

Unit 1

Fitness for Sport and Exercise

Unit 1, Fitness for Sport and Exercise, is an externally assessed, compulsory unit with three learning aims:

- Learning aim A: Know about the components of fitness and the principles of training
- Learning aim B: Explore different fitness training methods
- Learning aim C: Investigate fitness testing to determine fitness levels.

Unit 1 is a core unit and its content underpins the other BTEC sport units. Learning aim A looks at the components of physical and skill-related fitness and principles of training. Learning aim B covers the various training methods that can be used to develop the different components of fitness and learning aim C focuses on fitness tests.

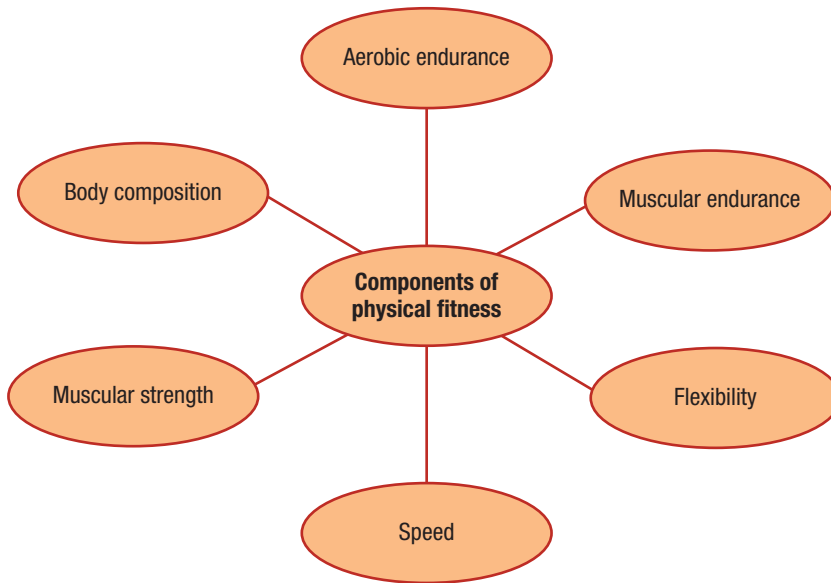
The unit is divided in to two sections. The first section contains the content of the learning aim, broken down in to bite-sized chunks. Each topic is covered and you can tick them off as you study them.

The second section contains two sample external assessments. You will be given 1 hour to complete the external assessment for this unit and the marks are out of 50. Your assessment will take place by an online, computer-based test and our two sample external assessments are designed to show you the types of questions, and question formats, you might face. Answers for the two sample external assessments can be found at the end of the book.

Learning aim A

Know about the components of fitness and the principles of training

Topic A.1 Components of physical fitness



You will need to know the definition of each of the six different components of fitness.

Aerobic endurance

Studied

Aerobic endurance is the ability of the cardiorespiratory system to work efficiently, supplying nutrients and oxygen to working muscles during sustained physical activity.

There are alternative names for this component of physical fitness; these are:

- cardiorespiratory fitness
- cardiorespiratory endurance, or
- aerobic fitness.

Remember that the cardiorespiratory system consists of the cardiovascular system, which includes the heart, blood



Figure 1.1

and blood vessels; and the respiratory system, which includes the lungs and airways.

