

Assessment Objective 1

Skill Related Components of Fitness

Agility Quickly and precisely move or change direction

Activities requiring quick changes in direction

Balance Maintain centre of mass over a base of support

Activities requiring control of the distribution of weight

Co-ordination Smooth flow of movement

Activities requiring the movements of two or more body parts

Power The product of strength and speed

Activities requiring explosive movements

Reaction Time The time taken to respond to a stimulus

Activities requiring a quick decision or response



Skill: A B C P R

Physical Related Components of Fitness

Muscular Endurance Muscular system – continue to contract at a light to moderate intensity to allow repetitive movements.

Events/sports lasting more than 30 minutes

Aerobic Endurance Cardiorespiratory system – supply oxygen and nutrients to the muscles to sustain low to medium intensity work.

Events/sports lasting more than 30 minutes

Muscular Strength The maximum force that can be generated by a muscle or muscle group

Activities requiring force

Speed Distance divided by time

Activities requiring fast movements.

Flexibility Having an adequate range of motion in all joints of the body

Activities requiring a wide ROM around a joint

Body Composition The relative ratio of fat mass to fat-free mass in the body

Activities requiring low body fat or High muscle mass depending on the activity

Physical: M A M S F B

Fitness Training Programme

A tailored training programme will help you achieve your fitness goals.

Basic principles of training - FITT

Frequency – Number of sessions e.g. 3 per week

Intensity – How hard you work e.g. 85% of Max HR or Borg

Time – How long you train for e.g 30 minutes → 60 minutes

Type – Type of training methods e.g. interval or circuit training.

ALL-OUT SPRINT The maximum possible effort, sustainable for just 20-30 seconds.	20
VERY HARD INTENSITY Hard to speak, breathing labored after a few seconds, requires focus; good for 1-min intervals.	19
HARD INTENSITY Requires focus to maintain; hard to say more than 2-3 words; good for Cooper Tests, 5k PRs.	18
VIGOROUS ACTIVITY Can speak in short sentences; becomes uncomfortable quickly. Requires constant effort.	17
HARD ACTIVITY Labored breathing, challenging and uncomfortable but sustainable for 30-60 mins.	16
PROGRESSIVE PACE A pace that requires some pushing and effort to maintain; still able to hold a conversation.	14-15
COMFORTABLE WITH SOME EFFORT Slight 'push' but still at a pace which you could speak a few sentences without struggling.	13
COMFORTABLE PACE Able to maintain a conversation without getting out of breath while running.	11-12
LIGHT AND EASY Non-tiring, very gentle and easy to maintain a conversation - could continue for hours.	10
MINIMUM EFFORT Rare minimum exertion; a gentle stroll through the woods. Could continue all day.	6-9



Exercise Intensity

This term is used to describe how hard an individual is training; for example the relative speed, rate or level of an individual's exertion.

Measuring Heart Rate

Measured in BPM

Neck (Carotid Artery)

Wrist (Radial Artery)

RPE and HR

- Instead of using a HR monitor, you can use the RPE scale to predict the exercise HR of an individual using the relationship:
- $RPE \times 10 = HR$ (bpm).

Strength Intensity

- Muscular Strength – 1 Rep Max (1RM)
- Muscular Endurance – 15 reps max

Additional principles of training – SPORIVAR

Specificity – Training and goals specific to the sport

Progressive Overload – gradually increasing how hard sessions are- ensures progress is made (slow to prevent injury)

Reversibility – Progress is reversed if training stops/reduced

Individual differences – Training is related to the individual e.g. age, ability, disability.

Variation – Training must be varied to help with progression and stop boredom.

Adaptation – Changes to the body due to increased training loads – improved performance

Rest and recovery – required so the body can recover from training and allows adaptation to occur

The BORG Scale

- Rate of Perceived Exertion Scale (RPE)
- Used to rate physical exertion Scale starts at 6 and goes up to 20.

Maximum Heart Rate

You measure your working heart rate during exercise. It is important you keep an eye on your heart rate so that you are in the correct training zone.

$$220 - \text{Age} = \text{Maximum Heart Rate}$$

Calculating Training Zones

- Find your maximum heart rate (MHR).
 - $MHR / 100 \times _\% = _____ \text{ bpm}$
- 60% -85% Aerobic Training zone 85%-95% Anaerobic Training Zone

Technology

Heart Rate Monitors

Smart Watches

Apps