National Fitness Leadership Alliance

Alberta Fitness Leadership Certification Association (AFLCA)
British Columbia Recreation and Parks Association (BCRPA)
Saskatchewan Parks and Recreation Association (SPRA)
Manitoba Fitness Council (MFC)
Ontario Fitness Council (OFC)
Fitness New Brunswick (NBF)
Nova Scotia Fitness Association (NSFA)

Exercise Theory
Performance Standards

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Health Related Benefits of Physical Activity (3.5%)

Performance Standard

The Fitness Leader will be able to describe the benefits of physical activity and its relationship to health and wellness.

Competencies

a. Summarize the health-related benefits of physical activity.
b. Describe the potential health impacts of physical inactivity and sedentary lifestyles.
c. Identify modifiable lifestyle behaviours and non-modifiable risk factors and how they increase or decrease the risk of chronic disease.

Holistic Approach to Physical Activity and Lifestyle (3%)

Performance Standard

The Fitness Leader will describe and integrate the holistic (whole person wellness) approach to physical activity and lifestyle, identify the elements of the Active Living concept, and discuss the implications for fitness leadership.

Competencies

a. Define holism, describe the benefits as they relate to physical activity, and discuss how to impart this knowledge in a fitness leadership setting.
b. Define Active Living.
c. Identify common barriers to physical activity.
d. Describe and demonstrate ways to encourage participants to commit to exercise and take responsibility for their own health and well-being.

Anatomy (15%)

Performance Standard

The Fitness Leader will demonstrate a basic knowledge of human anatomy.

Competencies

a. Identify the major muscle or muscle groups and the movements they perform, including: trapezius; erector spinae; deltoid (anterior, middle and posterior); rhomboids; pectoralis major; rectus abdominis; internal and external obliques; transverse abdominis; biceps brachii; triceps brachii; the latissimus dorsi; iliopsoas; gluteus maximus, medius, and minimus; hip adductors; hamstrings; quadriceps (rectus femoris, vastus lateralis, vastus intermedius, vastus medialis); gastrocnemius; soleus; and tibialis anterior.

b. Identify the types of joints, including; fibrous, cartilaginous and synovial (e.g., ball and socket, saddle, and hinge) and describe how bone structure influences joint function.

c. Identify joint structures and connective tissues, including the joint capsule, synovial membrane, articular cartilage, joint cavity, ligaments, and tendons.

d. Identify the major bones, including the: cranium, vertebrae (including cervical, thoracic and lumbar areas), scapula, ribs, sternum, humerus, radius, ulna, clavicle, pelvic girdle femur, tibia, fibula, and patella.

Movement Mechanics (25%)

Performance Standard

The Fitness Leader will demonstrate basic knowledge of the biomechanics involved in human movement.

Competencies

a. Identify the movements of the hip, elbow, shoulder girdle, spine, wrist, ankle and knee.
b. Identify the major joint actions; including flexion, extension, abduction, adduction, medial/ internal and lateral/external rotation, circumduction, hyperextension, dorsiflexion, plantar flexion, pronation, supination, eversion, inversion, lateral flexion, protraction, retraction, elevation, depression, transverse(horizontal) abduction and transverse(horizontal) adduction.
c. For the following four exercises (push-up, squat, lunge and abdominal curl), identify the agonist, antagonist, and the type of contraction for each phase of the exercise.
d. Define synergist.
e. Define and describe muscle actions (e.g., concentric, eccentric, isometric).
f. Describe how the following impacts stability: a) size of the base of support, b) height of the centre of gravity and c) location of the centre of gravity in relation to the base of support.
g. Using the principle of length of lever, explain how they can be used to vary the intensity of an exercise.

Exercise Physiology (12%)

Performance Standard

The Fitness Leader will demonstrate through verbal and/or written communication a basic knowledge of exercise physiology underlying human movement.

