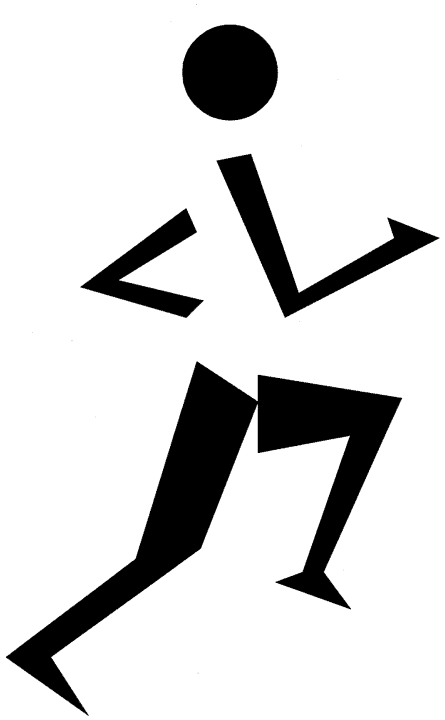
Grade 4

2. Fitness Management

The student will demonstrate the ability to develop and follow a personal fitness plan for lifelong physical activity and well-being.



PRESCRIBED LEARNING OUTCOMES

Students will...

❑ **K.2.4.A.1 Recognize the health-related fitness components** (e.g., cardiovascular endurance, muscular strength, muscular endurance, flexibility…).

Curricular Connections

ELA: GLO 1—Explore thoughts, ideas, feelings, and experiences (express ideas, consider others' ideas, express preferences, set goals, develop understanding, explain opinions, combine ideas, extend understanding), GLO 3—Manage ideas and information (use personal knowledge, ask questions, contribute to group inquiry, create and follow a plan, assess sources, access information, make sense of information, organize, record, and evaluate information)

(continued)

SUGGESTIONS FOR INSTRUCTION

♦ Muscle Scramble

Have students participate in activities at the following stations. After defining muscular strength and endurance, ask students to identify those stations that are associated with strength and those associated with endurance.

Stations:

- **Scooter Push-Away:** Sit on a scooter facing the wall and see how far you can go with one push.
- **Scooter Travel:** Push the scooter with legs only.
- **Maximum Vertical Jump:** Stand with one side to the wall and try to jump as high as possible.
- **Mexican Jumping Bean:** Do as many vertical jumps as possible in 20 seconds.
- **Standing Long Jump:** From a stationary position, jump as far as you can.
- **Line Jumping:** Jump back and forth over a line for 20 seconds.
- **Push-ups:** Place hands on bathroom scale and perform a push-up.
- **Pull-ups:** Do as many pull-ups as possible in 20 seconds.

♦ Create a Workout

Assign a fitness component to groups of students and have them work at stations to create one or more exercises/activities that will serve to develop that specific component. Have students participate in an active Gallery Walk, rotating among the various stations to perform the activities, with one group member staying back at his or her own station for instruction purposes. Refer students to books, websites, CD-ROMs, and so on, in their search for appropriate fitness exercises/activities. (See Gallery Walk Alternative, *Success for All Learners*, 6.80.)

♦ Sport Collage

Have students bring to class pictures of people participating in activities that require cardiovascular endurance, muscular strength/endurance, or flexibility. Have groups of students make three different collages representing the various health-related fitness components.

(continued)

TEACHER NOTES

See also "Activities Bingo" on page 21 in the Health section of *The Canadian Active Living Challenge: Leader's Resource Tool Kit, Program 2* (CAHPER/CIRA).

For knowledge-related learning outcomes, use "active" games to help students understand concepts. Use warm-up/cool-down time for "mini-lessons" and "assessment checks" for observing understanding. Some quick, efficient ways to assess in an active physical education setting are: use of exit slips, thumbs-up and thumbs-down signals, signing an inventory or "I Can" chart, human opinion lines, and use of self-stick notes for graphing results.

Health-Related Fitness Components:

Introduce, explain, use, and reinforce vocabulary for health-related fitness components:

- **Muscular strength**—the amount of force that can be exerted by a muscle or group of muscles in a single effort.
- **Flexibility**—the range and ease of movement of a joint (limited by bone, muscles, ligaments, tendons, and the bone-joint capsule).
- **Muscular endurance**—the ability of a muscle or group of muscles to exert force over an extended period of time without incurring fatigue.
- **Cardiovascular endurance**—the ability of the heart, blood vessels, and lungs to provide the working muscles with adequate oxygen during prolonged activity; also called aerobic endurance or capacity.

SUGGESTIONS FOR ASSESSMENT

♦ Questioning: Fitness Components

Teacher: Inventory

Assign the name of a fitness component to each gymnasium wall: cardiovascular endurance, muscular strength, muscular endurance, and flexibility. Call out an activity or exercise and have students run to the fitness component that the particular activity or exercise develops.