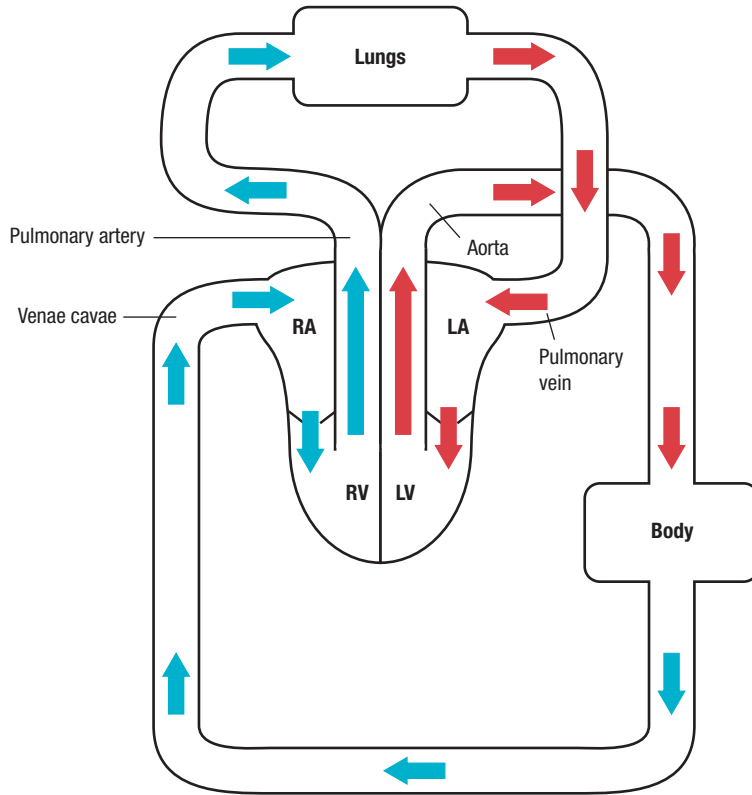


Figure 1.2 The cardiorespiratory system

The cardiorespiratory system is responsible for taking in and using oxygen from the air that is breathed in and also for transporting nutrients and oxygen around the body. It also removes waste products such as carbon dioxide and lactic acid.

Muscular endurance

Studied

This is the ability of the muscular system to work efficiently. A person with muscular endurance is able to have their muscles continue contracting over a period of time against a light to moderate fixed resistance load.



Figure 1.3

Flexibility

Studied

This means having an adequate range of motion in all joints of the body so that you are able to carry out all of the movements that are required every day. It also means the ability to move a joint fluidly through its complete range of movement.



Figure 1.4

Speed

Studied

This is the distance a person travels divided by the time taken to travel that distance. Speed is measured in metres per second (m/s). The faster an athlete is able to run over a set distance, the greater their speed.

There are three main types of speed:

- Accelerative speed – these are sprints up to 30 metres.
- Pure speed – these are sprints up to 60 meters.
- Speed endurance – these are sprints with a short recovery period in between.



Figure 1.5

Accelerative speed



Pure speed



Speed endurance



Figure I.6

Muscular strength

Studied

This is the maximum force (in kg or N) that can be generated by a muscle or muscle group.



Figure I.7

Body composition

Studied

This is the relative ratio of fat mass to fat-free mass (vital organs, muscle, bone) in the body.

External assessment: Question paper I

1. Omar is a lightweight boxer. He has applied the principles of training to his programme to ensure his performance increases.

Which principle of training is Omar applying when he carries out boxing practice punching a punch bag? (1)

- (a) Progression
- (b) Specificity
- (c) Adaptation
- (d) Reversibility



2. Using a variety of different fitness training methods is a good way to prevent boredom and to keep sports people interested in training. One method of fitness training is shown in the photograph below.

What fitness training method is being performed? (1)

- (a) PNF
- (b) Circuit Training
- (c) Free weights
- (d) Plyometrics



3. Max is an athlete. He belongs to a local athletics club and is using training methods to increase his fitness and performance.

Which component of fitness will hollow sprints help to develop? (1)

- (a) Agility
- (b) Speed
- (c) Flexibility
- (d) Muscular endurance

Unit 2

Practical Sports Performance

Unit 2, Practical Sports Performance, is an internally assessed, compulsory unit with three learning aims:

- Learning aim A: Understand the rules, regulations and scoring systems for selected sports
- Learning aim B: Practically demonstrate skills, techniques and tactics in selected sports
- Learning aim C: Be able to review sports performance.

In this unit you will develop your practical sports performance through taking part in activities and reviewing your performance and the performance of others. By observing sports officials you will develop your understanding of the rules and regulations of various sports in learning aim A. In learning aim B you will have the opportunity to take part in a number of different sports and will need to show skills, techniques and tactics in your chosen sport. Learning aim C asks you to review your performance in your chosen sports, consider your strengths and weaknesses and think about plans to develop your performance.

Each learning aim is divided in to two sections. The first section focuses on the content of the learning aim and each of the topics are covered. At the end of each learning aim there are some knowledge recap questions to test your understanding of the subject. The answers for the knowledge recap questions can be found at the end of the book.

