean muscle and reducing fat, and helping to build greater bone mass to thwart the development of osteoporosis in adulthood and prevent or reduce the risk of high blood pressure; and
19 20	WHEREAS, Every school system should provide opportunities for and encourage physical activity during the school day; and
21 22	WHEREAS, Recess should be encouraged during the school day, and not used as a reward or punishment; and
23 24	WHEREAS, School wellness encompasses healthy eating, adequate physical activity, nutrition education, and physical education for all students; and
25 26 27	WHEREAS, Improving school wellness practices is essential to decreasing childhood obesity and preparing children to lead healthy, active, and productive lives; and
28 29 30	WHEREAS, The Task Force on Student Fitness in Maryland Public Schools has provided recommendations to the Governor and the Legislature on improving the health and wellness of Maryland's students; now, therefore,
31 32	SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That the Laws of Maryland read as follows:
33	Article - Education

1 2	(a) Each public school shall have a program of physical education that is given in a planned and sequential manner to all students, kindergarten through grade
3	12, to develop their good health and physical fitness and improve their motor coordination and physical skills.
5	(b) The Department shall employ a full–time director of physical education.
6	(a) Every rocal compos example exist may be relate an and
7	(C) EACH LOCAL SCHOOL SYSTEM SHALL MAY DEVELOP AND IMPLEMENT AN ANNUAL PHYSICAL FITNESS MEASUREMENT PROGRAM
8	WELLNESS POLICY IMPLEMENTATION AND MONITORING PLAN TO BE USED TO:
9	(1) ESTABLISH BASELINE STUDENT DATA FOR THE
10	HEALTH-RELATED COMPONENTS OF PHYSICAL FITNESS;
11	(2) Assist students with the development of personal
12	PHYSICAL FITNESS PLANS;
13	(3) Encourage appropriate interventions for students
14	IDENTIFIED AS HAVING UNHEALTHY LEVELS OF PHYSICAL FITNESS;
15	(4) IDENTIFY EFFECTIVE PRACTICES FOR IMPROVEMENT OF
16	STUDENT HEALTH-RELATED PHYSICAL FITNESS; AND
17	(5) ENCOURAGE PARTNERSHIPS WITH HEALTH AGENCIES TO
18	ADDRESS STUDENT HEALTH-RELATED ISSUES IN THE STATE.
19	(D) THE DEPARTMENT SHALL:
20	(1) DEVELOP A PROCEDURE TO MONITOR AND MEASURE THE
21	IMPLEMENTATION OF EACH $\underline{\mathbf{A}}$ LOCAL SCHOOL SYSTEM'S PHYSICAL FITNESS
22	MEASUREMENT PROGRAM WELLNESS POLICY IMPLEMENTATION AND
23	MONITORING PLAN;
24	(2) Provide feedback and technical assistance to each
25	LOCAL SCHOOL SYSTEM TO IMPLEMENT ITS <u>THAT IMPLEMENTS A</u> PHYSICAL
26	FITNESS MEASUREMENT PROGRAM WELLNESS POLICY IMPLEMENTATION AND
27	MONITORING PLAN;
28	(3) IDENTIFY AND DISTRIBUTE TO EACH LOCAL SCHOOL SYSTEM
29	EFFECTIVE WELLNESS POLICY PRACTICES FOR PHYSICAL ACTIVITY AND
30	PHYSICAL EDUCATION; AND