Suggested Criterion:

The student

- ❑ correctly identifies the component and runs to the correct wall

PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
Students will...	
❑ **K.2.4.A.1** *(continued)*	*(continued)*

♦ The Muscle Circuit

Post exercise/activity cards with a range of repetitions on the gymnasium walls. Have students design a circuit plan with a muscular strength/endurance exercise for the arms, followed by one for the legs, the abdomen, and so on, until all cards are placed on a plan. Students then use the Think-Pair-Share strategy with a partner and, once their plans are approved by the teacher, work together to perform the activities. (See Think-Pair-Share, *K–4 ELA,* Strategies–15.)

♦ Rotating Reel

Form groups of four or five students who number their players one to four or five. Hold up the exercise/activity cards from The Muscle Circuit above or from Bucket of Fun (learning outcome S.2.3.A.1a) and have groups decide to which fitness component it belongs (i.e., cardiovascular endurance, muscular strength, muscular endurance, flexibility). Select a card from Ace (one) through to four or five, and have the player with that number from each group rotate to the next group to discuss their group answer regarding the activity card and the fitness component. Hold up another card and repeat the procedure of discussion and rotation.

Variation: Hold up pictures of people swimming, cycling, jumping rope, tobogganing, and doing activities around the house/apartment or yard.

TEACHER NOTES

When using ranges of repetitions, encourage students to strive for their personal best and to respect individual differences in growth and development. Set realistic ranges of repetitions, considering developmental levels. Adapt exercises/activities where necessary to ensure success for all learners.

SUGGESTIONS FOR ASSESSMENT

PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
Students will...	
❑ **K.2.3.C.1a ➠ K.2.4.C.1a Show an understanding of the location, size, and function of the heart** (e.g., in the chest area, size of a fist, pumps blood...).	♦ **Heart Works** Provide the class with videos, CD-ROMs, books, models, diagrams, and/or pictures of the heart and have students research the location, size, and function of the heart. Compare the heart size and number of heartbeats per minute of different animal hearts. ♦ **My Heart** Provide students with a diagram of a heart. Have them colour the arteries red (they carry oxygen) and the veins blue (they carry carbon dioxide).  See BLM 4–2: My Heart.
❑ **K.2.3.C.1b ➠ K.2.4.C.1b Identify short-term effects of exercise/physical activity on the body** (e.g., pulse rate increases, shortness of breath, body temperature increases, perspiration occurs, fatigue sets in...). **Curricular Connections** **ELA:** GLO 1—Explore thoughts, ideas, feelings, and experiences (express ideas, consider others' ideas, express preferences, set goals, develop understanding, explain opinions, combine ideas, extend understanding) **PE/HE**: S.2.4.A.1a, S.2.4.A.1b	♦ **Learning Outcome Connections** Have students participate in the physical activities suggested for learning outcomes S.2.4.A.1a and S.2.4.A.1b. Pose questions for discussion (see teacher notes). ♦ **Checkpoint** After students have participated in vigorous activity, have them record/write/draw how they felt. ♦ **Prediction** Have students predict their heart rate (and record their predictions) for the following activities: • resting for two minutes • walking for two minutes • jogging for two minutes Have them try the activities and record their actual results.
✿ **K.2.4.C.2* Show an understanding of the factors** (e.g., planning, regular participation, effort, adequate information, motivation, commitment, regular monitoring…) **affecting personal fitness development.** * The flower (✿) indicates that the learning outcome could be introduced in this grade.	

Effects of Activities on Heart Rate

	Prediction	Actual	Difference
Rest			
Walk			
Jog			
After Five Minutes			

TEACHER NOTES	SUGGESTIONS FOR ASSESSMENT
Refer to learning outcome K.2.3.C.1a. Jump Rope for Heart materials are available from the Heart and Stroke Foundation of Manitoba.	
Questions for Discussion: Use the following questions for discussion as they apply to the different activities: • What changes occur in your body after activity? Describe them. • What happens to your heart rate during and after activity? • What happens to your body temperature while being active? • How is your rate of breathing affected during activity? • Do you feel sweat on your body? • At what point do your muscles feel tired? 	♦ **Questioning: Learning Outcome Connections** Group Assessment: Inventory Use a stand-up or hands-up response to statements about the short- and long-term effects of exercise on the body.

PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
Students will...	
❑ **K.2.4.C.3 Recognize the importance of light aerobic activities and stretching as part of cool-down following a vigorous activity** (e.g., decrease blood flow and body temperature gradually...).	♦ **Walk after You Run** After students have participated in any of the vigorous aerobic activities, have them walk a few laps, taking in deep breaths through their noses and exhaling through their mouths. Discuss the benefits of cooling down (e.g., decreasing blood flow, heart rate, and body temperature) while performing some slow stretches after the walk. ♦ **Cool-Down Exercises/Stretches** Design exercise/activity cards that students could use as part of a cool-down. Include light to moderate activities, as well as flexibility and strength challenges. Post the cards around the gymnasium. Have students rotate from card to card, performing the activities. ♦ **Concentration** Have students sit down in a personal space in the gymnasium to perform stretching exercises. Select one student to go and sit behind another student, who then gets up and sits behind someone else, and so on, until everyone has had a turn or until someone selects a person who has already had a turn. The object of the game is for students to concentrate and remember who has and who has not had a turn. Should a student select someone who has already had a turn, everyone shouts out, "Concentration!" and the game ends. Remind students to cool off from their vigorous activities by breathing deeply while they are sitting on the floor.

