

Appendix G. Physical Education/Health: Internal Quality Review

Depth

Standard	Grade Span	Within Span	Across Span	Comments
1	K-4	P		The benchmarks have sufficient depth for grades K-2 but not for grades 3-4.
1	5-8	F		Depth is sufficient but could be increased (e.g., development of specific skills incorporated in dance).
1	9-12	P		Competency in 1 team, 1 dual, 1 individual sport/activity is not sufficient depth at grade span 9-12.
1	Across		P	Greater depth in activities and more specificity is warranted across the grade spans.
2	K-4	N		There is a lack of depth. Two of the three of bullets relate to body position but not to fitness.
2	5-8	I		There is insufficient information to determine a rating. The benchmarks are unclear and ambiguous (e.g., demonstrating how physical fitness increases wellness) and are not clarified by the bullets. There are statements about knowledge but there is little information in bullets about knowledge.
2	9-12	F		Depth in this grade span is full.
2	Across		P	There is insufficient depth in the bullets at grade spans K-4 and 5-8.
3	K-4	F		Depth in this grade span is full. However, by separating the standards into 1) Skill 2) Fitness 3) Knowledge, a lot of content is incorporated into standard 3. Standard 3 addresses team cohesion, skill development, rules, strategies, game organization, biometrics, fitness theory.
3	5-8	F		Depth in this grade span is full.
3	9-12	F		Depth in this grade span is full.
3	Across		F	Depth across the grade spans is full.

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Coherence

Standard	Grade Span	Appropriate Sequence	Appropriate Endpoints	Comments
1	K-4		P	The end points are appropriate for a K-2 grade span but not for a K-4 grade span. They are inadequate for grades 3-4.
1	5-8		F	Coherence in the grade span is sufficient. It has appropriate sequence and end points.
1	9-12		P	Coherence is insufficient; competency in only 1 team, 1 dual, and 1 individual sport is an insufficient end point.
1	Across	P	P	The sequence is appropriate for grade span 5-8 but is inappropriate for grade spans K-4 and 9-12.
2	K-4		I	The bullets do not provide clear beginning and end points to determine a rating. The benchmarks are appropriate.
2	5-8		P	The beginning and end points are insufficient. There is too much emphasis on technique instead of on participation, demonstration, or knowledge. The benchmarks are appropriate.
2	9-12		F	The coherence in the grade span is sufficient. There are appropriate beginning and end points.
2	Across	P	P	The bullets have insufficient beginning and end points for grade spans K-4 and 5-8. The benchmarks are appropriate across the grade spans.
3	K-4		F	Coherence in the grade span is sufficient. It has appropriate sequence and end points.
3	5-8		F	Coherence in the grade span is sufficient. It has appropriate sequence and end points.
3	9-12		F	Coherence in the grade span is sufficient. It has appropriate sequence and end points.
3	Across	F	F	Coherence and sequencing across the grade spans are sufficient.

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Rigor

Standard	Grade Span	Rigor	Comments
1	K-4	P	The rigor of the standard is appropriate for grades K-2 but not for grade 3-4.
1	5-8	P	The standard is not sufficiently rigorous. The expectations and requirements are general and too easily attainable.
1	9-12	I	There is insufficient information to determine a rating. It is unclear how competency is assessed and determined. Being competent in a minimum of 3 activities is not rigorous.
1	Across	P	The rigor is adequate for grade span 5-8 but not for grade spans K-4 or 9-12.
2	K-4	F	Rigor is sufficient for grade span.
2	5-8	F	Rigor is sufficient for grade span.
2	9-12	F	Rigor is sufficient for grade span. Rigor could be increased by developing varying training programs for different forms of fitness (e.g., flexibility, endurance, power, weight management).
2	Across	F	Rigor is sufficient across the grade spans.
3	K-4	F	Rigor is sufficient for grade span.
3	5-8	F	Rigor is sufficient for grade span.
3	9-12	F	Rigor is sufficient for grade span.
3	Across	F	Rigor is sufficient across the grade spans.

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Breadth

Standard	Grade Span	Breadth Within Span	Contains Essential Content	Free of Extraneous Content	Comments
Across	K–4	P	P	F	Breadth is partial for grade span K–4. The breadth is too narrow for standards 1 and 2; however, standard 3 is too broad and covers too much content. Overall breadth across the standards is partial as they are adequate for K–2 and not sufficient for 3–4.
1	K–4		P	F	The standard and benchmarks are too narrow in breadth.
2	K–4		I	F	There is insufficient information to rate the breadth for essential content. The bullets are unclear about breadth of the standard and benchmarks.
3	K–4		F	P	The standard is too broad at this grade span. Incorporating all knowledge of factors important to participation in physical activity into this standard could result in some content being overlooked.
Across	5–8	F	P	P	Breadth is full without extraneous content except for standard 3, which is broad and has too many benchmarks, bullets, and content areas. When the three standards are viewed across the grade span, the breadth is sufficient.
1	5–8		P	F	The standard includes relevant content areas such as defensive and offensive strategy in a variety of modified and invasion games. The breadth of the standard could be improved. Dance should be included in physical education, but dance could also be crosslinked to the Dance MCS.
2	5–8		P	P	The standard outlines some key content areas but could be broader. A lot of attention is devoted to demonstrating techniques regarding some fitness aspects (e.g., warming up/flexibility) but not to others (e.g., display knowledge of how to increase cardiovascular endurance). The standard is rated fully. However, there is some minor extraneous content (e.g., safety factors).
3	5–8		F	P	The standard is too broad at this grade span. Incorporating all knowledge of factors important to participation in physical activity into this standard could result in some content being overlooked.

