2016 Suite

OCR
Oxford Cambridge and RSA

Cambridge **TECHNICALS LEVEL 2**

Cambridge TECHNICALS 2016

SPORT AND PHYSICAL ACTIVITY

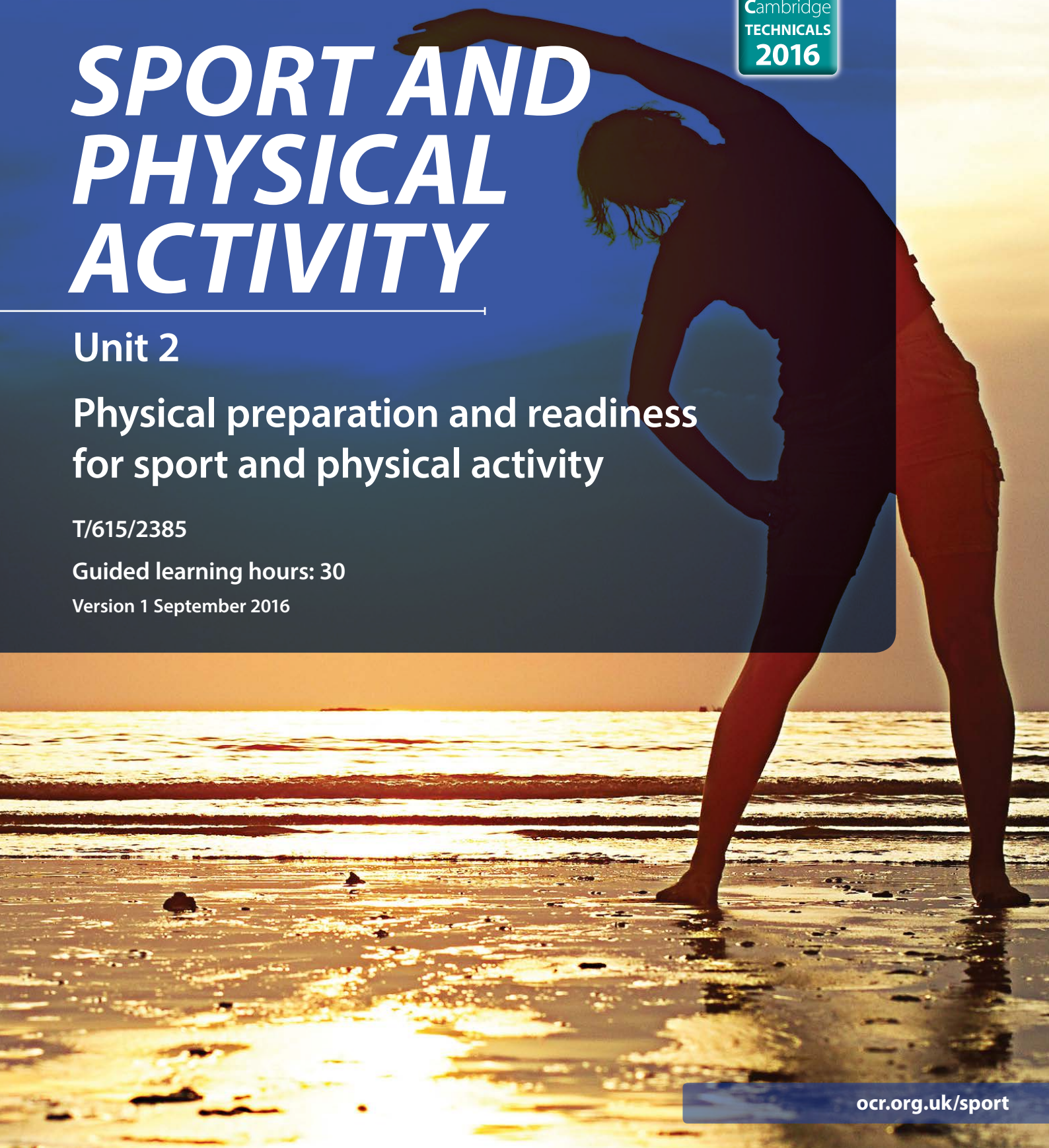
Unit 2

Physical preparation and readiness for sport and physical activity

T/615/2385

Guided learning hours: 30

Version 1 September 2016



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LEVEL 2

UNIT 2: Physical preparation and readiness for sport and physical activity

T/615/2385

Guided learning hours: **30**

Essential resources required for this unit: **None**

This unit is externally assessed by an OCR set and marked examination.

UNIT AIM

As well as knowing why it is important for people to be physically active and participate in sport and physical activity, it is also important to understand how to select appropriate sports or activities for people dependent on their individual circumstances and how to keep them safe whilst they are participating in order for them to experience, and benefit from, the short and long term effects.

