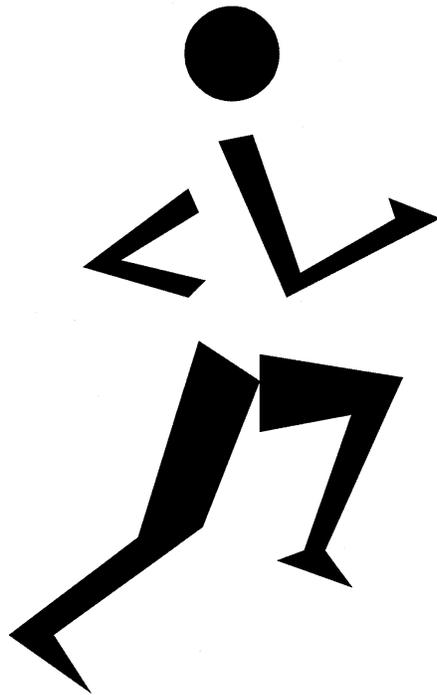

Grade 5

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	SUGGESTIONS FOR INSTRUCTION
<p><i>Students will...</i></p>	
<p>☐ K.2.5.A.1 Identify health-related fitness components (e.g., cardiovascular endurance, muscular endurance, muscular strength, flexibility, body composition...) and one example of an appropriate exercise/activity for each component (e.g., skip rope for cardiovascular endurance development...).</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Curricular Connections</p> <p>ELA: GLO 1—Explore thoughts, ideas, feelings, and experiences. GLO 3—Manage ideas and information. GLO 4—Enhance the clarity and artistry of communication. GLO 5—Celebrate and build community.</p> <p>SC: Cluster 1—Maintaining a Healthy Body</p> </div>	<p>◆ Fitness Plan</p> <p>Have students perform fitness tasks and record their personal fitness results in a fitness journal. Have them identify the fitness component that each of the tasks assesses and suggest goals and plans to improve in each area, using a recording sheet.</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>Refer to BLM 5–5: Personal Record Sheet.</p> <p>◆ Posters</p> <p>Have students, in groups of four or five, develop posters for each of the health-related fitness components, including suggested exercises for each.</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>Refer to BLM G–5: Health-Related Fitness Components Poster.</p> <p>◆ Create a Workout</p> <p>Have students work in groups of four or five to develop a complete workout that includes the following health-related fitness components:</p> <ul style="list-style-type: none"> • a warm-up • muscular endurance and strength activities • cardiovascular activities • cool-down/flexibility activities <p>Each student in the group researches and contributes one exercise for each component. Have each group lead their workout and explain to what component each exercise contributes.</p> <p>Variation: Students can design a muscular strength/endurance workout.</p>

(continued)



TEACHER NOTES

For information on teaching considerations and implementation guidelines related to fitness, refer to Guidelines for GLO 2—Fitness Management in the Overview of this document.

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 signals, signing an inventory or “I Can” chart, human opinion lines, and use of self-adhesive notes for graphing results.



SUGGESTIONS FOR ASSESSMENT

◆ Journal/Learning Log: Fitness Plan

Teacher Assessment: Checklist

Using a recording sheet, have students complete a personal fitness plan that includes identifying the health-related fitness components and setting personal goals for improvement.

Suggested Criteria:

The student is able to

- identify the health-related fitness components
- identify an appropriate exercise for each component
- record personal results and information



Refer to BLM 5–5: Personal Record Sheet and BLM G–4: Personal Fitness Profile.

◆ Observation: Create a Workout

Group Assessment: Checklist

Ask each group member to write an exercise/activity for each of the following components:

- warm-up activities—one idea per student
- muscular endurance and strength activities—one idea per student
- cardiovascular activities—one idea per student
- cool-down/flexibility activities—one idea per student

As groups present and lead their workout, have students look for correct identification of the health-related fitness component for each exercise/physical activity suggested.



Refer to BLM 5–6: Create a Workout.

PRESCRIBED LEARNING OUTCOMES
<i>Students will...</i>
<input type="checkbox"/> K.2.5.A.1 <i>(continued)</i>

SUGGESTIONS FOR INSTRUCTION

(continued)

◆ **What's Behind You?**

Display posters on the wall that identify the health-related fitness components and a list of appropriate exercises for each component. Have students work in pairs: one student, facing away from the poster, practises identifying the components and exercises; the other student, facing the poster, provides clues if the partner has difficulty remembering. Students switch places and roles.

Examples of exercises/activities that develop fitness components:

- **Body Composition:** aerobic exercises such as running, jogging, skipping, playing soccer, ice or in-line skating, cross-country skiing
- **Cardiovascular endurance:** aerobic exercises such as running, jogging, skipping, playing soccer, ice or in-line skating, cross-country skiing
- **Flexibility:** bent-leg sit and reach, stretches held for 10 to 30 seconds
- **Muscular endurance:** push-ups, curl-ups, tuck jumps
- **Muscular strength:** push-ups, pull-ups, rope climbing, vertical jumps

**TEACHER NOTES****SUGGESTIONS FOR ASSESSMENT****Health-Related Fitness****Components:**

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

- **Body composition**—the ratio of body fat to lean body tissue (how much of the body is fat and how much is muscle).
- **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).
- **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.
- **Muscular strength**—the amount of force that can be exerted by a muscle or group of muscles in a single effort.