TEACHER NOTES

Cool-down Time:

Cooling down is an essential part of any exercise session, as is warming up (see learning outcome K.2.2.C.3). A cool-down activity should last about three to five minutes for 30-minute classes in order to allow the body to recover gently from vigorous exercise. The best way to enhance flexibility is to stretch after exercise during the cool-down, since the muscles are already warm.

Use assessment strategies such as exit slips, thumbs-up and thumbs-down signals, or human opinion lines as part of a class cool-down activity.

For cool-down activities, see page 103 of *Health-Related Fitness for Grades 3 and 4* (Hopper, Fisher, and Munoz). See also *Ready-to-Use P.E. Activities for Grades 3–4* (Landy and Landy).

SUGGESTIONS FOR ASSESSMENT

♦ Questioning: Walk after You Run

Teacher: Informal Inventory

Ask students the following questions during or after the walk:

- What is an important activity to perform after vigorous activity?
- Why is a cool-down activity important?
- What types of activities should a cool-down consist of?

Suggested Criterion:

Look for

❑ number of correct responses

PRESCRIBED LEARNING OUTCOMES

Students will...

❑ **K.2.4.C.4 Discuss how setting realistic goals and developing strategies** (e.g., positive thinking, regular practice, participating with others...) **can contribute to personal achievement** (e.g., sense of enjoyment, self-confidence...).

Curricular Connections

ELA: GLO 1—Explore thoughts, ideas, feelings, and experiences (express ideas, consider others' ideas, express preferences, set goals, develop understanding, explain opinions, combine ideas, extend understanding)
PE/HE: K.5.4.B.1, K.4.4.A.1, K.4.4.A.2a, K.4.4.A.2b., S.4.4.A.1, K.1.4.C.4
SS: building community

SUGGESTIONS FOR INSTRUCTION

♦ Goal Setting

Have students review their first-attempt fitness results (see learning outcome S.2.4.A.3b) and help them to set goals after a discussion of goal setting (see teacher notes).

♦ "I Can" Charts

Have students review their "I Can" checklists (see learning outcome S.2.4.A.3b) to discuss how personal achievement, as indicated on their charts, and positive thinking contribute to success and a sense of enjoyment and self-confidence.

♦ Strive to Arrive

Have students review their goals and their second-attempt fitness results (see learning outcome S.2.4.A.3b) to determine whether they have arrived at or achieved their goals and whether they have set realistic goals.

Questions for Discussion:

- Were the goals too easy or difficult?
- Did setting specific goals motivate you to reach your target?
- Do you need to adjust your goals up or down?

♦ Guest Speakers

Invite parents, athletes, or sport/recreation program personnel to speak to students about the role of activity in their lives and the importance of setting goals and having a positive attitude and determination to reach for a personal best. Have students complete a LAPS activity before the speaker visits the school. (See LAPS Frame, *Success for All Learners,* 6.54.)

♦ Guest Performance Groups

Invite cultural dance groups, juggling experts, gymnasts, and/or specific sport agencies to school to demonstrate and possibly have students take part actively in mini-sessions.

TEACHER NOTES

Goal-Setting Strategies:

To motivate students maximally toward positive behaviours and attitudes regarding physical activity and fitness, use the following strategies for successful goal setting (AAHPERD, 18–22):

- Involve students in the goal-setting process.
- Focus on improvements relative to an individual's past behaviour/performance.
- Set specific and measurable goals (e.g., in the 1600-metre run the goal should be to decrease the time rather than just to run faster).
- Set challenging and realistic goals (e.g., the goals should not be so easy that they do not challenge the student or so hard that they discourage the student).
- Write down goals.
- Provide students with strategies to improve and maintain fitness.
- Support and give feedback about progress toward goals.
- Create exercise stations where students can choose to work on personal fitness goals (i.e., goal stations) as a warm-up or class activity.
- Provide opportunities for periodic assessment.

Students whose initial fitness level is low and who have a long time between testing periods to work on fitness have greater potential for improvement than students whose fitness level is high and who have little time to work on fitness.

SUGGESTIONS FOR ASSESSMENT

♦ **Reflection/Journal Entry: Goal Setting**

Self-Assessment: Inventory

Have students write in their journals about their first attempts, what goals they set for themselves, and what improvements they made in trying to reach those goals. Ask them to indicate how they feel about setting goals and making improvements.

PRESCRIBED LEARNING OUTCOMES

Students will...

❑ **S.2.4.A.1a Participate regularly in a variety of purposeful and individually challenging fitness activities that develop health-related and/or skill-related fitness components** (e.g., activities that increase heart rate, lung capacity, strength, muscular endurance, flexibility, coordination...).

