GRADE FOUR

In grade four, students make continuous progress across all fundamental motor patterns. Proficient movement patterns are possible as students combine locomotor and manipulative skills in increasingly complex situations. Students create sequences in educational dances and gymnastics. They apply movement concepts and principles and knowledge of anatomical structures in individual movement performances, and tactical strategies in modified activities. Fitness assessment is appropriate at this grade level, and students interpret the results of their assessments and set personal goals based on the results. Students exhibit appropriate etiquette, integrity, and conflict-resolution skills, and they apply proper rules and procedures.

Motor Skill Development

- 4.1 The student will refine movement skills and demonstrate the ability to combine them in increasingly complex movement environments/activities.
 - a) Demonstrate progression toward the use of all critical elements for specialized locomotor, non-locomotor, and manipulative skill combinations in small-sided games, modified sports activities, and lifetime activities, including overhand and underhand throwing and catching with a partner while moving to open spaces, overhand and underhand throwing to a target for distance, dribbling with non-dominant/non-preferred hand while walking at various speeds to open spaces, underhand volleying, catching thrown objects, striking a ball with short and long implement with force and control, and underhand volleying/striking, dribbling and passing a soccer ball with varying speed while moving to open spaces with control.
 - b) Create and perform an educational gymnastic sequence that combines four or more of the following movements: traveling, balancing, rolling, and other types of weight transfer with smooth transitions from one movement to the other.
 - c) Create and perform a routine to music that has smooth transitions with an apparent beginning, middle, and end, and integrate shapes, levels, pathways, and locomotor patterns.
 - d) Perform a jump rope routine/challenge (e.g., self-turn, long rope, jump bands).
 - e) Demonstrate the use of pacing, speed, and endurance in a variety of activities.

Essential Understandings	Essential Knowledge and Skills
Manipulative and movement skills can be broken down into smaller parts/critical	In order to meet these standards, it is expected that
elements to improve proficiency. Developmentally appropriate movement	students will
includes performance of all critical elements. Eye-hand and eye-foot skills are	demonstrate critical elements for

performed in isolation, games, and modified sports activities. (4.1.a, 4.1.b)

- Overhand throw
 - Non-throwing shoulder toward target;
 - Step to target with opposite foot;
 - Throwing arm raised in backswing;
 - Rotate hips during throw;
 - Weight shifts from back to front foot;
 - \circ $\;$ Throwing arm follows through to target with wrist to opposite knee.
- Catch from throw
 - Watch the ball all the way into the hands;
 - Arms in front of body, elbows flexed;
 - Place body in the path of the object;
 - Arms extend to reach for ball;
 - Thumbs in for catch above the waist;
 - Thumbs out for catch at or below the waist;
 - One foot slightly in front of the other (balanced stance);
 - Catch with hands only; no cradling against the body;
 - Pull the ball in to the body as the catch is made;
 - \circ $\,$ Relax and absorb the force of the object.
- Toss, underhand throw, underhand roll to partner/target
 - \circ Face the target;
 - Eye on target;
 - Use a backward-forward arm swing (tick-tock swing);
 - Step with opposite foot as tossing/throwing/rolling arm moves forward;
 - Release ball between knee and waist level during upward swing for throw;

specialized locomotor, non-locomotor, and manipulative skill combinations in smallsided games, modified sports activities, and lifetime activities, including overhand and underhand throwing and catching with a partner while moving to open spaces, overhand and underhand throwing to a target for distance, dribbling with nondominant/non-preferred hand while walking at various speeds to open spaces, underhand volleying, catching thrown objects, striking a ball with short and long implement with force and control, and underhand volleying/striking, dribbling and passing a soccer ball with varying speed while moving to open spaces with control(4.1.a);

- explain the relationship between force and speed (4.1.a);
- explain the effect force has on manipulative skills such as striking, throwing, and dribbling with feet (4.1.a);
- demonstrate the use of force needed to dribble with non-dominant/non-preferred hand while maintaining control (4.1.a);
- create and perform a continuous educational gymnastic sequence that combines four or more of the following movements: traveling, balancing, rolling,