Standard	Grade Span	Breadth Within Span	Contains Essential Content	Free of Extraneous Content	Comments
Across	9–12	P	P	F	Across the grade span, the breadth of the standards is insufficient. Areas for greater breadth exist (e.g., activity content areas, skill development, varying forms of fitness). Standard 3 has extraneous content, making it too broad. The standard has too many benchmarks, bullets, and content areas.
1	9–12		N	F	The standard is too narrow and ignores areas of physical activity that can be incorporated (recreation/gymnastics; outdoor education). Dance can be included in physical education but could also be crosslinked to Dance MCS.
2	9–12		F	F	The standard has sufficient breadth.
3	9–12		F	P	The standard is too broad at this grade span. Incorporating all knowledge of factors important to participation in physical activity into this standard could result in some content being overlooked.
Across	Across	P	P	F	Breadth is partial without extraneous content except for Standard 3, which is broad and encapsulates many benchmarks/bullets and content areas. However, when viewed across the span the breadth is satisfactory, though areas for greater breadth exist (e.g., activity content areas, skill development, varying forms of fitness).
1	Across		P	F	Standard 1 is narrow across the grade spans and does not promote extending skills beyond a K–2 level.
2	Across		P	F	Standard 2 is narrow across the grade spans and does not have great breadth in fitness attainment or knowledge.
3	Across		F	P	The standard is too broad across the grade spans. Incorporating all knowledge of factors important to participation in physical activity into this standard could result in some content being overlooked.

Appendix H. Physical Education/Health: External Referent Review — Massachusetts
External Referent: Massachusetts Comprehensive Health Curriculum Framework — Pre-Kindergarten–12th Grade (October 1999)

Organization/Structure

Subcategory	Similarities	Differences	Comments
Grade articulation	<p>The Colorado MCS for Physical Education and the <i>Massachusetts Comprehensive Health Curriculum Framework</i> have similar grade spans.</p> <p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • K–4 • 5–8 • 9–12 <p><i>Massachusetts Comprehensive Health Curriculum Framework:</i></p> <ul style="list-style-type: none"> • Pre-K–5 • 6–8 • 9–12 		
Hierarchy of standards		<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • standard • benchmark • benchmark bullet <p><i>Massachusetts Comprehensive Health Curriculum Framework:</i></p> <ul style="list-style-type: none"> • strand • standard • learning standard 	

Subcategory	Similarities	Differences	Comments
Number of standards		<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • 3 standards • 3 benchmarks • 20 or more bullets per benchmark <p><i>Massachusetts Comprehensive Health Curriculum Framework:</i></p> <ul style="list-style-type: none"> • 4 strands • 14 standards • up to 7 learning standards for each standard 	<p>The <i>Massachusetts Comprehensive Health Curriculum Framework</i> is primarily a health curriculum framework instead of a physical education curriculum framework. Physical activity and fitness is one of 4 standards under the physical health strand (1 of 14 topics in 4 strands).</p>
Design/Format	<p>Both the Colorado MCS for Physical Education and the <i>Massachusetts Comprehensive Health Curriculum Framework</i> are organized through spiral presentation of the standards across grade spans.</p>	<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • introduction • standards • glossary • index • references • 19 pages in length <p><i>Massachusetts Comprehensive Health Curriculum Framework:</i></p> <ul style="list-style-type: none"> • overview • introduction • core concepts • guiding principles • considerations in health education • strands and learning standards • appendices: <ul style="list-style-type: none"> ○ Massachusetts guiding principles ○ Laws and policy around health and health education ○ Technology literacy and health education • References and sources section • 102 pages in length 	<p>The design and format of the <i>Massachusetts Comprehensive Health Curriculum Framework</i> is much different than the Colorado MCS for Physical Education. It has greater structure, length, and detail.</p>

External Referent: Massachusetts Comprehensive Health Curriculum Framework — Pre-Kindergarten–12th Grade (October 1999)