Curricular Connections

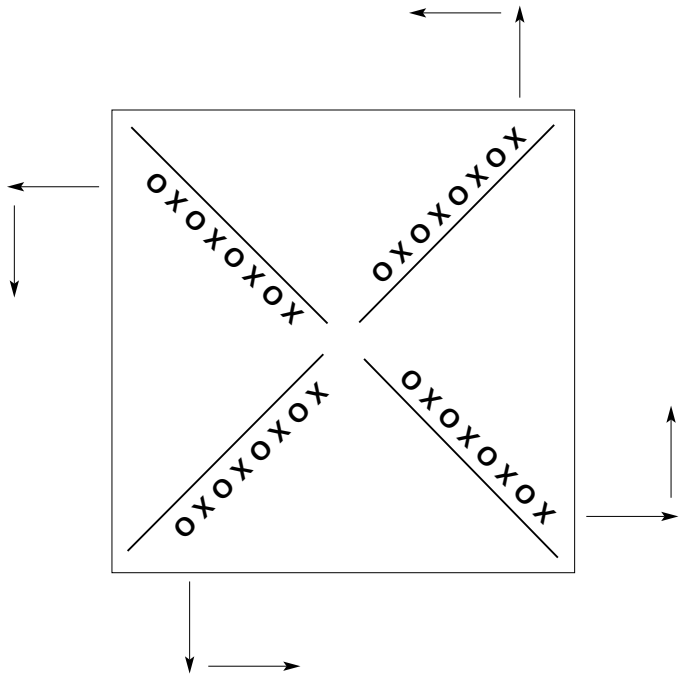
MA: Patterns and Relations (sorting, graphing, patterns, sequence), Statistics and Probability (counting, measuring, formulating questions, reading graphs, pictograms, predicting chance), Number (counting, adding with pictures, concept of half)
PE/HE: GLO 3—Safety (in all activities)

(continued)

SUGGESTIONS FOR INSTRUCTION

♦ Swedish Bench Run (cardiovascular endurance)

Divide the class into four teams and place four benches in the formation shown below, one bench for each team to sit on. At the "go" signal, have the first person from each team exit the square and run once around the other benches to tap the hand of the next team member before safely returning to sit at the end of the team line on the inside end of the bench. Continue for a specified amount of time.



Variations: Have students sit with a partner on the benches and have them run, one at a time, and tap the hand of the partner. Students may run two or three laps before tagging off. Students who are not running may perform a variety of exercises rather than sitting (e.g., curl-ups with toes under a bench or push-ups with hands or feet on the bench, depending on fitness levels).

♦ Mountain Climber

Pair students and place them on the inside of a lap track in the gymnasium. Have one partner run one lap and tag off his or her partner who also runs one lap. The first runner then runs two laps, as does the partner. They then each run three laps, then two laps, and finally one lap, alternating turns.

(continued)

TEACHER NOTES

Due to the importance and the nature of fitness development, learning experiences related to this outcome will be ongoing throughout the year. Assessment also needs to be ongoing to determine how students manage their fitness in class throughout the year.

Make appropriate adaptations or modifications for students with special needs or medical conditions in order to facilitate participation.

Provide alternative activities for students who are not able to participate fully.

Suggestions for instruction provided in previous grades can be carried forward and adjusted for Grade 4. Refer to learning outcomes S.2.3.A.1a, S.2.3.A.1b, and K.2.3.C.3.

Provide opportunities for students to practise activities requiring coordination such as juggling and skipping rope (see learning outcome S.1.4.B.1), activity games such as Continuous Baseball (see learning outcome S.1.4.B.2), and recreational activities such as cross-country skiing.

If batons are used in relays instead of tagging, review safety guidelines for baton exchange (e.g., spacing and speed control to avoid collisions, ways of carrying the baton).

Refer to Appendix I: Glossary for definitions of health-related fitness components.

SUGGESTIONS FOR ASSESSMENT

♦ **Observation: All Activities**

Teacher: Participation Rubric

As students participate in physical activities, observe their levels of participation and keep ongoing records for each term.

See BLM G–3: Participation Rubric (Appendix H).

PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
Students will...	
❑ **S.2.4.A.1a** *(continued)*	*(continued)*

♦ Cross-Country Team Challenges

Provide groups of students with cross-country running challenges listed on one sheet of paper.

Example of Team Challenges:

1. Run to the far baseball diamond.
2. Skip to the bicycle racks.
3. Power walk to the slide.
4. Jog around the soccer posts.

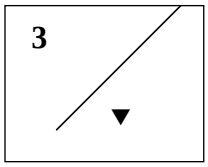
Have students predict the time it would take their team to complete the challenges. Students work together to cross the finish line with all team members striving to arrive at their predicted times, rather than racing for the fastest time.

Variation: Teams can earn extra points for performing all the challenges as a team.

♦ Score Orienteering

Create a map of the school grounds or the area to be used for the orienteering. Mark the map with numbered targets corresponding to the markers set out on the grounds. Each marker has a number and a symbol. Have partners or small groups each carry a copy of the map and attempt to find all the targets as quickly as possible. When they find one, they mark the symbol on their score sheet next to the correct target number. They return to the start when they have found all the targets or when the allotted time is up. Sheets can be scored by numbers found or by different scores for each target, depending on distance or difficulty. Runners can be timed by sending them out at timed intervals. Providing fun clues on the score sheets can help the searchers (e.g., north side of the slippery thing that rhymes with "hide").