For more fitness activities, see *Health-Related Fitness for Grades 5 and 6* (Hopper, Fisher, and Munoz) and *Fitness Education for Children* (Virgilio).



PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
<p><i>Students will...</i></p>	
<p><input type="checkbox"/> K.2.5.B.1 Identify the fitness benefits (i.e., muscle and bone development, decreased susceptibility to stress, positive self-esteem, faster heart-rate recovery) of moderate to vigorous fitness-type activities over time.</p>	<p>◆ Fitness Plan</p> <p>As part of their personal fitness plan, have students use a KWL (Know, Want to know, Learned) chart to identify the benefits of moderate to vigorous fitness activities. Have students share their results with the class. Discuss the benefits of fitness activities with students and have them complete the KWL chart. (See KWL, 5–8 <i>ELA</i>, Strategies–89 to 91.)</p>
<div style="border: 1px solid black; padding: 5px;"> <p>Curricular Connections</p> <p>ELA: GLO 1—Explore thoughts, ideas, feelings, and experiences. GLO 3—Manage ideas and information. GLO 4—Enhance the clarity and artistry of communication.</p> <p>MA: Statistics and Probability</p> <p>PE/HE: GLO 2—Fitness Management (K.2.5.C.1a)</p> <p>SC: Cluster 1—Maintaining a Healthy Body</p> </div>	<p>◆ All Fitness Activities</p> <p>Explain to students that the intensity of physical activity is often identified as light, moderate, or vigorous, based on the amount of energy or effort that is expended in performing the activity. Energy outputs can be estimated in a variety of ways:</p> <ul style="list-style-type: none"> • by a talk test (being able to talk easily during an aerobic activity) • by keeping within the target heart-rate zone • by perceived exertion (experiencing physiological signs such as increased heart rate, breathing rate, sweating, and muscle fatigue) <p>Discuss the physiological benefits of moderate to vigorous fitness activities over time after students have participated in those types of activities.</p> <p>Variation: Have students discuss the benefits of physical activity when learning about the body systems in science. (For background information on the respiratory and circulatory systems, see 5–8 <i>Science</i> 5.33.)</p> <p>◆ Activity Logs</p> <p>Have students keep track of their moderate to vigorous fitness activities in a physical activity log.</p>
	<div style="display: flex; align-items: center;">  <p>Refer to BLM G–6: Physical Activity Log (PAL).</p> </div>



TEACHER NOTES

The terms light, moderate, and vigorous physical activity may be defined as follows (U.S. Department of Health and Human Services *et al.* 32):

- **Light activity** is considered less than 50% of the individual’s age-related maximum heart rate (e.g., stretching, walking casually, golfing, playing catch).
- **Moderate activity** is 50% to 70% of the individual’s age-related maximum heart rate (e.g., brisk walking, skating, bike riding, low-impact aerobic dancing, recreational swimming).
- **Vigorous activity** is greater than 70% of the individual’s age-related maximum heart rate (e.g., running, supervised weight training, playing basketball or soccer, cycling 16 kilometres per hour and/or in uphill terrain, high-impact aerobic dancing, fast-pace skating).

Benefits of Fitness Activities:

Help students to understand the changes that occur in their bodies as they participate in moderate to vigorous fitness activities over time. According to Kirkpatrick and Birnbaum, participation in activity results in the following changes:

“Physiological Changes

- The heart muscle becomes stronger.
- The heart’s internal circulation improves.
- The resting heart rate lowers.
- The heart’s stroke volume (specifically due to endurance training) and the volume per minute increase.



SUGGESTIONS FOR ASSESSMENT

◆ Questioning: Fitness Plan

Group Assessment: Inventory

Use a stand-up or hands-up response to statements about the benefits of moderate to vigorous physical activity over time. Use statements from the teacher notes.

Examples:

- The heart muscle becomes stronger with exercise. (True)
- The resting heart rate increases with exercise. (False)

TEACHER NOTES (continued)

- The heart’s contraction capacity improves.
- The muscles’ capacity to use oxygen improves.
- The body’s oxygen intake capacity improves.
- The blood’s capacity to transport oxygen improves because the number of red blood corpuscles increases.” (Kirkpatrick and Birnbaum 8)

“Other Effects

- The level of muscular strength is preserved or improves.
- The bones become stronger.
- The working capacity of joints is preserved or improves.
- Stress decreases and relaxation increases.
- Self-confidence improves.
- Social and emotional health improves.
- Exerciser feels refreshed.” (Kirkpatrick and Birnbaum 8)

The heart rate of a fit person recovers after exercise and returns back to the resting heart rate faster than that of a person in poor condition.



PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
<p><i>Students will...</i></p>	
<p>☐ K.2.5.C.1a Recognize the terms associated with the function of the cardiovascular system (i.e., resting heart rate, maximum heart rate, target heart rate, blood pressure, recovery heart rate) in the context of exercise and physical activity.</p>	
<div style="border: 1px solid black; padding: 5px;"> <p>Curricular Connections</p> <p>ELA: GLO 1—Explore thoughts, ideas, feelings, and experiences. GLO 3—Manage ideas and information. GLO 4—Enhance the clarity and artistry of communication.</p> <p>MA: Statistics and Probability</p> <p>PE/HE: GLO 2—Fitness Management (K.2.5.B.1, K.2.5.C.1b, S.2.5.A.1b)</p> <p>SC: Cluster 1—Maintaining a Healthy Body</p> </div>	<p>◆ Active Heart Fair</p> <p>Have students complete projects on active hearts and display them in a Heart Fair. As a class, complete a mind map of all pertinent information to be included in the projects. Include terms associated with the function of the cardiovascular system and the benefits of moderate to vigorous fitness exercises over time in relation to the cardiovascular system (see learning outcomes K.2.5.B.1 and K.2.5.C.1b). Projects can take the form of active games, board games, TV commercials/programs, posters, brochures, and so on. Projects could be integrated with science and/or mathematics.</p> <p>◆ Crossword Puzzle or Word Find Puzzle</p> <p>Have students complete puzzles that include terms associated with the function of the cardiovascular system. Students may design their own puzzles and share them with other students.</p> <p>◆ “Cardio Terms”</p> <p>After students have participated in the activities suggested for learning outcome S.2.5.A.1b, discuss the terms associated with the function of the cardiovascular system. Use a vocabulary strategy such as the Word Cycle from page 6.31 of <i>Success for All Learners</i> to reinforce the vocabulary.</p>



TEACHER NOTES

Function of the Cardiovascular System:

Terms associated with the function of the cardiovascular system include the following:

- **Resting heart rate**—the number of beats in one minute when you are at complete, uninterrupted rest. It is best taken when first waking up in the morning before lifting the head from the pillow (Kirkpatrick and Birnbaum 11).
- **Maximum heart rate**—the highest number of times the heart can contract in one minute, which can be reached at maximum effort. Maximum heart rate changes with age (Kirkpatrick and Birnbaum 10).
- **Target heart-rate zones**—the heart-rate range within which the heart should beat to achieve the desired physiological benefits (Kirkpatrick and Birnbaum 11).
- **Recovery heart rate**—the heart rate measured at certain intervals after exercise, most often at one, three, and five minutes after completion (Kirkpatrick and Birnbaum 11).
- **Blood pressure**—the amount of force or pressure put forth by the heart to pump blood. When blood pressure is recorded, two figures are given, with one number over the other (e.g., 126/82). The upper number (126) represents the systolic pressure (the pushing phase) and the lower number (82) represents the diastolic (relaxing phase) (Bender *et al.* 180).



SUGGESTIONS FOR ASSESSMENT

◆ Project: Active Heart Fair

Teacher Assessment: Scoring Rubric

Have students complete their active heart projects. Assess the projects using a teacher- or student-made scoring rubric that reflects relevant learning outcomes from various subject areas.

Suggested Rubric Categories:

- Organization and Sequence
- Content
- Communication
- Accuracy
- Creativity
- Appearance
- Other



Refer to BLM G–9: Project-Assessment Rubric.

◆ Paper and Pencil Task: Puzzles

Self-Assessment: Inventory

Use teacher- or student-generated puzzles to assess knowledge of terms.

Suggested Criterion:

Look for

- number of correct responses

TEACHER NOTES (continued)

For information and software on making crossword puzzles, visit the following websites:

- Discovery School's Puzzlemaker:
<<http://www.puzzlemaker.com>>
- Schoolhouse Technologies:
<<http://www.schoolhousetech.com>>

Language Link:

When teaching vocabulary related to health content areas or specific sports, encourage students to learn the terms in their home language or in another language (e.g., French, Ukrainian, Mandarin, Cree, Ojibway), especially in communities where a particular culture is represented.



PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
<p><i>Students will...</i></p> <p>☐ K.2.5.C.1b Describe the effects of aerobic activities and inactivity on the cardiovascular system (i.e., lower/raised resting heart rate, increased/decreased heart size, increased/decreased stroke volume).</p> <div data-bbox="115 573 550 1031" style="border: 1px solid black; padding: 5px;"> <p>Curricular Connections</p> <p>ELA: GLO 1—Explore thoughts, ideas, feelings, and experiences. GLO 3—Manage ideas and information. GLO 4—Enhance the clarity and artistry of communication. GLO 5—Celebrate and build community.</p> <p>MA: Statistics and Probability</p> <p>PE/HE: GLO 2—Fitness Management (K.2.5.B.1, K.2.5.C.1a, K.2.5.C.1b, S.2.5.A.1a, S.2.5.A.1b)</p> <p>SC: Cluster 1—Maintaining a Healthy Body</p> </div>	<p>◆ Effects of Aerobic Activities</p> <p>After students have participated in the activities suggested for learning outcome S.2.5.A.1b, discuss the effects of aerobic activities and the effects of inactivity on the cardiovascular system.</p> <p>◆ Active/Inactive</p> <p>Have the class form two lines (with students facing each other) at the centre of the gym. Identify one line as the “Active” line and the other as the “Inactive” line. When students hear the teacher call out a statement that applies to their line, they chase the students in the other line to the end line of the basketball court (similar to “Crows and Cranes”). Tagged students join the other line of students.</p> <p>Sample Statements:</p> <ul style="list-style-type: none"> • “Resting heart rate is...lower.” (Active line chases Inactive line.) • “Resting heart rate is higher.” (Inactive line chases.) • “Stroke volume of heartbeat is higher.” (Active line chases.) • “Heart size is larger.” (Active line chases.) • “Heart size is smaller.” (Inactive line chases.)
<p>☐ K.2.5.C.2 Show an understanding of the factors (e.g., planning, regular participation, effort, adequate information, motivation, commitment, regular monitoring...) affecting personal fitness development.</p> <div data-bbox="115 1423 550 1671" style="border: 1px solid black; padding: 5px;"> <p>Curricular Connections</p> <p>ELA: GLO 1—Explore thoughts, ideas, feelings, and experiences.</p> <p>MA: Statistics and Probability</p> <p>SC: Cluster 1—Maintaining a Healthy Body</p> </div>	<p>◆ Fitness Plan</p> <p>Have students complete a plan (e.g., in fitness journals) to improve their personal fitness. Using a chart representing a month, have students add the following activities to the fitness plan:</p> <ul style="list-style-type: none"> • Activities for general health—moderate-intensity activities for a minimum of 60 minutes every day as part of play, exercise, chores, and transportation, according to <i>Canada’s Physical Activity Guide for Youth</i> (Health Canada). • Activities to improve cardiovascular endurance—vigorous-intensity activities for at least 30 minutes daily, according to <i>Canada’s Physical Activity Guide for Youth</i> (Health Canada). <p>After two weeks (as a checkpoint) and a month, have students discuss and record their responses to the following questions:</p> <ul style="list-style-type: none"> • Were you able to follow your plan? • What factors affected your ability or inability to follow the plan? • What are your goals/plans for the next period of time?



TEACHER NOTES

SUGGESTIONS FOR ASSESSMENT

See effects of physical activity in the teacher notes for learning outcome K.2.5.B.1.

For more information, contact the Heart and Stroke Foundation of Manitoba and the Diabetes Foundation of Manitoba.

◆ **Questioning: Effects of Aerobic Activities**

Group Assessment: Inventory

Have students use a stand-up or hands-up response to statements about the benefits of moderate to vigorous activity over time. Use learning outcome K.2.5.C.1b for examples of statements.

Examples:

- Over time, participation in aerobic activities will lower your resting heart rate. (True. Students stand up.)
- Participation in aerobic activities decreases the stroke volume of each heartbeat. (False. Students remain sitting.)

Variation: Use a Human Opinion Line (see learning outcome K.2.5.C.4).

Introduce students to the FITT (frequency, intensity, time, and type) principle.

Fitness can improve by increasing the frequency, intensity, and time spent on an activity. It is important to choose the right activity for improvement of each fitness component.

For more information on the FITT principle, see *Planet Health* (Carter *et al.* 43).

For more information on physical activity, refer to the following guides:

- *Canada's Physical Activity Guide for Youth*: <<http://www.hc-sc.gc.ca/hppb/paguide/youth.html>>
- *Canada's Physical Activity Guide to Healthy Active Living*: <<http://www.hc-sc.gc.ca/hppb/paguide/main.html>>

◆ **Journal/Learning Log: Fitness Plan**

Self-Assessment: Anecdotal Notes

Have students record in their fitness journals all the factors that helped or hindered their ability to stick to their fitness plan.



Refer to BLM 5–7: Fitness Goal Setting and BLM 5–8: Fitness Goal Factors.

TEACHER NOTES (*continued*)

Aboriginal Link:

For Aboriginal resources, refer to the following websites:

- Instructional Resources Unit (Library), Manitoba Education and Youth: <<http://libinfo.merlin.mb.ca>>
- Manitoba First Nations Education Resource Centre: <<http://www.mfnerc.com>>
- Online resources that include Aboriginal content, such as CANTEACH: <<http://www.canteach.org>>



PRESCRIBED LEARNING OUTCOMES

SUGGESTIONS FOR INSTRUCTION

Students will...

K.2.5.C.3 Show an understanding that stretching exercises for the major muscle groups should be held for a minimum length of time to be effective (e.g., as long as a stretch feels comfortable, which is usually 10 to 30 seconds with three to five repetitions...).

Curricular Connections

ELA:

GLO 5—Celebrate and build community.

PE/HE:

GLO 3—Safety (K.3.5.A.2)

SC:

Cluster 1—Maintaining a Healthy Body

K.2.5.C.4 Determine the intrinsic (e.g., enjoyment, enhanced health, level of success, increased energy level, affiliation...) **and extrinsic** (e.g., awards, media, sport heroes, family, peers...) **factors that motivate participation for fitness development.**

Curricular Connections

ELA:

GLO 1—Explore thoughts, ideas, feelings, and experiences.

GLO 4—Enhance the clarity and artistry of communication.

GLO 5—Celebrate and build community.