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0	Bend at hip (roll);	and other types of weight transfer (4.1.b);
0	Release ball under knee for roll;	 create and perform a partner dance
-	Follow through with hand pointing to the target.	sequence with an apparent beginning,
0	Follow through with hand pointing to the target.	middle, and end that integrates shapes,
	ribble with hands while finding space at different speeds	levels, pathways, and locomotor patterns
0	Head up looking for open space;	(4.1.c);
0	Pads of fingers contact top of ball;	• create and perform a jump-rope routine
0	Firm and flexible wrist as hand pushes ball to floor;	(self-turn or long rope) (4.1.d);
0	Hand absorbs ball slightly on return;	• demonstrate the use of pacing, speed, and
0	Waist-height bounce;	endurance in a variety of activities (4.1.e);
0	Ball slightly in front of body;	• demonstrate the ability to self-pace in a
0	Knees bent slightly with dribbling arm close to the body.	cardiovascular endurance activity (4.1.e).
• U	nderhand volley	Additional resources:
0	Shoulders facing target;	SHAPE America National Standards and Grade-
0	One foot slightly ahead of other;	Level Outcomes
0	Tick-tock swing movement with volleying hand;	OPEN Online Physical Education Network
0	Contact ball with palm;	Health Smart Virginia
0	Contact occurs at waist level;	PE Central
0	Follow through upward;	Dynamic PE ASAP
0	Track the ball with eyes;	
0	Move body into position for next contact;	
0	Continuous volley.	
• V	olley objects with short-handled implement	
0	Shake hands with the paddle;	
0	Firm grip and wrist;	
0	Contact occurs at waist level;	
0	Hit with a flat surface at center of paddle or racket;	

0	Follow through toward target.
0	Track the ball with eyes;
0	Move body into position for next contact;
0	Continuous volley.
St	rike/bat a ball off a tee
0	Non-dominant hand grips the bottom of the long-handled implement
	with dominant hand stacked above with knuckles in line with each
	other;
0	Side to target (non-throwing arm closest to target);
0	Knees slightly bent;
0	Eyes follow ball to center of striking implement from start to finish;
0	Step toward target with opposite foot;
0	Striking arm way back;
0	Weight transfer from back foot to front foot;
0	Rotate hips;
0	Wrist unlocks on follow-through for completion of striking action.
Ki	ck a moving ball
0	Eyes focused on ball throughout kick;
0	Contact the ball with shoelaces (not toes);
0	Contact behind the center of the ball for low-level kick;
0	Contact ball below the center of the ball for travel in air;
0	Non-kicking foot plants beside the ball;
0	Forward and sideward swing of arm opposite kicking leg;
0	Hips and shoulders rotate forward;
0	Kicking foot follows through toward target area.
Dribl	ble (foot)
	0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0	Knees slightly bent;	
0	Push the center of the ball with shoelaces, inside of the foot, or outside	
	of foot;	
0	Contact behind the center of the ball;	
0	Ball stays close to feet/soft touches;	
0	Tap with both feet to move ball forward;	
0	Head up, eyes looking forward using peripheral vision to see the ball;	
0	Stay light on your feet with weight on toes.	
• Pas	ssing to a partner/stationary target	
0	Non-kicking foot beside the ball;	
0	Use inside of foot;	
0	Step to the target;	
0	Contact behind the center of the ball;	
0	Firm and controlled pass;	
0	Follow through toward target.	
Force is st	rength or energy exerted. (4.1.a)	
• Us	ing increased force (hard) with manipulatives may include throwing	
for	a farther distance or striking harder to make the ball go farther.	
• Using decreased force (soft) with manipulatives may include throwing		
eas	sier over a shorter distance or to improve accuracy to a target.	
• Co	ntrol includes the ability to use more or less force as needed for	
int	ended target or outcome.	
Movemen	t proficiency includes maintaining balance in a variety of movements,	
such as tra	weling, rolling, and weight transfer, during an educational gymnastics	
sequence.	(4.1.b)	