Target Example:



Score Sheet Example:

Orienteering Score Sheet

Names _____ _____

Time In ____ Time Out ____ Actual Time _____

Target Number	**Symbol**
1. clue	_____
2. clue	_____
3. clue	_____
4. clue	_____
5. etc.	

Total Correct _____

(continued)

TEACHER NOTES

Skill-related fitness—refers to the ability to perform successfully during games and sports (also called performance fitness). The skill-related fitness components are:

- **agility**—"the ability to shift the body in different directions quickly and efficiently" (Kirchner and Fishburne, 701).
- **balance**—the ability to control or stabilize your equilibrium while moving (dynamic balance) or staying still (static balance).
- **coordination**—"the ability to use your eyes and ears to determine and direct the smooth movement of your body" (hands, feet, arms, head, and so on) (Rainey and Murray, 395).
- **speed**—"the ability to move your body or parts of your body swiftly" (Rainey and Murray, 399).
- **power**—"the ability of the body to apply a maximum muscular contraction with the quickest possible speed" (Kirchner and Fishburne, 706).
- **reaction time**—"the ability to react or respond quickly to what you hear, see, or feel" (Rainey and Murray, 398).

Emphasize with students that in order to improve personal fitness one must increase the intensity (how hard), duration (how long), or frequency (how often) of performing the activity. If one is inactive, the muscles become smaller (atrophy) and lose strength, and breathing becomes less efficient because the lungs are not forced to expand (refer to learning outcome K.2.3.B.1).

SUGGESTIONS FOR ASSESSMENT

PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
Students will...	
❑ **S.2.4.A.1a** *(continued)*	*(continued)*

♦ **Partner Challenge (muscular strength/endurance)**

Set up a circuit of various muscular strength/endurance challenge cards (e.g., push-ups, skips, mountain climbing, curl-ups, line touches) around the gymnasium. Have students work with a partner of similar ability to count the number of challenges (e.g., push-ups or skips) they can complete in 30 seconds.

Variation: Have students work individually to record their scores and beat their personal best.

♦ **Gymnastic Routines (flexibility)**

Have students participate in gymnastics routines (see learning outcome S.1.4.D.2).

♦ **Rhythmic Ball Routine**

Use a large or small playground ball and slow music to demonstrate a rhythmic ball routine and have students match the movements.

For example, move the ball

- around the neck
- down and back up the arms
- around the waist
- out to the side (stretching the body)
- down and up the legs (without locking the knee joint)
- to the floor and up overhead
- around straddled feet while sitting on the floor
- around toes with legs together while sitting on the floor

♦ **Star Adventure**

Have each student stand inside a hoop (space ship) and move in his or her own path according to the music. Play the theme song from a current space movie and have students move accordingly: loud—move quickly; quiet—bend down slowly in the hoop. When the music stops, students can do challenges (e.g., push-ups, curl-ups, stretches, balances, transport skills, gymnastic movements such as weight transfer, creative movements).

TEACHER NOTES

SUGGESTIONS FOR ASSESSMENT

Fitness for All:

Use strategies such as the following to accommodate fitness activities for all students, regardless of their ability levels or physical characteristics:

- Allow students to choose an activity to develop one fitness component, as well as the number of repetitions (e.g., 5, 10, 15) of an exercise.
- Challenge students to perform exercises for a set time period (e.g., number of push-ups in 30 seconds, distance covered in 10 minutes) instead of setting a number that may be too hard for some and too easy for others.
- Provide motivation using developmentally appropriate fitness progressions. For the development of upper body strength, for example, allow modified push-ups with knees touching the floor or a standing push-up against the wall. As well, the degree of difficulty can be adjusted easily by moving the feet farther from the wall to increase the degree of body lean or inclination as the child's upper body strength improves.
- Encourage all students by focusing on individual effort and improvement, rather than on the success of a few highly accomplished students.
- Establish a class atmosphere in which praise and group cooperation is evident for motivating students to achieve their personal best.

TEACHER NOTES *(continued)*

Help students work toward maintaining lifelong physical activity by providing motivating and varied activities that develop confidence and competency.

Refer to *1999 Pan Am Games: Resource Kit for Physical Education Teachers* for general fitness and participation activities/games from different cultures (e.g., "Indian Kickball," page 26).

Various track and field events provide opportunities for students to improve on all aspects of their health-related and skill-related fitness.

PRESCRIBED LEARNING OUTCOMES

Students will...

❑ **S.2.4.A.1b Maintain continuous aerobic activity for a set period of time, based on functional capacity.**

Curricular Connections

MA: Patterns and Relations (sorting, graphing, patterns, sequence), Statistics and Probability (counting, measuring, formulating questions, reading graphs, pictograms, predicting chance), Number (counting, adding with pictures, concept of half)
PE/HE: GLO 1—Movement, GLO 3—Safety (in all activities), GLO 4—Personal and Social Management, K.4.4.B.1b
SS: building community, cultural diversity

SUGGESTIONS FOR INSTRUCTION

♦ 4, 3, 2, 1

Have students set a pace at which they can run/jog/speed walk in their target heart-rate zones (see teacher notes for learning outcome S.2.4.A.2) for four continuous minutes, followed by a 30-second to one-minute walk, followed by a three-minute continuous run, a 30-second walk, and so on. Provide current, up-tempo music for interest and motivation.