SC:

Cluster 1—Maintaining a Healthy Body

◆ **Cool-down Stretches**

Have each student take a turn leading the cool-down stretches at the end of class. To improve flexibility, the stretches should be held for 10 to 30 seconds with three to five repetitions. Focus on the major muscle groups used in the activity. Review safety guidelines related to stretching (e.g., avoid bouncing, maintain correct body alignment, bend knees to reduce strain on back).

◆ **Inside and Outside Motivators**

Brainstorm factors that motivate people to be fit. Sort the reasons into two categories: extrinsic (outside) and intrinsic (inside). Students could reflect (in their fitness journals) why they want to be fit.

◆ **Cheers**

To encourage others to “get fit,” have students create “Let’s Get Fit” chants and cheers, complete with movements and meaningful lyrics.

◆ **Activity Inventory**

Have students discuss fitness activities they like to do and why they like to do them. Use self-adhesive notes to record reasons for participation and post them on a chart as either extrinsic or intrinsic motivators. Encourage students to include reasons related to media pressures, if applicable.

◆ **Human Opinion Line**

Have students line up in the centre of the gym. Have one side of the gym represent “Yes” and the other side represent “No.” Ask questions such as the following:

- Is enjoyment an intrinsic factor?
- Are awards extrinsic factors?

Students move to the side of the gym that represents their answer.



TEACHER NOTES

SUGGESTIONS FOR ASSESSMENT

Cool-down Time:

Cooling down is an essential part of any exercise session, as is warming up. A cool-down activity should last at least three to five minutes. The best way to enhance flexibility is to stretch after exercise during cool-down, since the muscles are already warm.

For cool-down and stretching activities, see *Health-Related Fitness for Grades 5 and 6* (Hopper, Fisher, and Munoz 113–120).

Recognize that reasons for participation in activities are personal and may vary from person to person. Children and youth may participate

- to be with friends
- in the hope of becoming famous
- to keep their bodies healthy
- because it is fun
- because parents urge them to
- to win a trophy or medal
- other reasons

Language Link:

When teaching vocabulary related to health content areas or specific sports, encourage students to learn the terms in their home language or in another language (e.g., French, Ukrainian, Mandarin, Cree, Ojibway), especially in communities where a particular culture is represented.

◆ **Observation: Cool-down Stretches**

Teacher Assessment: Checklist

Observe students as they perform the cool-down exercises.

Suggested Criteria:

The student

- performed stretches correctly
- stretched slowly and held stretches for 10 to 30 seconds
- encouraged others to stretch to the limit of their movement
- did not rush while stretching
- other

◆ **Journal/Learning Log: Inside and Outside Motivators**

Self-Assessment: Anecdotal Notes

Have students record in their fitness journals the reasons why they want to be fit, determine whether their reasons are extrinsic and/or intrinsic, and explain why.

◆ **Paper and Pencil Task: Activity Inventory**

Self-Assessment: Inventory

Have students complete the inventory of activities they like to do and why they like to do them. Discuss the results.



Refer to BLM 5–9: Why I Participate.

PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
<p><i>Students will...</i></p>	
<p>□ S.2.5.A.1a Demonstrate correct execution of exercises (e.g., keeping body straight for push-ups, keeping legs bent for curl-ups...) designed to improve and maintain personal fitness associated with health-related fitness components.</p>	
<p>Curricular Connections ELA: GLO 5—Celebrate and build community. PE/HE: GLO 2—Fitness Management (K.2.5.B.1) GLO 3—Safety (in all activities) SC: Cluster 1—Maintaining a Healthy Body</p>	<p>◆ Fitness Circuit</p> <p>Have students participate in a muscular strength and endurance circuit. Discuss proper execution of each of the fitness exercises. Encourage proper body alignment.</p> <p>Examples of Exercises:</p> <ul style="list-style-type: none"> • Push-ups progressions (wall push-ups, hands on bench push-ups, floor push-ups, feet on bench push-ups)  • Pull-ups or chin-ups  • Bench-steps  • Tuck jumps  • Lunges  • Curl-ups (and variations)  • Back lifts, alternate leg and arm lifts  <p>◆ Lead-up Games and Activities</p> <p>Encourage students to use correct form while participating in all games and activities.</p> <p>◆ Strength Tag</p> <p>Designate two or three players to be “it” (taggers). Tagged students must go to a designated area and perform a specific exercise (e.g., push-ups). Observe students for correct execution. After students have performed the exercise a specified number of times, they return to the game.</p>



TEACHER NOTES

Due to the importance and nature of fitness development, learning experiences related to this learning 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, focusing on personal progress and achievement.

Make appropriate adaptations or modifications for students with special needs or medical conditions in order to facilitate participation. Provide alternative activities for those students who are not able to participate fully.

Emphasize with students that in order to improve personal fitness one must increase the intensity (how hard), duration (how long), and/or frequency (how often) of performing the activities. 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.

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

Choose strategies and activities such as the following to promote fitness for all students of varying ages and abilities:

- 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 standing push-ups against the wall.



SUGGESTIONS FOR ASSESSMENT

◆ **Performance Task: Fitness Circuit**

Peer Assessment: Checklist

Provide students with a checklist identifying proper technique for each of the exercises in the fitness circuit. Have pairs of students check off the skills that are performed properly and coach each other on skills that are not being performed properly.