Movement competency involves patterns. Patterns include dance sequences with a beginning, middle, and end that integrates shapes, levels, pathways, and locomotor patterns. (4.1.c)	_	
Jumping rope helps with cardiorespiratory endurance, strengthening the heart, and helps with coordination. Jump rope activities can include short and long ropes and a variety of types of jumps. (4.1.d)		
Pacing is the rate of movement or performance usually in reference to achieving a goal of time or distance. Speed is the rate at which someone is able to move; swiftness or rate of performance or action. Endurance is the ability to sustain a prolonged stressful effort or activity; relates to an activity or sporting event that takes place over a long distance. (4.1.e)	omeone is able to move; is the ability to sustain a	

Anatomical Basis of Movement

- 4.2 The student will identify major structures and begin to apply knowledge of anatomy to explain movement patterns.
 - a) Identify the major components of the cardiorespiratory system and describe the relationship between the heart, lungs, and blood vessels.
 - b) Identify the major muscle groups, including the deltoid and gluteal.
 - c) Identify the major components of the skeletal system, including the sternum, vertebrae, patellae, and phalanges.
 - d) Locate the radial and/or carotid pulse.
 - e) Identify the bones and muscles needed to perform one fitness activity and one skilled movement.
 - f) Apply the concept of closing space during movement sequences.

Essential Understandings	Essential Knowledge and Skills
The cardiorespiratory system carries oxygen to the muscles and organs of the	In order to meet these standards, it is expected that
body and removes waste products. (4.2.a)	students will
 Components of the cardiorespiratory system include heart; acts as a pump to send blood to the lungs for oxygen pumps oxygenated blood to muscles and organs lungs; take in oxygen through breathing put oxygen in blood vessels blood vessels. arteries carry blood with oxygen from the heart to muscles organs and veins carry blood without oxygen back to heart 	 identify the major components of the cardiorespiratory system—including the heart, lungs, and blood vessels—and describe how they function together (4.2.a); identify major muscle groups, including deltoid and gluteal (4.2.b); identify major components of the skeletal system, including the sternum, vertebrae, patella, and phalange (4.2.c); locate the radial and/or carotid pulse (4.2.d);
 Major muscles are important for movement. (3.2.b) Major muscles include hamstrings; triceps; quadriceps; 	 identify the bones and muscles needed to perform one fitness activity and one skilled movement (4.2.e); approach a defender using a controlled movement pattern to close space (4.2.f).

Essential Understandings	Essential Knowledge and Skills
 biceps; 	Additional resources:
\circ abdominals;	SHAPE America National Standards and Grade-
\circ heart;	Level Outcomes
\circ deltoid;	OPEN Online Physical Education Network
\circ gluteal.	Health Smart Virginia
	PE Central
Bones provide shape and support for the body, as well as protection for some	Dynamic PE ASAP
organs. (4.2.c)	KidsHealth.org
Major bones include	
o skull;	
 ribs; 	
o spine;	
o femur;	
o tibia;	
o fibula;	
 humerus; 	
\circ radius;	
∘ ulna;	
o sternum;	
• vertebrae;	
∘ patella;	
\circ phalange.	
Additional bones and muscles may be included.	
The pulse is a measure of heart rate, or the number of times your heart beats in	
one minute. This can be measured through the radial and carotid artery. The	
pulse can be found on different places of the body. (4.2.d)	
• The radial artery is located on the inside of the wrist near the side of the	

Essential Understandings	Essential Knowledge and Skills
 thumb. The carotid artery is found in the neck between the windpipe and neck muscle, and just under the lower jawbone. 	
 Bones work with muscles to produce movement. (4.2.e) Examples include, but are not limited to running. leg muscles (quadriceps, hamstrings); bones (femur, tibia, fibula, and patella); abdominals and vertebrae help provide balance. 	
 The ability to stop/confront/tag/play defense in an activity or game requires the ability to move and close spaces. (4.2.f). Closing space requires awareness and planning. Spatial awareness is knowing where the body is in space in relation to objects and other people. Small-sided games allow students to learn how to guard a peer for defense and not guard a peer while on offense. 	