Content

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Standard 1	The <i>Massachusetts Comprehensive Health Curriculum Framework</i> motor skill development learning standards are similar to standard 1 of the Colorado MCS for Physical Education.		
Standard 2	The <i>Massachusetts Comprehensive Health Curriculum Framework</i> fitness learning standards are similar to standard 2 of the Colorado MCS for Physical Education.		
Standard 3		The personal and social competency standards of the <i>Massachusetts Comprehensive Health Curriculum Framework</i> are not articulated in standard 3 of the Colorado MCS for Physical Education.	
Grades K–4	Grade span K–4 of the Colorado MCS for Physical Education is similar to the <i>Massachusetts Comprehensive Health Curriculum Framework</i> physical activity and fitness learning standards 2.1 – 2.6 that focus upon motor skills development and introduction to fitness concepts.	The <i>Massachusetts Comprehensive Health Curriculum Framework</i> emphasizes social conduct used in physical activity.	
Grades 5–8	Grade span 5–8 of the Colorado MCS for Physical Education is similar to the <i>Massachusetts Comprehensive Health Curriculum Framework</i> physical activity and fitness learning standards 2.8 – 2.13. Both the	The <i>Massachusetts Comprehensive Health Curriculum Framework</i> physical activity and fitness learning standards provide explanations of wellness, behaviors that relate to fitness, and decision making.	

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Grades 5–8 Cont'd	Colorado MCS for Physical Education and the <i>Massachusetts Comprehensive Health Curriculum Framework</i> focus on expanding activities, developing sequences, and increasing difficulty of skill development.	The <i>Massachusetts Comprehensive Health Curriculum Framework</i> learning standards 2.14 – 2.16 emphasize social competency, strategies, and inclusion.	
Grades 9–12	Grade span 9–12 of the Colorado MCS for Physical Education is similar to the physical activity and fitness learning standards 2.17 – 2.23 of the <i>Massachusetts Comprehensive Health Curriculum Framework</i> which focus upon physical competence in a variety of activities, knowledge of warm up/cool down, and increasing understanding of fitness related knowledge and activities.	The <i>Massachusetts Comprehensive Health Curriculum Framework</i> learning standards 2.24 – 2.27 focus upon social competency, lifelong participation, strategies, inclusion, and leadership.	
Across	The grade span standards of the Colorado MCS for Physical Education are similar to the corresponding grade spans of the <i>Massachusetts Comprehensive Health Curriculum Framework</i> physical activity and fitness learning standards regarding motor skills and fitness.	<p>The <i>Massachusetts Comprehensive Health Curriculum Framework</i> has additional learning standards focusing on social competency.</p> <p>The <i>Massachusetts Comprehensive Health Curriculum Framework</i> emphasizes across all grade spans the following health content and skills:</p> <ul style="list-style-type: none"> • growth and development (including sex education) • nutrition/diet • mental health • family and community • health/supports • disease/hygiene • safety/injury prevention • ATOD use/abuse prevention 	<p>The most comparable section of the <i>Massachusetts Comprehensive Health Curriculum Framework</i> is the physical activity and fitness standard under the physical health strand. This separates physical activity and fitness into 3 learning standards regarding:</p> <ul style="list-style-type: none"> • motor skill development • fitness • personal and social competency <p>The <i>Massachusetts Comprehensive Health Curriculum Framework</i> health standards are a good model for developing the Colorado health standards. The document has more breadth and depth than the Colorado MCS for Physical Education, addressing the strands of personal and community health, safety and prevention, and social and emotional health.</p>

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Wording/specificity	Both the Colorado MCS for Physical Education and the <i>Massachusetts Comprehensive Health Curriculum Framework</i> address similar topics and use similar wording.	There is more detail and alignment in the <i>Massachusetts Comprehensive Health Curriculum Framework</i> learning standards than the Colorado MCS for Physical Education. It is easier to follow the path from strands, to standards, to learning standards in the <i>Massachusetts Comprehensive Health Curriculum Framework</i> than in the Colorado MCS for Physical Education.	

Appendix I. Physical Education/Health: External Referent Review — North Carolina
External Referent: Healthful Living Performance Standard Course of Study — K – 12th Grade

Organization/Structure

Subcategory	Similarities	Differences	Comments
Grade articulation	Both the Colorado MCS for Physical Education and the <i>North Carolina Healthful Living Performance Standards</i> articulate their standards by grade spans.	<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • K–4 • 5–8 • 9–12 <p><i>North Carolina Healthful Living Performance Standards</i>:</p> <ul style="list-style-type: none"> • K–3 • 4–5 • 6–8 <p>There are no high school standards of benchmarks</p>	The <i>North Carolina Healthful Living Performance Standards</i> articulation of grade spans is logical and provides for more differentiation than the Colorado MCS for Physical Education, which has two grade spans compared with the three North Carolina grade spans. The <i>North Carolina Healthful Living Performance Standards</i> physical education standards stop at the end of middle school.
Hierarchy of standards	<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • standards • benchmarks • benchmark bullets <p><i>North Carolina Healthful Living Performance Standards</i>:</p> <ul style="list-style-type: none"> • skills • competency goals • competency goals bullets 	The <i>North Carolina Healthful Living Performance Standards</i> has strands for its competency goals: <ul style="list-style-type: none"> • movement forms • fitness and sports literacy • healthful lifestyles • personal fitness • appreciation for diversity 	<p>The <i>North Carolina Healthful Living Performance Standards</i> has a logical hierarchy of standards that captures more content, strands, and skills than the Colorado MCS for Physical Education.</p> <p>The <i>North Carolina Healthful Living Performance Standards</i> has some disconnect between skills and goals (and strands). A site map of standards, goals, bullets, and strands would be helpful.</p>