The second section of each learning aim provides support with assessment by using evidence generated by a student, for each grading criterion, with feedback from an assessor. The assessor has highlighted where the evidence is sufficient to satisfy the grading criterion and provided developmental feedback when additional work is required.

At the end of the book is an example of an assignment brief for this unit. The sample assignment brief contains tasks that would allow you to generate the evidence needed to meet all the assessment criteria in the unit. The assessment criteria are also outlined in a table following the brief.

Learning aim A

Understand the rules, regulations and scoring systems for selected sports

Assessment criteria

- 2A.P1** Describe the rules, regulations and scoring systems of two selected sports.
- 2A.P2** Apply the rules of a selected sport in four specific situations.
- 2A.P3** Describe the roles and responsibilities of officials from two selected sports.
- 2A.M1** For each of the two selected sports, explain the roles and responsibilities of officials and the application of rules, regulations and scoring systems.
- 2A.D1** Compare and contrast the roles and responsibilities of officials from two selected sports, suggesting valid recommendations for improvements to the application of rules, regulations and scoring systems for each sport.

Topic A.1 Rules (or laws)

Rules are a set of agreed standards that are laid down to standardise how a sport is to be played, such as how many people are on each side and how you score points. Rules also cover what behaviour is acceptable and unacceptable and how unacceptable behaviour can be punished. Rules are set down by national or international governing bodies of sport, such as FIFA (football) or the IRB (rugby union). In some sports, such as cricket, the rules are referred to as 'laws'.

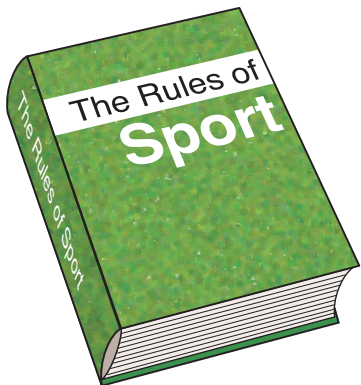


Figure 4.1

Governing body of sport

Studied

The governing body of a sport is represented by the group of people who agree the rules and appoint officials to implement them, e.g. the FA (football) and the RFL (rugby football league).

Governing bodies can be international and they agree rules for sports played in all countries; they also organise competitions. In the UK, National Governing Bodies ensure these international rules are implemented in all forms of a sport. They are also responsible for organising sporting competitions in the UK.



Figure 4.2

Topic A.2 Regulations

Regulations relate to specific aspects of the rules and how the rule should be implemented. Regulations include details of various elements, including the playing surface; the type of equipment that is acceptable, for example, what any equipment is made from, length of studs; any timing regulations such as time outs or added on time; methods of substituting players; health and safety and officials.

Topic A.3 Scoring systems

The scoring system is the method a sport uses to decide who the winner is. The simplest scoring systems are where a point is recorded for each goal, such as in football or hockey. Athletics, which uses times or distances, also has an easy to understand method of deciding who the winner is. Some sports such as golf, rugby and tennis have complex scoring methods. These sports all have scoring methods that are clear and are not based on the opinion of judges or officials. Some sports, such as diving, gymnastics, ice skating, boxing and synchronised swimming, have scoring systems that are based on the opinions of the officials who have been appointed to judge the sport. This can lead to some controversial decisions that not all the people watching the sport may agree with.

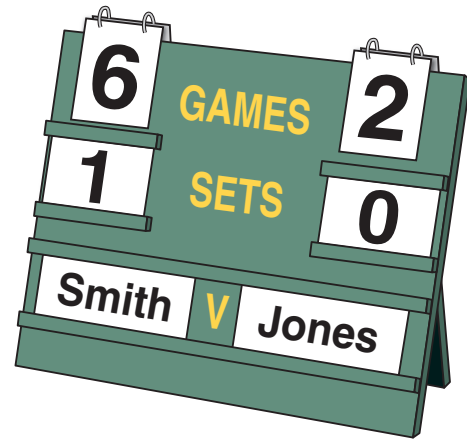


Figure 4.3

Topic A.4 Application of the rules/laws of sports in different situations

It is the officials' role to apply the rules/laws to the action that they are watching. For example, in football the referee will blow their whistle if they see foul play and the referee's assistant will raise their flag if they judge that a player has been offside. Some officials have many rules to apply. For example, umpires in cricket have to judge whether a player is out LBW, run out or their bat has made contact with the ball. In cricket and tennis, the players are able to appeal a decision that an official has made and these sports use technology to help them make accurate decisions.