Fitness Planning

- 4.3 The student will apply knowledge of health-related fitness, gather and analyze data, and set measurable goals to improve fitness levels.
 - a) Describe the components of health-related fitness (i.e., cardiorespiratory endurance/aerobic capacity, muscular strength and endurance, flexibility, body composition) and list at least three physical activities associated with each component.
 - b) Analyze personal baseline data using data from a standardized health-related criterion-referenced test (e.g., Virginia wellness-related criterion-referenced fitness standards).
 - c) Create a SMART (specific, measurable, attainable, realistic, timely) goal for at least one health-related component of fitness to improve or maintain fitness level.
 - d) Identify two physical activities that can be done at school and two physical activities that can be done at home to meet fitness goals.
 - e) Analyze post-fitness testing results and reflect on goal progress/attainment.
 - f) Define the FITT (frequency, intensity, time, and type of exercise) principles.
 - g) Calculate resting and activity heart rate during a variety of physical activities.

Essential Understandings	Essential Knowledge and Skills
Health-related components of fitness are important for disease prevention and	In order to meet these standards, it is expected that
functional health. (4.3.a) Activities to support each component can be done at	students will
home and/or at school. (4.3.d)	• describe the components of health-related
• Cardiorespiratory endurance is the ability of the heart, lungs, and blood	fitness and list associated measurements
vessels to deliver oxygen to muscles during prolonged exercise. Activities	(4.3.a);
may include	• analyze baseline data from a standardized
 running; 	health-related criterion-referenced test
 jogging; 	(Virginia wellness-related criterion-
 swimming; 	referenced fitness standards, CDC
◦ cycling.	guidelines) (4.3.b);
• Muscular strength is the ability to exert a maximal amount of force, such	• use a student-created SMART goal for at
as lifting objects, for a short period of time. Activities may include	least one health-related component of
 lifting weights; 	fitness to improve or maintain fitness level

Essential Understandings	Essential Knowledge and Skills
 resistance band activities; 	(4.3.c);
• weighted squats;	• identify/list activities that can be done at
• walking up a steep hill.	school and activities that can be done at
• Muscular endurance is the ability to do something again and again for an	home to meet fitness goals (4.3.d);
extended period of time without getting tired. Activities may include	• analyze post-fitness testing results and
\circ elongated time in a static hold, such as a plank;	reflect (written or oral) on goal
• high repetitions of a dynamic activity, such as push-ups, squats and	progress/attainment (4.3.e);
curl-ups.	• describe the FITT principle:
• Flexibility allows joints to move through range of motion as muscles	• Frequency: How often you do the
work with bones for movement. Activities may include	physical activity (days per week)?
• stretching;	• Intensity: How hard your body is
o yoga;	working during physical activity
• tai chi.	(light, moderate, vigorous)?
• Body composition includes body weight and the relative amounts of	• Time: How long you spend doing
muscle, fat, bone, and other vital tissues of the body. Activities may	the physical activity?
include	\circ Type of exercise: The kind of
• burpees;	activity you choose to gain a
o jumping jacks;	specific benefit (example, jogging,
• other full-body exercises.	swimming, biking, body weight
• Body mass index (BMI) is based on height and weight.	exercises, yoga, etc.) (4.3.f);
	• measure active and resting heart rate using
Baseline and post data can be analyzed and compared to determine areas of	the carotid or radial pulse during a variety
improvement/progress as well as design future programs. (4.3.b)	of exercises (4.3.g).
r	
SMART goals can be used to target and improve one or multiple areas of health-	Additional resources:
related fitness. (4.3.c)	Health Smart Virginia
• SMART goal statements are specific, measurable, attainable, realistic,	OpenPhysed
and timely.	Focused Fitness

Essential Understandings	Essential Knowledge and Skills
	American Heart Association
Baseline and post data can be analyzed and compared to determine areas of	
improvement/progress as well as design future programs. (4.3.e)	
• Note: Fitness assessments should be conducted at the end of the school	
year for the purposes of student reflection on goal progress/attainment	
and state reporting.	
FITT principle—frequency, intensity, time, and type of exercise—is a formula	
for planning what type of physical activity/activities, how often to do them, how	
hard, and for how long to meet fitness goals. (4.3.f)	
Heart rate can be calculated by measuring the pulse at the carotid or radial artery.	
(4.3.g)	
• The carotid artery is in the neck and supplies blood to the brain, neck, and	
face.	
• The radial artery is in the wrist.	