Subcategory	Similarities	Differences	Comments
Number of standards	<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • 3 standards • 3 benchmarks • 20 or more bullets per benchmark <p><i>North Carolina Healthful Living Performance Standards:</i></p> <ul style="list-style-type: none"> • 6 standards • 5 benchmarks • 5-8 bullets per benchmark 		
Design/Format	<p>Both the Colorado MCS for Physical Education and the <i>North Carolina Healthful Living Performance Standards</i> are organized by a spiral presentation of standards across grade spans.</p>	<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • introduction • standards • glossary • index • references • 19 pages in length <p><i>North Carolina Healthful Living Performance Standards:</i></p> <ul style="list-style-type: none"> • introduction • standards • 20 pages 	<p>The <i>North Carolina Healthful Living Performance Standards</i> is generally clearer and has a more concise layout than the Colorado MCS for Physical Education. However, it does not have a clear pattern of influence or use for strands, skills, and benchmarks.</p>

External Referent: Healthful Living Performance Standard Course of Study — K – 12th Grade

Content

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Standard 1	The <i>North Carolina Healthful Living Performance Standards</i> skill 1: motor skills is similar to standard 1 of the Colorado MCS for Physical Education.	The <i>North Carolina Healthful Living Performance Standards</i> emphasizes self-confidence.	The <i>North Carolina Healthful Living Performance Standards</i> has more depth than the Colorado MCS for Physical Education.
Standard 2	The <i>North Carolina Healthful Living Performance Standards</i> skill 2: movement knowledge is similar to part of standard 2 of the Colorado MCS for Physical Education.	The <i>North Carolina Healthful Living Performance Standards</i> skill 4: fitness responsibility is not part of the Colorado MCS for Physical Education, although it is part of standard 2 of the Colorado MCS for Physical Education. However, it differs as it adds responsibility to the standard.	The <i>North Carolina Healthful Living Performance Standards</i> has more depth than the Colorado MCS for Physical Education.
Standard 3	Part of the <i>North Carolina Healthful Living Performance Standards</i> skill 2 aligns to standard 3 of the Colorado MCS for Physical Education.		The <i>North Carolina Healthful Living Performance Standards</i> has more depth than the Colorado MCS for Physical Education.
Grades K–4	Both the Colorado MCS for Physical Education and the <i>North Carolina Healthful Living Performance Standards</i> emphasize movement, basic skills, and basic fitness.	The <i>North Carolina Healthful Living Performance Standards</i> emphasizes: <ul style="list-style-type: none"> • stress • behavior • apprehension • personal choice in activity • decision making 	The <i>North Carolina Healthful Living Performance Standards</i> has added emphasis upon group dynamics, personal development, and many aspects that can be future restrictions to lifelong physical activity.

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
<p>Grades K–4 Cont'd</p>		<p>The <i>North Carolina Healthful Living Performance Standards</i> grade spans are divided into K–3 and 4–5.</p> <p>For grades K–5 the <i>North Carolina Healthful Living Performance Standards</i> emphasizes:</p> <ul style="list-style-type: none"> • personal decisions regarding fitness and activity • sequences routines • physical activity outside of school • effective self-management • accepting responsibility for fitness • respect for similarities and differences 	
<p>Grades 5–8</p>	<p>Both the Colorado MCS for Physical Education and the <i>North Carolina Healthful Living Performance Standards</i> emphasize movement, basic skills, and basic fitness.</p>	<p>The <i>North Carolina Healthful Living Performance Standards</i> grade spans are organized by grade span 6–8.</p> <p>The <i>North Carolina Healthful Living Performance Standards</i> emphasizes:</p> <ul style="list-style-type: none"> • continued areas for physical activity • self-esteem • teamwork • fitness • self-monitoring • diet • goal-setting 	
<p>Grades 9–12</p>			<p>The <i>North Carolina Healthful Living Performance Standards</i> does not have standards at this grade span.</p>

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Across		<p>The <i>North Carolina Healthful Living Performance Standards</i> skill 3: self-management is not part of the Colorado MCS for Physical Education.</p> <p>The <i>North Carolina Healthful Living Performance Standards</i> skill 5: teamwork/respect is not part of the Colorado MCS for Physical Education.</p>	<p>The physical education standards end at grade 8 in the <i>North Carolina Healthful Living Performance Standards</i>.</p>
Wording/specificity			<p>The <i>North Carolina Healthful Living Performance Standards</i> has good use and examples of appropriate verbs (e.g., demonstrate movement control, demonstrate mature form, create and demonstrate, identify personal effort, identify likes/dislikes, create movement sequence, understand and apply strategy, etc.)</p>