◆ **Observation: All Activities**

Teacher Assessment: Scoring Rubric

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

Participation Rubric	
Rating	The student is
4	<ul style="list-style-type: none"> • always able to perform the excises correctly, ready to participate, highly involved, and on task
3	<ul style="list-style-type: none"> • frequently able to perform the excises correctly, ready to participate, highly involved, and on task
2	<ul style="list-style-type: none"> • sometimes able to perform the excises correctly, ready to participate, highly involved, and on task
1	<ul style="list-style-type: none"> • rarely able to perform the excises correctly, ready to participate, highly involved, and on task

TEACHER NOTES (continued)

- 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 where praise and group cooperation are evident for motivating students to achieve their personal best.

For information on teaching considerations and implementation guidelines related to fitness, refer to the Guidelines for GLO 2—Fitness Management in the Overview of this document.



PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
<p><i>Students will...</i></p>	
<p>☐ S.2.5.A.1b Participate in continuous aerobic activity for a sustained period of time, while maintaining the target heart rate.</p>	
<div style="border: 1px solid black; padding: 5px;"> <p>Curricular Connections</p> <p>ELA: GLO 3—Manage ideas and information. GLO 5—Celebrate and build community.</p> <p>MA: Patterns and Relations Statistics and Probability</p> <p>PE/HE: GLO 1—Movement GLO 3—Safety (in all activities) GLO 4—Personal and Social Management (K.4.5.B.1b)</p> <p>SC: Cluster 1—Maintaining a Healthy Body</p> <p>SS: Identity, Culture, and Community</p> </div>	<p>◆ Pursuit Run</p> <p>Divide the class into groups of three or four students, and have each group appoint a leader. On a given signal, students follow the leader in their group in an aerobic activity (e.g., running). On the second signal, the next person in line becomes the leader. This continues until the established time period is over. Students can check their heart rate during and after the run. This activity can be done as a scientific inquiry, asking the question, “How does running affect heart rate?”</p> <p>Variation: The activity can be done outdoors or indoors over obstacles.</p> <p>◆ Lead-up Games</p> <p>Many lead-up games can provide opportunities for continuous aerobic activity (e.g., lead-up games in ultimate, team handball, soccer, football, floor hockey, non-contact rugby, basketball, lacrosse). Modify the rules to allow for maximum activity.</p> <p>◆ Game Search</p> <p>Give students opportunities to research and play games from other cultures that include aerobic activity (e.g., lacrosse).</p> <p>◆ Jump Rope</p> <p>Have students participate in jump-rope stations or design continuous jump-rope routines for a performance. Jump-rope stations can include individual tricks, partner tricks, long rope, double-dutch, and jump bands.</p> <p>◆ Aerobic and Step Routines</p> <p>Have students participate in teacher-led aerobic and step routines, or have each student take responsibility for leading one part of the workout.</p> <p>◆ Orienteering</p> <p>Have students follow an orienteering course. Time the activity to promote continuous aerobic activity.</p> <p>◆ Fitness Circuits</p> <p>Have students participate in fitness circuits that allow for continuous activity.</p>



TEACHER NOTES

Students are encouraged to work within their target heart-rate zones so that they accumulate 60 minutes of moderate physical activity and 30 minutes of vigorous physical activity daily to achieve health benefits associated with participation in physical activities (see *Canada’s Physical Activity Guide for Youth*: <<http://www.hc-sc.gc.ca/hppb/paguide/youth.html>>).

To develop aerobic capacity, the heart must reach a heart-rate range or zone to achieve the desired physiological benefits. Target heart-rate zones are calculated based on a percentage of maximum heart rate.

For example:

- Moderate health zone—50% to 70% of maximum heart rate.
- Aerobic health zone—70% to 85% of maximum heart rate.

Furthermore, to calculate an aerobic health zone for 9- to 12-year-olds (not taking resting heart rate into consideration), 70% to 85% of 210 (maximum heart rate for ages 9 to 12) would be 145 to 180 beats per minute (rounding off to the nearest five). For a 10-second count, the pulse count would be 24 to 30 (Kirkpatrick and Birnbaum 9-10).

When using heart-rate monitors in Grades 5 and 6, the aerobic target heart-rate zone could be pre-set on watches prior to class. Note that some watches should be set for individual students with special conditions or needs.



SUGGESTIONS FOR ASSESSMENT

◆ **Performance Task: All Activities**

Self-Assessment: Scoring Rubric

Have students score their ability to remain in their target heart-rate zone for the required time, using a scoring rubric such as the following.

Target Heart-Rate Rubric				
Name _____		Class _____		
Level	The student is	Date	Date	Date
3	<ul style="list-style-type: none"> • able to sustain the target heart rate for the required time based on functional capacity 			
2	<ul style="list-style-type: none"> • able to sustain the target heart rate most of the time 			
1	<ul style="list-style-type: none"> • able to sustain the target heart rate some of the time 			

Variation: Have students show one, two, or three fingers to identify their level of participation.