This unit will teach you the short and long term effects of participation in sport and physical activity and how to maintain safety during participation through appropriate warm ups and cool downs and how to identify and treat injuries when they occur. During this unit you will also learn about the different types of sport and physical activity that are available and how a person's individual circumstances might influence the type of sport or activity that they can or want to participate in.

TEACHING CONTENT

The unit content describes what has to be taught to ensure that learners are able to access the highest grade.

Anything which follows an i.e. details what must be taught as part of that area of content.

Anything which follows an e.g. is illustrative.

Where teaching content contains i.e. and e.g. under specific areas of content, the following rules will be adhered to when we set questions for an exam:

- A direct question may be asked about unit content which follows an i.e.
- Where unit content is shown as am e.g. a direct question will not be asked about that example.

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
1. Understand the short term effects of sport and physical activity on body systems	1.1 Short term effects i.e. 1. musculoskeletal system, i.e. a. increase of synovial fluid in the joints increases range of movement b. muscle fibre tears mean muscle soreness and fatigue c. muscles stretch, improving flexibility and mobility d. tendons stretch, improving flexibility e. lactic acid builds in the working muscles resulting in muscle soreness and fatigue 2. cardiorespiratory system, i.e. a. increase in heart rate and cardiac output increases blood flow to the muscles, supplying them with oxygen and raising their temperature	Learners will need to be able to apply knowledge and understanding to practical scenarios and examples from the sport and physical activity sector.

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	b. blood pressure increases improving the flow of oxygen and nutrients to the working muscles c. vascular shunt mechanism, i.e. i. blood flow is directed away from inactive organs and muscles ii. blood flow is redirected to working muscles d. rate of breathing increases, increasing the uptake of oxygen into the body to supply working muscles via the bloodstream e. respiratory muscles work harder to increase the volume of oxygen coming into the lungs 3. aerobic and anaerobic exercise, i.e. a. aerobic exercise, i.e. i. utilises oxygen for energy ii. used during moderate intensity and long-duration activity b. anaerobic exercise, i.e. i. means 'without oxygen' ii. utilises glycogen stored in muscles for energy iii. used in high intensity, short-duration activity 4. short-term health benefits, i.e. a. improved mood through reduced muscular and mental tension b. skin look healthier due to increased blood flow to the surface	

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	c. blood pressure lowers after just a few weeks participation due to improved function of cardiac system d. sleep is improved to allow muscles time to repair e. metabolism is boosted to convert calories to energy which helps to control weight	
2. Understand the long term effects of sport and physical activity on body systems	2.1 Long term effects i.e. 1. musculoskeletal system, i.e. a. bones become stronger as they increase in size and density. this, in turn, reduces the risk of osteoporosis b. increase in synovial fluid into joints means a decrease in its viscosity over time, improving the range of movement at the joint and reduces the risk of osteoarthritis c. cartilage in joints grows thicker and strengthens the joint d. ligaments are able to bear more load as collagen fibres increase e. muscle hypertrophy increases the size and strength of muscles, allowing them to cope with additional stress f. muscles are able to produce more energy 2. cardiorespiratory system, i.e. a. an increase in strength and size of the cardiac muscle increases the volume of blood that can be pumped by the heart (to working muscles) b. the number of red blood cells in the blood	

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	increases, allowing more oxygen to be transported around the body c. an increased number of capillaries in the muscles allows more blood to reach working muscles d. the cardiac system becomes more efficient, lowering blood pressure and reducing the risk of cardiovascular disease e. the increased size and strength of the respiratory muscles increases respiratory volumes, allowing more oxygen to be diffused into the blood f. increased number of alveoli improves the efficiency of gaseous exchange 3. long term health benefits, i.e. a. improved balance and coordination (e.g. helps to prevent accidents and injuries through falls) b. improved flexibility, speed and mobility (e.g. supports independent living in older age, improves performance in sport and physical activity) c. improved core strength and maintenance of a healthy posture (e.g. can reduce back, neck and shoulder pain) d. prevents osteoporosis (e.g. less chance of breaking bones) e. prevents osteoarthritis (e.g. staying pain free in older age) f. sustain a healthy lifestyle into old age (e.g. to support a longer, more health and	