(4) PROVIDE STAFF SUPPORT TO EACH LOCAL SCHOOL SYSTEM

TO IMPLEMENT THE LOCAL SCHOOL SYSTEM'S THAT IMPLEMENTS A PHYSICAL

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1 2	FITNESS MEASUREMENT PROGRAM WELLNESS POLICY IMPLEMENTATION AND MONITORING PLAN.			
3	(E) EACH LOCAL SCHOOL SYSTEM THAT IMPLEMENTS A WELLNESS			
4				
5	THIS SECTION SHALL SUBMIT TO THE DEPARTMENT:			
6	(1) THE LOCAL SCHOOL SYSTEM'S PHYSICAL FITNESS			
7	MEASUREMENT PROGRAM WELLNESS POLICY IMPLEMENTATION AND			
8	MONITORING PLAN, THAT SHALL INCLUDE:			
9	(I) POLICY GOALS;			
10	(II) ACTIVITIES;			
11	(III) EXPECTED OUTCOMES; AND			
12	(IV) MEASUREMENTS FOR PHYSICAL ACTIVITY AND			
13	PHYSICAL EDUCATION; AND			
14	(2) AN ANNUAL REPORT ON THE LOCAL SCHOOL SYSTEM'S			
15	PROGRESS TOWARD ACHIEVING THE POLICY GOALS OF THE IMPLEMENTATION			
16	PLAN.			
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17	(F) (1) THE DEPARTMENT SHALL ESTABLISH AN ADVISORY COUNCIL			
18	ON HEALTH AND PHYSICAL EDUCATION.			
19	(2) THE ADVISORY COUNCIL SHALL CONSIST OF THE FOLLOWING			
20	MEMBERS, SELECTED BY EACH ORGANIZATION FROM WHICH THE MEMBER IS A			
21	REPRESENTATIVE:			
22	(I) A REPRESENTATIVE FROM THE DEPARTMENT;			
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23	(II) A REPRESENTATIVE FROM THE MARYLAND			
24	PARENT-TEACHER ASSOCIATION;			
25	(III) A REPRESENTATIVE FROM THE MARYLAND STATE			
26	TEACHERS ASSOCIATION;			
27	(IV) A REPRESENTATIVE FROM THE PUBLIC SCHOOL			
28	SUPERINTENDENTS ASSOCIATION OF MARYLAND;			
29	(V) DEPENDENT MANUEL PROME TAREST CONTROL			
29 30	(V) REPRESENTATIVES FROM EACH LOCAL SCHOOL SYSTEM:			
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1 2	(VI) A REPRESENTATIVE FROM THE MARYLAND ASSOCIATION OF BOARDS OF EDUCATION;
3	(VII) A REPRESENTATIVE FROM THE MARYLAND ASSOCIATION OF COUNTIES;
5 6	(VIII) A REPRESENTATIVE FROM THE GOVERNOR'S COUNCIL ON PHYSICAL FITNESS AND SPORT;
7 8 9	(IX) A REPRESENTATIVE OF THE PROFESSIONAL ORGANIZATION FOR HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE;
10 11 12	(X) A REPRESENTATIVE FROM AN INSTITUTION OF HIGHER EDUCATION HAVING A HEALTH AND PHYSICAL EDUCATION TEACHER EDUCATION PROGRAM;
13 14	(XI) A REPRESENTATIVE FROM SPECIAL OLYMPICS OF MARYLAND;
15 16	(XII) A REPRESENTATIVE FROM THE DEPARTMENT OF HEALTH AND MENTAL HYGIENE;
17 18	(XIII) A REPRESENTATIVE FROM THE AMERICAN ACADEMY OF PEDIATRICS; AND
19 20	(XIV) REPRESENTATIVES FROM THE FOLLOWING HEALTH ORGANIZATIONS:
21	1. THE AMERICAN HEART ASSOCIATION;
22	2. THE AMERICAN CANCER SOCIETY; AND
23	3. THE AMERICAN DIABETES ASSOCIATION.
24 25 26	(3) FROM AMONG ITS MEMBERS, THE COUNCIL SHALL ELECT A CHAIR, VICE CHAIR, AND ANY OTHER OFFICERS NECESSARY TO CARRY OUT THE ADVISORY COUNCIL'S FUNCTIONS.
27 28 29	(4) THE DEPARTMENT SHALL PROVIDE STAFF AND OTHER NECESSARY SUPPORT TO THE ADVISORY COUNCIL USING EXISTING RESOURCES.
30	(5) A MEMBER OF THE ADVISORY COUNCIL MAY NOT RECEIVE

COMPENSATION FOR SERVING ON THE ADVISORY COUNCIL, BUT IS ENTITLED

1 2	TO REIMBURSEMENT FOR EXPENSES UNDER THE STANDARD STATE TRAVEL REGULATIONS, AS PROVIDED IN THE STATE BUDGET.
3 4 5	(6) THE ADVISORY COUNCIL SHALL MEET AT LEAST TWICE EACH YEAR AND MAY HOLD ADDITIONAL MEETINGS AT THE DISCRETION OF THE CHAIR OR AT THE REQUEST OF A MAJORITY OF THE MEMBERS.
6	(7) THE ADVISORY COUNCIL SHALL:
7 8 9	(I) DEVELOP AND COORDINATE PROGRAMS IN COLLABORATION WITH PUBLIC SCHOOLS TO EDUCATE STUDENTS REGARDING THE IMPORTANCE OF:
10	1. PHYSICAL ACTIVITY AND PHYSICAL MOVEMENT;
11 12	2. The relationship of physical activity to a healthy lifestyle and improved fitness;
13 14	3. THE RELATIONSHIP BETWEEN HEALTHY EATING, PHYSICAL ACTIVITY, AND MAINTAINING A HEALTHY WEIGHT; AND
15 16 17	4. THE VALUE OF PHYSICAL ACTIVITY AND ITS RELATIONSHIP TO IMPROVED ACADEMIC ACHIEVEMENT AND STRESS REDUCTION; AND
18 19	(II) IDENTIFY PROMISING HEALTH AND PHYSICAL EDUCATION PRACTICES IN THE STATE;
20 21 22	(III) BUILD A NETWORK OF HEALTH AND PHYSICAL EDUCATION PROFESSIONALS TO SHARE INFORMATION AND STRENGTHEN PARTNERSHIPS;
23 24 25	(IV) SUPPORT SUCCESSFUL HEALTH AND PHYSICAL EDUCATION PROGRAMS IN THE STATE AND ENCOURAGE THE EXPANSION OF THOSE PROGRAMS; AND
26 27	(V) CONSULT WITH ORGANIZATIONS REPRESENTED ON THE ADVISORY COUNCIL AS APPROPRIATE.
28	(8) THE ADVISORY COUNCIL MAY:
29	(I) SEEK, ACCEPT, AND EXPEND FUNDS FROM ANY SOURCE,

SEEK, ACCEPT, AND EXPEND FUNDS FROM ANY SOURCE,

INCLUDING DONATIONS, STATE APPROPRIATIONS, AND FEDERAL GRANTS; AND

(I)

SECTION 2. AND BE IT FURTHE	ER ENACTED, That this Act	shall take eff
October 1, 2009.		
Approved:		
		<u> </u>
		Governor.

Speaker of the House of Delegates.