Appendix J. Physical Education: External Referent Review — Finland

External Referent: Physical Education — Finland National Core Curriculum for Basic Education (2004)

Organization/Structure

Subcategory	Similarities	Differences	Comments
Grade articulation	<p>The Colorado MCS for Physical Education and the Finland National Core Curriculum have similar grade spans.</p> <p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • K–4 • 5–8 • 9–12 <p>Finland National Core Curriculum:</p> <ul style="list-style-type: none"> • 1–4 • 5–8 • 9–12 	<p>The Colorado MCS for Physical Education begins its standards at Kindergarten in the K–4 grade span.</p> <p>The Finland National Core Curriculum organizes its standards into compulsory and specialized courses at the 9–12 grade span.</p>	
Hierarchy of standards		<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • standard • benchmark • benchmark bullets <p>Finland National Core Curriculum:</p> <ul style="list-style-type: none"> • rationale • objectives • objective bullets • core content • core content bullets • description of good performance benchmarks 	

Subcategory	Similarities	Differences	Comments
<p>Number of standards Cont'd</p>		<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • 3 standards • 3 benchmarks • 20 or more bullets per benchmark <p>Finland National Core Curriculum:</p> <ul style="list-style-type: none"> • 1 rationale • 5 to 8 objectives per grade span • 8 to 9 core content bullets per grade span • 12 description of good performance benchmarks for grade spans 1-4 and 5-8 	
<p>Design/Format</p>		<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • introduction • standards • glossary • index • references • 19 pages in length • the Colorado MCS for Physical Education is organized by standard across grade spans <p>Finland National Core Curriculum:</p> <ul style="list-style-type: none"> • excerpted sections from the national core curricula • general introduction for each section • each document is 3 pages in length • the Finland National Core Curriculum presents its standards by grade span 	

External Referent: Physical Education — Finland National Core Curriculum for Basic Education (2004)

Content

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Standard 1	Both the Colorado MCS for Physical Education and the Finland National Core Curriculum emphasize skill. Standard 1 of the Colorado MCS for Physical Education is similar to objective 1 (grade span 1–4) of the Finland National Core Curriculum.	The corresponding physical education standards for the Finland National Core Curriculum lack depth. They are basic, leaving out both topics and themes, and do not provide sufficient detail about skills in physical activities and sports.	Standard 1 of the Colorado MCS for Physical Education has more depth than the corresponding standards of the Finland National Core Curriculum.
Standard 2	Both the Colorado MCS for Physical Education and the Finland National Core Curriculum emphasize fitness. Standard 2 of the Colorado MCS for Physical Education is similar to objective 2 (grade span 1–4) of the Finland National Core Curriculum.	The corresponding physical education standards of the Finland National Core Curriculum lack depth. They are basic, leaving out both topics and themes, and do not provide sufficient detail in physical fitness.	Standard 2 of the Colorado MCS for Physical Education has more depth than the corresponding standards of the Finland National Core Curriculum.
Standard 3		<p>The corresponding physical education standards of the Finland National Core Curriculum lack depth. They are basic, leaving out both topics and themes, and do not provide sufficient detail in knowledge of factors important to participation in physical activity.</p> <p>Standard 3 of the Colorado MCS for Physical Education (knowledge) is incorporated into all of the Finland National Core Curriculum objectives.</p>	<p>Standard 3 of the Colorado MCS for Physical Education has more depth than the corresponding standards of the Finland National Core Curriculum.</p> <p>The corresponding standards of the Finland National Core Curriculum have greater breadth than standard 3 of the Colorado MCS for Physical Education.</p>

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Standard 3 Cont'd		The Finland National Core Curriculum has objectives that pertain to fair play, cooperation, self-perception/assessment, group work, diversity, and outdoor education.	
Grades K–4	Both the Colorado MCS for Physical Education and the Finland National Core Curriculum emphasize motor skills and development of basic skill development.	The Finland National Core Curriculum emphasizes fair play and cooperation.	<p>The standards of the Finland National Core Curriculum at this grade span lack depth.</p> <p>The standards of the Finland National Core Curriculum that emphasize social skills have more precise benchmarks than the Colorado MCS for Physical Education.</p>
Grades 5–8	Both the Colorado MCS for Physical Education and the Finland National Core Curriculum emphasize expansion of movement skills and sport specific skills.	The Finland National Core Curriculum emphasizes self-perception, group work, diversity, and outdoor education.	<p>The standards of the Finland National Core Curriculum at this grade span lack depth.</p> <p>The standards of the Finland National Core Curriculum that emphasize social skills have more precise benchmarks than the Colorado MCS for Physical Education.</p>
Grades 9–12	Both the Colorado MCS for Physical Education and the Finland National Core Curriculum have increased emphasis on exercise, fitness, and specific skill development.	<p>The Finland National Core Curriculum emphasizes broadening forms of exercise/activity. The Colorado MCS for Physical Education narrows the breadth and increases the depth of content areas.</p> <p>The Finland National Core Curriculum continues emphasis on social development.</p>	<p>The standards of the Finland National Core Curriculum at this grade span lack depth.</p> <p>The standards of the Finland National Core Curriculum that emphasize social skills have more precise benchmarks than the Colorado MCS for Physical Education.</p>