Variation: Start with 3, 2, 1 according to the general endurance of the class.

♦ Partner Interval Run

Challenge pairs of students to count the total number of laps they run in a specified time period, alternating laps with their partner, and have them attempt to improve their own scores in another session.

♦ Run Your Grade in Minutes

Have students run/jog/speed walk continuously for four minutes.

Variation: Have students run/jog/speed walk their age in laps (e.g., nine-year-olds run nine laps).

♦ Fitness Runs

Organize fitness runs (e.g., Run to an Olympic City, Run across Canada, Charity Runs) that challenge the class to cover a certain distance in laps by a certain date.

Students run for a specified amount of time each day and each person contributes to the class total of laps/distance. Have students record their daily totals and have them assist in the mapping of the distances on a large wall map.

♦ Pick-a-Paper

Make exercise/activity cards and place them upside down in the centre of the gymnasium. Play a tape with intervals of 15 seconds of quiet followed by 30 seconds of music. During the first 15 seconds of quiet, have students select one activity card, read it, and return it to its upside-down position. When the music begins, students perform that activity for the 30 seconds of music. Repeat for a specified period of time. Include some enjoyable, easy tasks, such as the following: “Tell your physical education teacher how much fun gym class is.” “Go get a drink of water.” “Shake hands with five different people.” “Sit down on a bench.”

TEACHER NOTES

When doing continuous runs, alternate clockwise and counter-clockwise laps for interest and ankle muscle development.

The fitness management outcomes link to active living in GLO 5—Healthy Lifestyle Practices. There are also links between GLO 1—Movement and GLO 2—Fitness Management since many of the movement activities can be designed to be more physically active in order to enhance students' fitness levels.

Examples:

S.1.4.A.1
- Follow the Signs
- Relays
- Leaping Lizards

S.1.4.A.2
- Dribble Tag
- Soccer Tag

S.1.4.B.2
- Continuous Baseball

S.1.4.C.1
- Shinny

S.1.4.D.1
- Aerobic Routines

Physical Education Methods for Classroom Teachers (Human Kinetics, with Pettifor, 139) suggests teaching tips for fitness development:
- Never use fitness activities as punishment.
- Don't overemphasize fitness testing.
- Encourage students to set realistic goals and to celebrate progress and achievement.
- Don't underemphasize the importance of self-esteem to lifelong fitness.

SUGGESTIONS FOR ASSESSMENT

♦ **Performance Task: All Activities**

Teacher: Scoring Rubric

Observe students as they participate in the activities. Using BLM G–8, fill in the names of students in the category describing their performance level. As a timesaver, fill in only the names of students achieving a "3" or a "1" during the activity and add the other names later.

See BLM G–8: Aerobic Capacity Rubric (Appendix H).

TEACHER NOTES *(continued)*
- Clarify goals of fitness, check for understanding of why activities are done, and relate fitness concepts to everyday experiences.
- Teach children the difference between initial fatigue and pain that may result in injury.
- Always ensure that environmental conditions are safe for all lessons.

PRESCRIBED LEARNING OUTCOMES

Students will...

❑ **S.2.4.A.2 Demonstrate efficient ways** (e.g., pulse point location and proper finger positions on wrist and neck, use of heart monitors...) **to determine heart rate before and after exercise.**

Curricular Connections

MA: Patterns and Relations (sorting, graphing, patterns, sequence), Statistics and Probability (counting, measuring, formulating questions, reading graphs, pictograms, predicting chance), Number (counting, adding with pictures, concept of half)

SUGGESTIONS FOR INSTRUCTION

♦ Taking Your Heart Rate

Discuss with students the normal resting heart-rate ranges for children in beats per minutes (see teacher notes). Show the class a chart for 10-second counts. Have them determine their own 10-second heart rates while resting and after participating in activities by gently placing the pads of the first two fingers on the sides of their necks (some students may not be able to feel this light pulse). Also, have students follow a demonstration of using the pads of the first two fingers to feel their pulses near their wrists (on the thumb-side of the underside of their wrists). If students are unable to locate their pulses, have them participate in a brief physical activity and then take their pulses.

Variations: Have students count their heartbeats for six seconds and multiply by 10 to determine beats per minute and/or have them count for 30 seconds and multiply by two. If available, have students use pulse sticks or heart-rate monitors to determine their resting heart rates before exercise. Stethoscopes can also be used as a station activity.

♦ Heart-Rate Inquiry

Have students work individually or in pairs to answer the following inquiry questions while using heart-rate monitors (if available). Use a class Inquiry Chart to record responses.

Inquiry Questions:

- Which of the following heart rates are most likely to be below one hundred beats per minute:
  — resting heart rates?
  — heart rates during activity?
  — heart rates five minutes after activity?
- What do you predict your three heart rates to be?
  (See learning outcome K.2.4.C.1b.)