Social and Emotional Development

- 4.4 The student will demonstrate positive interactions with others in cooperative and competitive physical activities.
 - a) Identify a group goal and the strategies needed for successful completion while working-productively and respectfully with others.
 - b) Identify and demonstrate conflict-resolution strategies for positive solutions in resolving disagreements in physical activity settings.
 - c) Define *etiquette* and demonstrate appropriate behavior when participating in physical activity settings as well as application of rules and procedures.
 - d) Define *integrity* and describe its importance in a physical activity setting.
 - e) Identify how participation in physical activity improves mood and positively impacts the brain.
 - f) Differentiate and communicate about activities that facilitate feelings of inclusion and those that do not.

Essential Understandings	Essential Knowledge and Skills
Cooperative strategies for groups may include verbalizing and justifying ideas,	In order to meet these standards, it is expected that
active listening, being respectful of others, considering others' perspectives,	students will
handling conflicts, collaborating, building consensus, and accepting	• list a group goal and the strategies used for
responsibility. (4.4.a)	successfully meeting the goal (4.4.a);
	list conflict-resolution strategies and one
Conflict resolution skills may include (4.4.b)	example for using the strategies (4.4.b);
• ability to reduce one's stress quickly – calming oneself before addressing	• define <i>etiquette</i> (4.4.c);
the conflict;	demonstrate appropriate etiquette and
• being emotionally aware of the feelings of self and the other person;	application of rules and procedures for
• stating what the conflict is about;	physical activities (4.4.c);
• communication skills;	• define <i>integrity</i> and describe the importance
 listening carefully to others; 	of integrity in a physical activity setting
 speaking directly to each other; 	(4.4.d);
\circ speaking honestly and with kindness;	evaluate through self-reflection mood and
 proposing solutions or compromises; 	focus before and after physical activity
• agreeing on a solution or compromise to try.	(4.4.e);

Essential Understandings	Essential Knowledge and Skills
 Etiquette is the rules indicating the proper and polite way to behave. (4.4.c) Example: Taking turns when playing golf. Demonstrating etiquette looks like: following established rules for an activity; allowing full participation by all individuals; using appropriate language during the activity. 	 define <i>inclusion</i> (4.4.f); define the three tenets of inclusion; acceptance, belonging, and value (4.4.f); reflect on personal experiences when they felt, and did not feel, included (4.4.f). Additional resources: OPEN Online Physical Education Network
Integrity is the quality of being honest and fair. Integrity in physical activity settings allow for inclusive, fair, and safe participation for all participants. (4.4.d)	Health Smart Virginia PE Central Dynamic PE ASAP
Regular exercise helps a person's brain process information and emotions more easily. (4.4.e)	EverFi KidsHealth.org
Self-reflection allows students to identify whether they felt acceptance, belonging and valued during activities or in environments. (4.4.f)	

Energy Balance

- 4.5 The student will explain the nutrition and activity components of energy balance.
 - a) Define *calorie* and identify the number of calories per gram of fat (nine), protein (four), and carbohydrates (four).
 - b) Explain the uses of salt and sugar and the harm of excessive salt and sugar intake.
 - c) Identify examples of each macronutrient (i.e., fat, protein, carbohydrates).
 - d) Calculate the calories per gram of macronutrients for various foods.
 - e) Explain the importance of hydration.
 - f) Compare and contrast different hydration choices.
 - g) Explain the role of moderate to vigorous physical activity (MVPA) for energy balance.
 - h) Identify different portion sizes for each food group.