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Across	Both the Colorado MCS for Physical Education and the Finland National Core Curriculum emphasize skill and fitness.	The Finland National Core Curriculum emphasizes social and group skills and outcomes more than the Colorado MCS for Physical Education.	The standards of the Finland National Core Curriculum have greater breadth than the Colorado MCS for Physical Education with regards to physical education knowledge.
Wording/specificity		<p>The physical education standards of the Finland National Core Curriculum have greater specificity than the Colorado MCS for Physical Education. Although the Finland National Core Curriculum has content gaps, it is clear and consistent.</p> <p>The standards of the Finland National Core Curriculum do not use action verbs with the content bullets.</p>	

Appendix K. Physical Education/Health: External Referent Review — Singapore
External Referent: Physical Education Syllabus — Primary, Secondary, and Pre-University Levels (2006) and Health Education Syllabus for Primary Level (2007)

Organization/Structure

Subcategory	Similarities	Differences	Comments
Grade articulation	<p>Both the Colorado MCS for Physical Education and the Singapore physical education syllabus organize their standards by grade spans. The Singapore Physical Education Syllabus refers to its grade spans as stages.</p> <p>The Singapore Health Education Syllabus for Primary Level organizes the standards into grade spans Lower Primary and Upper Primary.</p>	<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • K–4 • 5–8 • 9–12 <p>Singapore Physical Education Syllabus has 6 grade spans (stages):</p> <ul style="list-style-type: none"> • Primary 2 (equivalent to K-2) • Primary 3 (3-4) • Primary 4 (5-6) • Secondary 2 (7-8) • Secondary 4/5 (9-10/11) • Pre-university 2/3 (10/11-12) 	<p>The increased number of grade spans in the Singapore Physical Education Syllabus, with few grade levels within them, allows for greater detail in the learning outcomes than the Colorado MCS for Physical Education.</p>
Hierarchy of standards		<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • standards • benchmarks • benchmark bullets <p>Singapore Physical Education Syllabus:</p> <ul style="list-style-type: none"> • learning objectives • key stage components • expected learning outcomes • content bullets <p>Singapore Health Education Syllabus:</p> <ul style="list-style-type: none"> • dimension • themes • objectives • and learning objectives 	<p>The Singapore Physical Education Syllabus provides a clear hierarchy of standards from learning objectives to expected learning outcomes.</p> <p>The Colorado MCS for Physical Education follows a less direct path from standards to benchmarks and rationale to bullets. Some content bullets are repeats of benchmarks and generally provide less direction/guide than the Singapore Physical Education Syllabus expected learning outcomes.</p>

Subcategory	Similarities	Differences	Comments
<p>Number of standards</p>	<p>Both the Colorado MCS for Physical Education and the Singapore Physical Education Syllabus present their standards through spiral organization of the standards across grade spans.</p>	<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • 3 standards • 3 benchmarks • 20 or more bullets per benchmark <p>Singapore Physical Education Syllabus:</p> <ul style="list-style-type: none"> • 6 learning objectives • 4–7 expected learning outcomes • 7 key stage components • 10–102 content bullets per expected learning outcome <p>Singapore Health Education Syllabus for Primary Level:</p> <ul style="list-style-type: none"> • 3 health dimensions: <ul style="list-style-type: none"> ○ Physical Health ○ Environment and Your Health ○ Emotional and Psychological Health • 2–3 themes per health dimension • 7 objectives • 25 learning objectives that align to each theme 	<p>The Singapore Physical Education Syllabus has a greater number of objectives/standards and benchmarks/expected learning outcomes than the Colorado MCS for Physical Education. Each learning outcome is specific, which provides for clear direction and assessment. The standards also cover greater content and skill development areas than the Colorado MCS for Physical Education. They also appropriately cover what can be expected in a detailed physical education syllabus.</p>

Subcategory	Similarities	Differences	Comments
Design/Format		<p>Colorado MCS for Physical Education:</p> <ul style="list-style-type: none"> • introduction • standards • glossary • index • references • 19 pages in length • Colorado presents its standards through spiral organization across grade spans. <p>Singapore Physical Education Syllabus:</p> <ul style="list-style-type: none"> • introduction • aim of physical education section • scope and selection of activities section • sample yearly plan • content section • assessment section • descriptors of overall grade section • references materials (literature and websites) section • acknowledgement • 50 pages in length 	<p>There is greater detail in the Singapore Physical Education Syllabus than the Colorado MCS for Physical Education. The syllabus follows an understandable path from aims to objectives to expected learning outcomes in the key stages.</p>