Have students participate in cardiovascular activities (refer to learning outcomes S.2.4.A.1a and S.2.4.A.1b) to complete their Inquiry Charts. (See Inquiry Chart, *K–4 ELA*, Strategies–83.)

Variation: Have students chart or graph their heart-rate results before and after participating in various activities.

TEACHER NOTES

Remind students to use their fingers rather than the thumb when taking the pulse rate since the pulse in the thumb may be strong enough to interfere with the actual count.

Ten-Second Heart Rates

# beats in 10 sec. x 6 = # beats per min.		
8=48	13=78	18=108
9=54	14=84	19=114
10=60	15=90	20=120
11=66	16=96	etc.
12=72	17=102	

Typical resting heart rates of elementary school children are between 75 and 95 beats per minute and that the **maximum heart rate** for elementary school children is approximately 210 to 220 beats per minute (Kirchner and Fishburne, 146).

For the general activities of children, a **target heart-rate zone** of 60% to 80% of maximum heart rate has a positive effect on the heart and circulatory system without being too strenuous (Kirkpatrick and Birnbaum, 9).

See Appendix I: Glossary for suggested target heart rates related to moderate and vigorous activity.

SUGGESTIONS FOR ASSESSMENT

♦ **Learning Log: Heart-Rate Inquiry**
Teacher Inventory

Have students complete heart-rate prediction charts (see learning outcome K.2.4.C.1b).

Suggested Criteria:

Look for

- ❑ completion of chart
- ❑ ability to find own heart rate

PRESCRIBED LEARNING OUTCOMES

Students will...

❑ **S.2.4.A.3a Determine own performance level for health-related fitness components** (i.e., cardiovascular endurance, muscular strength, muscular endurance, flexibility)**, using simple tests or tasks** (e.g., sit and reach, modified curl-up, 1600-metre run...).

Curricular Connections

ELA: GLO 3—Manage ideas and information (use personal knowledge, ask questions, contribute to group inquiry, create and follow a plan, assess sources, access information, make sense of information, organize, record, and evaluate information)
MA: Patterns and Relations (sorting, graphing, patterns, sequence), Statistics and Probability (counting, measuring, formulating questions, reading graphs, pictograms, predicting chance), Number (counting, adding with pictures, concept of half)
PE/HE: GLO 4—Personal and Social Management (goal setting/planning)

SUGGESTIONS FOR INSTRUCTION

♦ Fitness Circuit

Set up a fitness circuit that includes exercises or tasks that challenge the different health-related fitness components and different muscle groups (e.g. arms, legs, abdominals). Have students work in pairs. Partners take turns participating and recording at each exercise station on cue from the teacher. Have students perform the circuit several times throughout a term to set goals and monitor their own progress. Change exercises periodically for variety and interest.

Examples of Fitness Tasks or Challenges:

- Record the number of minutes that the heart rate is in the target heart-rate zone while jumping rope or running for five minutes (cardiovascular endurance).
- Record the maximum number of push-ups, choosing a progression (e.g., against the wall, with bent knees, with straight body) for measuring upper body strength and endurance. Perform shoulder stretches before and after self-assessment if waiting to switch stations.
- Record the maximum number of curl-ups that the partner can do at a specified pace (e.g., rate of 20 curl-ups per minute) for abdominal strength and endurance.
- Perform a shoulder-stretch challenge by raising one arm up and bending it to pat the back. With the other arm, reach down and behind the back and try to touch the fingers of the first hand, which is patting the back. Measure how many centimetres the hands are apart when fingers of the second hand attempt to reach the fingers of the first hand. Repeat the shoulder-stretch challenge, starting with the other hand (checking for flexibility).

♦ 6-8-10-12 Time Trials

Have students run/jog at a steady pace and count the number of laps they complete in various minutes, gradually increasing the amount of time each session.

Variations: Have students work in pairs, with one student sitting on the inside of the track counting his or her running partner's laps. If heart-rate monitors are available, have students run/jog/speed walk in their target heart-rate zones for the duration of the time rather than having them count their number of laps.

TEACHER NOTES

For assessment guidelines, see Guidelines for GLO 2—Fitness Management in the Overview of this document.

A variety of fitness tests or tasks have traditionally been used to measure health-related fitness components. Before choosing a fitness-assessment task, check for reliability, validity, developmental appropriateness, ease of administration, and safety considerations. Use fitness testing or assessment as a strategy to help students monitor their own progress and set personal goals rather than emphasizing the test itself. Focus on fitness management and motivation toward participation in physical activity. Comparing students' scores and using extrinsic awards are discouraged.

The use of individual goal-setting techniques helps encourage students to focus on personal improvement and progress toward achieving personal goals rather than on comparisons. For example, cardiovascular endurance runs based on time to run rather than distances to be covered motivate students toward achieving fitness. Timing the 1600-metre (one mile) run may be a simple task to organize for large-group testing; however, having everyone run the same length of time means no waiting for slower runners and less chance of any children feeling embarrassed by their performances, as everyone succeeds at his or her own rate. (Refer to the teacher notes for learning outcomes S.2.4.A.1a and S.2.4.A.1b.)