TEACHER NOTES (continued)

For more information, refer to the following websites:

- Manitoba Marathon: <<http://www.manitobamarathon.mb.ca/>>
- Manitoba Physical Education Teachers Association (MPETA): <<http://home.merlin.mb.ca/~mpeta/>>



PRESCRIBED LEARNING OUTCOMES									
<i>Students will...</i>									
<p><input type="checkbox"/> S.2.5.A.2 Demonstrate use of short-cut methods (e.g., 6-second count x 10; 10-second count x 6...) and/or technology (e.g., heart-rate monitors...) for monitoring heart-rate counts before, during, and after activities, and relate to target heart-rate zones (e.g., general health, basic fitness, healthy heart...).</p>									
<table border="1"> <tr> <td data-bbox="123 684 358 709">Curricular Connections</td> </tr> <tr> <td data-bbox="123 716 180 741">ELA:</td> </tr> <tr> <td data-bbox="123 741 505 766">GLO 3—Manage ideas and information.</td> </tr> <tr> <td data-bbox="123 772 168 798">MA:</td> </tr> <tr> <td data-bbox="123 798 358 873">Patterns and Relations Statistics and Probability Number</td> </tr> <tr> <td data-bbox="123 879 199 905">PE/HE:</td> </tr> <tr> <td data-bbox="123 905 529 957">GLO 2—Fitness Management (K.2.5.C.1b, S.2.5.A.1a, S.2.5.A.1b)</td> </tr> <tr> <td data-bbox="123 963 164 989">SC:</td> </tr> <tr> <td data-bbox="123 989 493 1014">Cluster 1—Maintaining a Healthy Body</td> </tr> </table>	Curricular Connections	ELA:	GLO 3—Manage ideas and information.	MA:	Patterns and Relations Statistics and Probability Number	PE/HE:	GLO 2—Fitness Management (K.2.5.C.1b, S.2.5.A.1a, S.2.5.A.1b)	SC:	Cluster 1—Maintaining a Healthy Body
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SC:									
Cluster 1—Maintaining a Healthy Body									

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, as well as during 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) and then take their pulses. If students are unable to locate their pulses, have them participate in a brief physical activity to elevate heart rate.

Variation: 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**

Post a class Inquiry Chart and have students work individually or in pairs to answer the following inquiry questions, using heart-rate monitors (if available):

- What is your heart rate after walking for two minutes?
Identify the target heart-rate zone.
- What is your heart rate after running for two minutes?
Identify the target heart-rate zone.

Have students participate in cardiovascular activities (refer to learning outcomes S.2.5.A.1a and/or S.2.5.A.1b) to complete their Inquiry Charts. (See Inquiry Chart, 5-8 ELA, Strategies–83.)


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-Rate Chart

# beats in 10 sec. x 6 = # beats per min.		
8=48	17=102	26=156
9=54	18=108	27=162
10=60	19=114	28=168
11=66	20=120	29=174
12=72	21=126	30=180
13=78	22=132	31=186
14=84	23=138	32=192
15=90	24=144	33=198
16=96	25=150	34=204



Refer to BLM G–8:
Ten-Second Heart-Rate
Chart.

Integration Link:

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


SUGGESTIONS FOR ASSESSMENT
◆ Journal/Learning Log: Heart-Rate Inquiry

Teacher Assessment: Inventory

Have students complete a heart-rate prediction chart.



Refer to BLM G–7: Heart-Rate Predictions.

Suggested Criteria:

Look for

- ability to find own heart rate
- ability to work in specific heart-rate zones
- completion of chart

PRESCRIBED LEARNING OUTCOMES	SUGGESTIONS FOR INSTRUCTION
<p><i>Students will...</i></p>	
<p>☐ S.2.4.A.3a ⇒ S.2.5.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...).</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Curricular Connections ELA: GLO 1—Explore thoughts, ideas, feelings, and experiences. SC: Cluster 1—Maintaining a Healthy Body</p> </div>	<p>◆ Fitness Assessments</p> <p>Choose from the following list of assessment tasks pertaining to each of the health-related fitness components, or use other tasks or tests that are safe and reliable.</p> <p>Cardiovascular Endurance:</p> <ul style="list-style-type: none"> • 6-, 8-, 10-, or 12-Minute Run: Students count the number of laps completed in the time of the run. • Leger Beep Test: This test uses an audiotape to control timed runs over a measured course, and an audio tone communicates timing information for the test subjects (runners). The tests are run continuously until the subjects can no longer continue or start to miss (arrive late at lines). The highest running pace and number of repetitions that the runner can accomplish successfully is then the player’s rating. • Walk Test: Available online at http://www.motivationstation.net. <p>Muscular Strength and Endurance (specific to muscle groups):</p> <ul style="list-style-type: none"> • Push-ups (full or modified)  • Pull-ups  • Curl-ups (cadence controlled)  • Bench-Steps  <p>Flexibility:</p> <ul style="list-style-type: none"> • Modified Sit and Reach (one leg bent)  • Shoulder Stretch 



TEACHER NOTES

A variety of fitness tasks or tests 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.

Focus on fitness management and motivation towards participation in physical activity. Comparing students' scores and using extrinsic awards are discouraged.