External Referent: Physical Education Syllabus — Primary, Secondary, and Pre-University Levels (2006) and Health Education Syllabus for Primary Level (2007)

Content

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Standard 1	The Singapore Physical Education Syllabus learning objective 1 is similar to standard 1 of the Colorado MCS for Physical Education.	The Singapore Physical Education Syllabus has more breadth by including recreation. It also provides a more comprehensive rationale.	The Singapore Physical Education Syllabus has greater breadth and depth in skill development than the Colorado MCS for Physical Education.
Standard 2	The Singapore Physical Education Syllabus learning objective 2 is similar to standard 2 of the Colorado MCS for Physical Education.		
Standard 3	The Singapore Physical Education Syllabus learning objective 4 is similar to standard 3 of the Colorado MCS for Physical Education.		
Grades K–4	The Singapore Physical Education Syllabus Primary 2 stage, which extends only up to grade 2, is similar to grade span K–4 of the Colorado MCS for Physical Education. Each focuses upon gross motor and movement skills.	<p>The Singapore Physical Education Syllabus separates this grade span into 2 stages and provides additional expected learning outcomes for grades 3–4 as well.</p> <p>The Singapore Physical Education Syllabus emphasizes self-esteem, fair play, teamwork, and safety.</p>	<p>The Singapore Health Education Syllabus for Primary Level addresses the following general themes:</p> <ul style="list-style-type: none"> • healthy habits • emotional awareness • cooperation, empathy • safety • health and environment • care for environment

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
<p>Grades K–4 Cont'd</p>		<p>The Singapore Health Education Syllabus for Primary Level addresses the following:</p> <ul style="list-style-type: none"> • understand that good health habits will contribute to healthy growth • exhibit good health habits • express and manage emotions appropriately • exhibit behavior and attitudes that show consideration for others • practice safe behavior that will protect themselves and others • understand the relationship between health and environment • demonstrate understanding of their roles and responsibilities in caring for the environment 	
<p>Grades 5–8</p>	<p>The Singapore Physical Education Syllabus Primary 6 stage is similar to grade span 5–8 of the Colorado MCS for Physical Education. Each focuses upon team, individual, and small group activities.</p>	<p>The Singapore Physical Education Syllabus provides greater detail and emphasis at all grade levels within the grade span than the Colorado MCS for Physical Education. Also by separating these grades into 2 key stages (Primary 6 and Secondary 2) it increases the content and detail.</p> <p>The Singapore Physical Education Syllabus emphasizes self-esteem, fair play, teamwork, and safety.</p>	<p>The Colorado MCS standards for physical education do not address the themes of self-esteem, teamwork, and safety.</p> <p>The Singapore Physical Education Syllabus provides greater direction in attaining expected learning outcomes than the Colorado MCS for Physical Education.</p>

Subcategory	Similarities in emphasis	Differences in emphasis	Comments
Grades 5–8 Cont'd		<p>The Singapore Health Education Syllabus for Primary Level for the Upper Primary addresses the following themes:</p> <ul style="list-style-type: none"> • Physical Health <ul style="list-style-type: none"> ○ growth and health ○ knowing what food does for me ○ vision and oral care • Environment and Your Health <ul style="list-style-type: none"> ○ safety first ○ safe from illness and diseases • Emotional and Psychological Health <ul style="list-style-type: none"> ○ managing my emotions ○ developing good relationships 	The Singapore Health Education Syllabus for Primary Level is a good model for developing Colorado health standards.
Grades 9–12	The Singapore Physical Education Syllabus Secondary 4/5 is similar to grade span 9–12 of the Colorado MCS for Physical Education. Each grade span focuses upon team, individual, and small group activities. They also place greater emphasis on self-direction/understanding of fitness.	<p>The Singapore Physical Education Syllabus separates this grade span into 2 stages (Secondary 4/5 and Pre-university 2/3) and broadens the role and purpose of physical education into mastery, empowerment, and leadership.</p> <p>The Singapore Physical Education Syllabus emphasizes self-esteem, fair play, teamwork, and safety.</p>	
Across			
Wording/specificity		There is greater detail and specificity in the Singapore Physical Education Syllabus. It provides attainable and rigorous steps and clear objectives that give broader rationale for why physical education is taught.	

Appendix L. Physical Education and Health: 21st Century Skills and Postsecondary Workforce and Readiness

21st Century Skills

Standard	Grade Span	Critical thinking and reasoning	Information literacy	Collaboration	Self-direction	Invention	Comments
1	K-4	N	N	P	P	P	Standard 1 provides opportunities for the 21 st Century Skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., game strategies), Information literacy (e.g., reading and learning rules), Collaboration (e.g., leadership, followship), Self-direction (e.g., efficacy, individual activities, skill development), and Invention (e.g., game development, dance sequence).
1	5-8	P	N	P	P	P	Standard 1 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., game strategies), Information literacy (e.g., reading and learning rules), Collaboration (e.g., leadership, followship), Self-direction (e.g., efficacy, individual activities, skill development), and Invention (e.g., game development, dance sequence).