SUGGESTIONS FOR ASSESSMENT

- **Performance Task: Fitness Circuit**
  Self-Assessment: Rating Scale

  Have students complete fitness assessments and determine their own results or scores. Record student results on a class status sheet.

  See BLM 4–3: Fitness Assessment Results: Class Status.

- **Reflection/Journal Entry: All Fitness Activities**
  Self-Assessment: Inventory

  Have students choose a number of exercises or assessment tasks that measure health-related fitness components. Explain proper technique, safety precautions, and procedures for each task. Have students practise the exercise or task, perform and assess it to determine their personal best, and set goals for personal improvement. Ask them to record this information in a journal.

TEACHER NOTES *(continued)*

For physical fitness tests for special populations, see page 163 of *Physical Education for Elementary School Children* (Kirchner and Fishburne) and pages 25 and 29 of *Physical Best Activity Guide* (AAHPERD).

PRESCRIBED LEARNING OUTCOMES

Students will...

❑ **S.2.4.A.3b Record own fitness results and physical activity participation over a period of time** (e.g., beginning, middle, end of school year...) **for personal progress.**

Curricular Connections

ELA: GLO 3—Manage ideas and information (use personal knowledge, ask questions, contribute to group inquiry, create and follow a plan, assess sources, access information, make sense of information, organize, record, and evaluate information)
MA: Patterns and Relations (sorting, graphing, patterns, sequence), Statistics and Probability (counting, measuring, formulating questions, reading graphs, pictograms, predicting chance), Number (counting, adding with pictures, concept of half)
PE/HE: GLO 5—Healthy Lifestyle Practices

SUGGESTIONS FOR INSTRUCTION

♦ Record Your Fitness Results

Provide students with charts and/or computers to enter their fitness results.

Variation: Have students chart their results to notice personal progress.

♦ Learning Log Entries

Have students keep a portfolio of their results in various challenges suggested for learning outcomes S.2.4.A.3a, S.2.4.A.1a, and S.2.4.A.1b in order to observe improvements and progress as a source of motivation.

♦ "I Can" Checklists

Provide students with various health- and skill-related fitness challenge checklists and have them record their performances throughout the year.

TEACHER NOTES

Encourage students to recognize real-world activities (e.g., going for a family walk or hike, carrying groceries or laundry, raking leaves, shovelling snow, walking a dog, delivering papers) as contributors to an active lifestyle.

SUGGESTIONS FOR ASSESSMENT

♦ **Performance Task: Record Your Fitness Results**
Self-Assessment: Inventory

Have students complete fitness profile charts to show personal progress.

See BLM 4–4: My Personal Fitness Profile.

Fitness Management Outcomes: Grade 4

Knowledge

❑ **K.2.4.A.1 Recognize the health-related fitness components** (e.g., cardiovascular endurance, muscular strength, muscular endurance, flexibility...).

❑ **K.2.3.C.1a ➠ Show an understanding of the location, size, and function of the heart** (e.g., in the chest area, size of a fist, pumps blood...).

❑ **K.2.3.C.1b ➠ Identify short-term effects of exercise/physical activity on the body** (e.g., pulse rate increases, shortness of breath, body temperature increases, perspiration occurs, fatigue sets in...).

❑ **K.2.4.C.3 Recognize the importance of light aerobic activities and stretching as part of cool-down following a vigorous activity** (e.g., decrease blood flow and body temperature gradually...).

❑ **K.2.4.C.4 Discuss how setting realistic goals and developing strategies** (e.g., positive thinking, regular practice, participating with others...) **can contribute to personal achievement** (e.g., sense of enjoyment, self-confidence...).

Skills

❑ **S.2.4.A.1a Participate regularly in a variety of purposeful and individually challenging fitness activities that develop health-related and/or skill-related fitness components** (e.g., activities that increase heart rate, lung capacity, strength, muscular endurance, flexibility, coordination...).

❑ **S.2.4.A.1b Maintain continuous aerobic activity for a set period of time, based on functional capacity.**

❑ **S.2.4.A.2 Demonstrate efficient ways** (e.g., pulse point location and proper finger positions on wrist and neck, use of heart monitors...) **to determine heart rate before and after exercise.**

❑ **S.2.4.A.3a Determine own performance level for health-related fitness components** (i.e., cardiovascular endurance, muscular strength, muscular endurance, flexibility)**, using simple tests or tasks** (e.g., sit and reach, modified curl-up, 1600-metre run...).

❑ **S.2.4.A.3b Record own fitness results and physical activity participation over a period of time** (e.g., beginning, middle, end of school year...) **for personal progress.**

Attitude Indicators

1.1 Show a willingness to participate in a variety of physical activities.
1.2 Express enjoyment in a variety of movement experiences.
1.3 Appreciate that time, commitment, and practice are required for skill development.
1.4 Appreciate the aesthetic and athletic values of movement.
1.5 Appreciate and respect diversity while participating in physical activity.
1.6 Appreciate and respect the natural environment while participating in physical activity.