Beep tests can be ordered from:
Fitness Appraisal Certification
U de Montreal Kinesiologie,
CP 6128 Succursale Centre-ville,
Montreal QC H3C 3J7
Fax: 514-343-2181

The use of individual goal-setting techniques encourages students to focus on personal improvement and progress towards achieving personal goals rather than on comparisons.

Muscular strength and endurance components can be trained together. Activities may focus on strength for some students and endurance for others, depending on the number of repetitions they are capable of performing.

For information related to fitness assessment, refer to

- *Fitness Education for Children* (Virgilio)
- *Physical Best Activity Guide* (AAHPERD)
- *FITNESSGRAM 6.0 Test Kit* (The Cooper Institute for Aerobics Research)



SUGGESTIONS FOR ASSESSMENT

◆ Journal/Learning Log: 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.



Refer to BLM 5–5: Personal Record Sheet and BLM G–6: Physical Activity Log (PAL).

PRESCRIBED LEARNING OUTCOMES

Students will...

S.2.5.A.3b Compare own fitness results and physical activity participation over a period of time (e.g., beginning, middle, end of school year...) to check and revise personal goals.

Curricular Connections

ELA:

GLO 1—Explore thoughts, ideas, feelings, and experiences.

MA:

Patterns and Relations
Statistics and Probability
Number

PE/HE:

GLO 2—Fitness Management (S.2.5.A.3a, S.2.5.A.1a, S.2.5.A.1b)
GLO 5—Healthy Lifestyle Practices

SC:

Cluster 1—Maintaining a Healthy Body

SUGGESTIONS FOR INSTRUCTION

◆ **Learning Log Entries**

Have students keep a portfolio of their fitness results in various challenges suggested for learning outcomes S.2.5.A.3a, S.2.5.A.1a, and S.2.5.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.

◆ **Activity Participation**

Have students take home recording sheets or logs to keep track of the number of minutes they participate in moderate and/or vigorous activities each day over a period of time.



Refer to BLM G–6: Physical Activity Log (PAL).

◆ **Journal Entries**

Have students record their personal fitness results on a personal record sheet to put in a Fitness Portfolio.



Refer to BLM 5–5: Personal Record Sheet.

**TEACHER NOTES**

For information on teaching considerations and implementation guidelines related to fitness, refer to Guidelines for GLO 2—Fitness Management in the Overview of this document.

Encourage students to recognize day-to-day 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****◆ Journal/Learning Log: 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.



Refer to BLM 5–5: Personal Record Sheet and BLM 5–7: Fitness Goal Setting.



Fitness Management Outcomes: Grade 5



Knowledge

- K.2.5.A.1 Identify health-related fitness components** (e.g., cardiovascular endurance, muscular endurance, muscular strength, flexibility, body composition...) **and one example of an appropriate exercise/activity for each component** (e.g., skip rope for cardiovascular endurance development...).
- K.2.5.B.1 Identify the fitness benefits** (i.e., muscle and bone development, decreased susceptibility to stress, positive self-esteem, faster heart-rate recovery) **of moderate to vigorous fitness-type activities over time.**
- K.2.5.C.1a Recognize the terms associated with the function of the cardiovascular system** (i.e., resting heart rate, maximum heart rate, target heart rate, blood pressure, recovery heart rate) **in the context of exercise and physical activity.**
- K.2.5.C.1b Describe the effects of aerobic activities and inactivity on the cardiovascular system** (i.e., lower/raised resting heart rate, increased/decreased heart size, increased/decreased stroke volume).
- K.2.5.C.2 Show an understanding of the factors** (e.g., planning, regular participation, effort, adequate information, motivation, commitment, regular monitoring...) **affecting personal fitness development.**
- K.2.5.C.3 Show an understanding that stretching exercises for the major muscle groups should be held for a minimum length of time to be effective** (e.g., as long as a stretch feels comfortable, which is usually 10 to 30 seconds with three to five repetitions...).
- K.2.5.C.4 Determine the intrinsic** (e.g., enjoyment, enhanced health, level of success, increased energy level, affiliation...) **and extrinsic** (e.g., awards, media, sport heroes, family, peers...) **factors that motivate participation for fitness development.**

Skills

- S.2.5.A.1a Demonstrate correct execution of exercises** (e.g., keeping body straight for push-ups, keeping legs bent for curl-ups...) **designed to improve and maintain personal fitness associated with health-related fitness components.**
- S.2.5.A.1b Participate in continuous aerobic activity for a sustained period of time, while maintaining the target heart rate.**
- S.2.5.A.2 Demonstrate use of short-cut methods** (e.g., 6-second count x 10; 10-second count x 6...) **and/or technology** (e.g., heart-rate monitors...) **for monitoring heart-rate counts before, during, and after activities, and relate to target heart-rate zones** (e.g., general health, basic fitness, healthy heart...).
- S.2.4.A.3a** ➡ **S.2.5.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.2.5.A.3b Compare own fitness results and physical activity participation over a period of time** (e.g., beginning, middle, end of school year...) **to check and revise personal goals.**

Attitude Indicators

- 2.1 Show an interest in and responsibility for personal fitness.
- 2.2 Appreciate the role and contribution of regular participation in physical activity for health and fitness.
- 2.3 Show respect and acceptance for physical and performance limitations of self and others.