Competencies

a. Identify the average range for resting heart rate as well as the range for target exercise heart rate for an individual of a stated age using the Karvonen Method, and 220- age max heart rate method.
b. State whether each of the following increases or decreases during a cardiovascular exercise session: heart rate, blood pressure, stroke volume and respiratory rate.
c. Describe how oxygen enters and moves through the body and how carbon dioxide is removed from the muscles.
d. Describe venous pooling and how to prevent it.
e. Understand blood pressure and normal resting values for diastolic and systolic.
f. Describe how blood pressure adapts to cardiovascular conditioning.
g. Summarize the key elements (endurance, total time, power) of the three energy systems, (aerobic, lactic acid and ATP-CP) and their primary fuel (glycogen/glucose, fats, ATP-CP). Identify the primary system used in various physical activities.
h. Describe the long-term training adaptations of the following fitness components: cardiovascular endurance, muscular endurance, muscular strength and flexibility.
i. Identify and describe how environmental factors (heat, humidity, cold) can affect the body's response to physical activity.

Principles of Exercise Conditioning (18%)

Performance Standard

The Fitness Leader will demonstrate a basic knowledge of exercise conditioning principles.

Competencies

a. Describe the FITT Principle: frequency, intensity, time (duration), and type of exercise for improving each of the following health related components of fitness: flexibility, cardiovascular endurance, muscular strength, and muscular endurance.
b. Show how using the talk test, rating of perceived exertion, the Borg scale, and training heart rate can be used to monitor and adjust intensity.
c. Identify the pros and cons associated with static, dynamic and ballistic stretching and when each is most appropriate.
d. Describe the importance of developing a balanced muscle conditioning program for the muscles surrounding the major joints.
e. Identify and describe the anatomical limitations to joint range of motion (flexibility).
f. Describe established training methods and principles. (SAID, progressive overload, maintenance, FITT, reversibility, ceiling effect, symmetry).

Exercise Analysis and Risk Management (10%)

Performance Standard

The Fitness Leader will exemplify and demonstrate safety in all aspects of planning and delivering of fitness programs as well as demonstrate methods for preventing and managing injuries.

Competencies

a. Describe why and how to use the following pre-screening tools: PAR-Q+ and ePARmed-X.
b. For the following exercises: push-up, squat, lunge and abdominal curl, analyze each for purpose, potential risks to joint structures, and modifications or alternative exercises.
c. Describe the signs and symptoms of overtraining.
d. Know the signs and symptoms that would warrant modifying or stopping an exercise session.
e. Understand the importance of knowing the set of emergency procedures for the facility (i.e., location of the first aid kit, emergency exits, emergency protocols, location of telephone and street address)
f. Explain the RICE principle (i.e., rest, immobilize, cold and elevation).
g. Describe and demonstrate neutral posture while standing.

Basic Nutrition (3.5%)

Performance Standard

The Fitness Leader will be able to explain *Eating Well with Canada's Food Guide*.

Competencies

a. Using *Eating Well with Canada's Food Guide*, list the 4 food groups and describe the main principles of the guide, e.g., choosing healthy options, choosing variety and using water to satisfy your thirst.
b. Know the differences between the unsaturated, saturated and trans-fat and give a food example of each.
c. Know when you should refer a participant to a Registered Dietitian.

Body Composition (3%)

Performance Standard

The Fitness Leader will identify safe and effective strategies for obtaining and maintaining a healthy body composition.

Competencies

a. Explain the energy-in/energy-out concept.

b. Understand that the combination of food intake and physical activity is most effective in maintaining a healthy body composition.
c. Demonstrate an understanding of Body Mass Index (BMI), and this measurement's limitations. (e.g., it does not differentiate between lean and fat mass)
d. Demonstrate an understanding of waist girth and its use as a predictor of the health related risks of obesity.
e. Explain how changes in body composition (lean and fat tissue changes) influence basal metabolic rate and subsequent energy balance.
f. Define atrophy and hypertrophy.

Program Planning (5%)

Performance Standard

The Fitness Leader will design an effective physical activity/exercise program using established training methods and principles.

Competencies

a. Demonstrate the ability to provide exercise modifications based on clients' needs.
b. Apply the principles of the *Canadian Physical Activity Guidelines*.

Leadership Skills (2.5%)

Performance Standard

The Fitness Leader will understand principles of adult learning, communication skills, and leadership models.

Competencies

a. Understand the principles of adult learning and how they relate to an exercise environment.
b. Understand how to use effective communication when working with a variety of participants. (ex. non-verbal, verbal)
c. Describe and apply the principles of effective leadership styles: leader centred dictator, and laissez-faire.
d. Identify intrinsic and extrinsic factors that may motivate adults to participate in physical activity.
e. Understand the principles of adult learning.