Essential Understandings	Essential Knowledge and Skills
Calories in food provide energy in the form of heat. The body stores and "burns"	In order to meet these standards, it is expected that
calories as fuel for body functions. (4.5.a)	students will
• A calorie is a unit of measurement or unit of energy; an amount of food	• define calorie and identify the number of
having a heat-producing or energy-producing value in food when	calories per gram of each macronutrient
oxidized in the body.	(4.5.a);
• Number of calories per gram of each macronutrient: fat-9, protein-4, and	• explain how the body uses salt and sugar
carbohydrates–4.	(4.5.b);
	• describe the effects of excessive salt and
Salt and sugar are often added to foods and drinks to enhance flavor (4.5.b).	sugar intake (4.5.b);
• Salt/sodium is used by the body to maintain fluid levels and is necessary	 identify/select examples of each
for the health of the heart, liver, and kidneys. Too much salt/sodium can	macronutrient (4.5.c);
increase risk for high blood pressure and can lead to heart and other	• use food labels to calculate the calories per
diseases.	gram of macronutrients for a variety of foods
• Sugars are carbohydrates and serve as the main energy source for the	(4.5.d);
body. Excess sugar can lead to unhealthy cravings and obesity, which	• explain the importance of hydration (4.5.e);
puts a child at risk for developing high blood pressure, elevated	• compare different hydration choices (4.5.f);
cholesterol levels and type 2 diabetes.	• explain the role of moderate to vigorous

Essential Understandings	Essential Knowledge and Skills
Macronutrients are nutrients the body needs in larger amounts to function properly and include fat (avocados, walnuts), protein (eggs, beans fish), and carbohydrates (oatmeal, bread, pasta.) (4.5.c)	 physical activity for energy balance (4.5.g); identify/select portion sizes for each food group (4.5.h).
 Carbohydrates (oatheat, bread, pasta.) (4.5.c) Carbohydrates provide sugar needed for energy; sugar from carbohydrates is broken down into glucose; glucose is released into the bloodstream for energy for the body; limited amounts of carbohydrates can be stored. Fat is used for energy; any unused energy is stored; the body can store unlimited amounts of fat. Protein is broken down into amino acids, used to build muscle, and to make other proteins that are essential for the body to function. Each macronutrient provides the body a different amount of energy (calories) per gram. (4.5.d) Calories per gram of macronutrients example: cereal label Total fat - 2 grams x 9 calories per gram = 18 calories from fat Total carbohydrates - 30 grams x 4 calories per gram = 12 calories from protein 	Additional resources: SHAPE America National Standards and Grade- Level Outcomes Health Smart Virginia MyPlate.gov OpenPhysed KidsHealth.org
 Hydration/drinking water is important for the body. Without enough water (dehydration), a person can feel sick. (4.5.e) Water helps regulate body temperature; keep joints lubricated; prevent infections; deliver nutrients to cells. 	

Essential Understandings	Essential Knowledge and Skills
Water is the best choice for hydration. (4.5.f)	
• Milk is important for children because of calcium and vitamin D.	
• It is best to limit sugary drinks.	
• Unhealthy drink choices that contain too much sugar and calories are	
sports drinks, sodas, juice drinks, and energy drinks.	
Energy is another word for calories. Energy balance is the balance between	
calories consumed (energy in) and calories expended (energy out). Moderate to	
vigorous physical activity (MVPA) is important for balancing the energy from	
calories consumed. Energy balance in children supports natural growth without	
promoting excess weight gain. (4.5.g)	
• Moderate physical activity refers to activities equivalent in intensity to	
brisk walking or bicycling. Vigorous physical activity produces large	
increases in breathing or heart rate, such as jogging, aerobic dance or	
bicycling uphill.	
Portion sizes range for each food group as the body requires varying amounts for	
optimal health. (4.5.h)	
• Portion size is the amount of food or drink that is served. Children are	
smaller, so their portion sizes are also smaller. The closed fist of a child is	
equal to a cup for their age. Recommended daily amounts vary by age but	
on average are (4.5.g):	
• Fruit: 1-2 cups	
\circ Vegetables: 1 ¹ / ₂ -2 ¹ / ₂ cups	
• Grains: 2-3 ounce equivalent	
 Protein: 3-6 ounce equivalent 	
• Dairy: $2\frac{1}{2}$ -3 cups	