Topic A.5 Sports

There is a range of sports that could be considered as part of this learning aim, for example, cricket, hockey, netball, rounders, volleyball, wheelchair basketball, golf, trampolining, table tennis, archery, judo, cross-country running, Boccia, fencing, orienteering, skiing, canoeing, sailing and mountain biking. Each sport has different rules, regulations and scoring systems, and the roles and responsibilities of the officials will vary from sport to sport.

Topic A.6 Roles of officials

Officials are the people or groups of people who ensure that the participants play to the rules and regulations of a sport. They may also be responsible for time-keeping, starting play and scoring.

Some of these officials are positioned on the field of play, such as football referees or cricket umpires; some are close to the play, such as tennis umpires or boxing judges; and some are further away from the action, such as officials in cycling or gymnastics.

Officials are also called umpires, referees or judges.

The roles of officials are the duties they have to perform in enforcing the rules of the sport. For example, in football a referee is in charge of the game and enforcing the rules; the referee's assistants and the fourth official are there to assist the referee in implementing the rules.

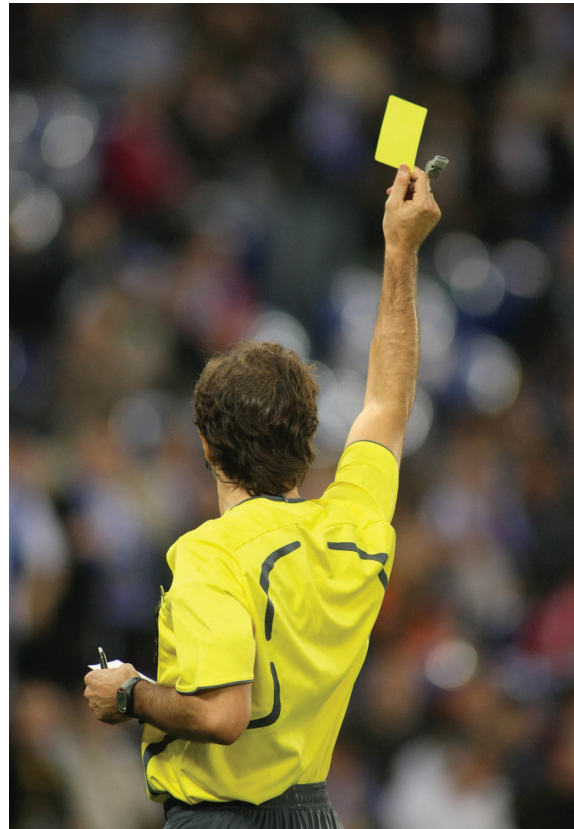


Figure 4.4

Topic A.7 Responsibilities of officials

The responsibilities of officials describe how they implement these rules, for example, punishing foul play, controlling players and ensuring they are wearing the correct equipment. The health and safety of all participants is the responsibility of officials.

Officials communicate in different ways: by speaking and listening to players, using their whistle to stop play and hand signals to convey their decisions. In some sporting situations, officials can rely on technology; for example, a tennis or cricket umpire can use 'Hawkeye' to review decisions.

Knowledge recap

1. Describe what is meant by the rules of a sport.
2. Identify two things a governing body does.
3. Identify three roles of umpires in tennis.

Assessment guidance for learning aim A

Scenario

You have been offered a job in your local sports centre to help run a summer holiday sports scheme for the children aged 11–13. The sports centre is able to offer the children the opportunity to play a variety of sports, but for many of them it will be the first time they have played some of the sports. The manager of the scheme has asked you to complete several activities that will help the children to participate in the sports.

2A.P1 Describe the rules, regulations and scoring systems of two selected sports

Assessor report: The command verb in the grading criterion is describe. In the answer we would expect to see a detailed account of the rules, regulations and scoring systems, to the extent that a person reading the answer would be able to play or officiate the game in line with the rules and regulations.