Standard	Grade Span	Critical thinking and reasoning	Information literacy	Collaboration	Self-direction	Invention	Comments
1	9–12	P	N	P	P	P	Standard 1 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., game strategies), Information literacy (e.g., reading and learning rules), Collaboration (e.g., leadership, followship), Self-direction (e.g., efficacy, individual activities, skill development), and Invention (e.g., game development, dance sequence).
1	Across	P	N	P	P	P	Standard 1 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., game strategies), Information literacy (e.g., reading and learning rules), Collaboration (e.g., leadership, followship), Self-direction (e.g., efficacy, individual activities, skill development), and Invention (e.g., game development, dance sequence).

Standard	Grade Span	Critical thinking and reasoning	Information literacy	Collaboration	Self-direction	Invention	Comments
2	K-4	N	N	N	P	N	Standard 2 provides opportunities for the 21st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., understanding fitness routines), Information literacy (e.g., reading and analyzing statistical data), Collaboration (e.g., activities that incorporate group dynamics), Self-direction, and Invention (e.g., routines and drills).
2	5-8	N	N	N	P	N	Standard 2 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., understanding fitness routines), Information literacy (e.g., reading and analyzing statistical data), Collaboration (e.g., activities that incorporate group dynamics), Self-direction, and Invention (e.g., routines and drills).
2	9-12	N	N	N	P	P	Standard 2 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Information literacy (e.g., reading and analyzing statistical data), Collaboration (e.g., activities that incorporate group activities), Self-direction (e.g., fitness programs), and Invention (e.g., routines and drills).

Standard	Grade Span	Critical thinking and reasoning	Information literacy	Collaboration	Self-direction	Invention	Comments
2	Across	N	N	N	P	N	Standard 2 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., understanding fitness routines), Information literacy (e.g., reading and analyzing statistical data), Collaboration (e.g., group activities that incorporate group dynamics), Self-direction (e.g., fitness programs—note P for grade span 9–12), and Invention (e.g., routines and drills).
3	K–4	P	P	N	N	P	Standard 3 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., team play, strategies), Information literacy (e.g., game knowledge, biomechanics, fitness knowledge), Self-direction (e.g., individual plans) and Invention (e.g., game design). Other areas can be expanded, such as Collaboration (e.g., leadership/ fellowship principles).

Standard	Grade Span	Critical thinking and reasoning	Information literacy	Collaboration	Self-direction	Invention	Comments
3	5–8	P	P	N	N	P	Standard 3 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., team play, strategies), Information literacy (e.g., game knowledge, biomechanics, fitness knowledge), Self-direction (individual plans) and Invention (game design). Other areas can be expanded, such as Collaboration (leadership/fellowship principles).
3	9–12	P	P	N	P	P	Standard 3 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (team play, strategies), Information literacy (game knowledge, biomechanics, fitness knowledge), Self-direction (e.g., individual plans) and Invention (e.g., game design). Other areas can be expanded such as Collaboration (e.g., leadership/ fellowship principles).

Standard	Grade Span	Critical thinking and reasoning	Information literacy	Collaboration	Self-direction	Invention	Comments
3	Across	P	P	N	N	P	Standard 3 provides opportunities for the 21 st century skills. However, they are either represented in a superficial or less complex way, or are not present as the standard is currently written. Strategies for revising the standard to address the skills involve including for: Critical thinking (e.g., team play, strategies), Information literacy (e.g., game knowledge, biomechanics, fitness knowledge), Self-direction (e.g., individual plans) and Invention (e.g., game design). Other areas can be expanded such as Collaboration (e.g., leadership/ fellowship principles).
	Comments						

Postsecondary and Workforce Readiness

Standard	Grade Span	Application of reading, writing, and computing skills with minimal remediation or training	Logical reasoning and argumentation abilities	Identification and solving of problems	Information management skills	Human relation skills	Analysis and interpretation skills	Comments
1	9–12	N	N	N	N	P	P	
2	9–12	N	N	N	N	N	P	
3	9–12	N	P	P	P	P	P	
	Comments	Approaches for revising the standard to apply reading, writing, and computing skills with minimal remediation could include biomechanics, physiology, skill development theory, and fitness theories.	The skills appear at the standard level but not at the grade span bullet levels for standards 1 and 2. More explicit reference to the skills in the grade span bullets would increase the ratings to Fully.	Approaches for revising the standard to apply identifying and solving of problems could include game development/strategies, and fitness theories.	The skills appear at the standard level but not at the grade span bullet levels for standards 1 and 2. More explicit reference to the skills in the grade span bullets would increase the ratings to Fully.	Approaches for including human relation skills exist throughout physical education via teamwork, team development, encouragement and motivation, leadership/fellowship.	Approaches for revising the standard to include analysis and interpretation skills could include fitness routines, programs and analyzing workout data/information.	