Learner answer

Rules

Sport 1 – Badminton

- To win a game, it's the first to 21 points.
- To win the match you need to win the best of three games.
- When you lose a point, the serve is changed to your opponent.
- If the score is 20–20, the game is won by the player who scores two consecutive points.
- If the game gets to 29–29, the player who gets to 30 points wins the game.
- The net is 5 feet high.
- The player who wins a game takes the first serve of the next match.
- If a player fails with their serve, it's a point to the opposition.

- You are not allowed to reach over the net to play the shuttlecock.
- Before a game you toss a coin to decide who serves first and which end you play from.
- If the shuttlecock lands on a line it counts as in.
- If a shuttlecock hits a player they lose the point.
- The first serve of a game is taken from the right-hand side of the court.
- The serve must be done from below waist height.

Sport 2 - Handball

The playing court

- Court measures 20 metres by 40 metres and there is a goal line at 6 metres.
- The goal is 2 metres by 3 metres.
- Players may jump into the goal area if they release the ball before landing.

The ball

- Handball is played with a 32-panel leather ball.
- For women the ball weighs 325–400 grams and for men 425–475 grams.

Number of players

- There are seven players on each team.
- Of these seven players, six are court players and one the goalkeeper.
- A maximum of 12 players may participate in the game.

Referees

- There are two referees.
- They are the court referee and the goal line referee.

Length of game

- For players aged over 18, the game consists of two, 30-minute halves with 10 minutes half-time.

Scoring

- A goal is scored when the whole of the ball has crossed the goal line on the inside of the goal.

Playing the ball

- A player can hold the ball for a maximum of 3 seconds.
- A player can take a maximum of three steps before dribbling the ball.

Defending

- A player may use their torso to obstruct an opponent with or without the ball.
- A player cannot use an outstretched arm to push, hold or trip an opponent.
- An attacking player cannot charge into a defensive player.

Assessor report: The candidate has completed the rules of badminton in a brief way. To gain PI they would need to cover the rules in more detail and give details of the dimensions of the playing area and the numbers of officials involved. It is also a good idea to bunch together the rules relating to different aspects of the game, such as the serve. The work on the scoring system, although strictly speaking they are rules, would be better left for the section on scoring systems. The work on handball is excellent. It covers all the main rules and puts them in logical groups and in a logical order. A similar approach should be adopted for the work on badminton.

Regulations

In badminton there are regulations regarding the equipment and the court. The racket should measure 2.5 feet long and be 8 inches wide. Players cannot attach anything to their racket. The shuttlecock will consist of 16 feathers attached to a cork base; it should weigh less than half an ounce. The net should be 4 feet off the ground and be of a white colour with a white strip across the top. The court needs to be kept dry and the court lines need to be marked in white paint.

In handball the team can name five substitutes and a substitute can be used at any time through the substitution area as long as the player being replaced has left the court. The court must be kept dry and have clearly marked lines on it. There must be benches for substitutes. The court must be checked before a game and all players must be checked to ensure they are not wearing jewellery and are wearing appropriate clothing and footwear.

Assessor report: These regulations have been covered well. It can be difficult to differentiate between rules and regulations, but the regulations regarding clothing and equipment are well covered. There

is an opportunity here to cover detail about the badminton court, its dimensions and the requirements for space around and above the court. There are some factual inaccuracies given here about the height of the net off the ground and its colour.

Scoring systems

Badminton

A match is three games long and consists of three games; the winner is the first to two games.

To win a game, you have to get to 21 points before your opponent, but you have to be at least two points clear to win.

You will win a point if:

- The shuttlecock hits the floor on your opponent's side.
- Your opponent hits the shuttlecock into the net.
- Your opponent hits the shuttlecock outside the lines of the court.
- The shuttlecock hits your opponent.

Handball

A goal is scored when the entire ball crosses the goal line inside the goal. A goal may be scored from a free throw, a throw in, throw off or a goal throw. The team who scores the most goals wins the match.

Assessor report: The information on scoring in handball is quite straightforward but more detail could be provided on badminton, such as what happens at 20–20 and how many points they play for.

Assessor report – overall

What is good about this assessment evidence?

The candidate has produced good descriptions of the rules, regulations and scoring systems of two sports.

What could be improved about this assessment evidence?

The organisation of the work could be improved so that the work is grouped under headings and subheadings. The learner also needs to make sure there are no factual inaccuracies in the information they provide for both sports.