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	active life) g. able to sustain physical activity for longer periods of time (e.g. to continually improve the function of body systems) h. improved metabolic rate helps to control weight (e.g. preventing weight-related conditions such as type 2 diabetes)	
3. Understand the use of warm ups and cool downs	3.1 Warm ups, i.e. 1. pulse raising exercises (e.g. jogging) 2. mobility exercises (e.g. arm circles) 3. dynamic movements (e.g. shuttle-runs) 4. stretching (e.g. hamstring stretch) 5. skill rehearsal (e.g. practicing a badminton serve) 3.2 Cool downs, i.e. 1. pulse lowering (e.g. brisk walking) 2. stretching (e.g. tricep stretch) 3.3 Purpose of a warm up, i.e. 1. increase body temperature 2. increase heart rate 3. increase flexibility in muscles and joints 4. increase blood flow 5. increase speed of muscle contraction 3.4 Purpose of a cool down, i.e. 1. gradually lower heart rate (e.g. to prevent heart problems) 2. gradually lower body temperature 3. maintain rate of blood circulation/prevent rate of	

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	blood circulation from dropping too quickly (e.g. to prevent blood pooling that can lead to dizziness/faintness) 4. gradually reduce breathing rate 5. remove waste products i.e. a. lactic acid (to prevent stiffness/soreness in muscles) b. carbon dioxide	
4. Understand the needs of different participants in sport and physical activity	4.1 Participants in sport and physical activity, i.e. 1. age groups, i.e. a. young children (0-10 years old) b. children/adolescents (11-15 years old) c. young adults (16-24 years old) d. adults (25-50 years old) e. over 50 year olds and retired people 2. gender, i.e. a. male b. female 3. cultural groups (e.g. ethnicity, religious beliefs) 4. groups with specific health issues, i.e. a. physical health issues, i.e. i. disabilities (e.g. hearing, visual, paralysis) ii. injuries iii. illnesses/conditions (e.g. diabetes, asthma, heart conditions) b. mental health issues (e.g. depression, anxiety, stress, low self-esteem) 4.2 Needs of participants and how sport and physical activity can support these, i.e.	

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	1. enjoyment (e.g. fun environment, meeting new people) 2. promote healthy physical development (e.g. increased strength of muscles and bones, improves function of heart and lungs) 3. increase social circles (e.g. team sports help with meeting new people) 4. improve social skills (e.g. teamwork, communication) 5. improve work/life balance (e.g. encourages activity away from the workplace) 6. improve physical health, i.e. a. manage conditions b. control weight c. prevent illnesses d. injury rehabilitation 7. improve mental health (e.g. improves mood) 4.3 Suitable inclusive sports and physical activities for different participants, i.e. 1. sports, i.e. a. team sports (e.g. football, rugby, cricket) b. individual sports (e.g. badminton, golf) c. contact/non-contact sports (e.g. football/walking football, rugby/tag rugby, tennis, martial arts) d. outdoor and adventurous (e.g. rock climbing, pot holing) e. acrobatic sports (e.g. gymnastics) f. athletic sports (e.g. sprinting, hurdles, javelin) g. racquet sports	

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	h. disability sports i. endurance sports (e.g. marathon, triathlon) j. precision sports (e.g. archery, golf) k. summer/winter sports l. water-based sports m. physical activities, i.e. i. leisure and recreational (e.g. cycling, swimming, walking, running) ii. fitness/gym iii. dance iv. yoga / pilates 4.4 Selecting appropriate inclusive sports or activities, i.e. 1. dependent on, i.e. a. level of experience / ability / disability b. access c. cost d. time e. preference f. demands of the sport/activity g. seasonal considerations h. indoor or outdoor i. provision	Learners will need to be able to make connections between appropriateness of activities and type of participant and their needs from 4.1 and 4.2.
5. Understand sports injuries, causes and their treatment for rehabilitation	5.1 1. common sports injuries with examples, i.e. a. acute injuries, i.e. i. caused as a result of a sudden trauma to the body (e.g. hard rugby tackle, being hit by a ball) ii. result in immediate pain, and usually swelling with a loss of function	

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	iii. types, i.e. o fractures o concussion o soft tissue injuries (e.g. sprains and strains) o contusions, abrasions and blisters b. chronic injuries, i.e. i. also known as overuse injuries and are a result of continuous stress on an area (e.g. tendonitis, shin splints or tennis elbow) ii. these injuries tend to develop gradually over a period of time 2. other negative effects of sport and physical activity, i.e. a. energy stores are depleted, leading to tiredness/lethargy/fatigue b. fatigue can lead to poor/incorrect technique, increasing risk of injury c. can strain/cause injury if work too hard or for too long, or attempt more than body is ready for (e.g. lifting heavier weights than usual) d. young participants may have decreased flexibility, balance and coordination due to muscles growing slower than bones e. excessive exercise can lead to burn-out/increase the risk of injury 5.2 Causes i.e. 1. extrinsic factors, i.e.	

Learning outcomes The Learner will:	Teaching content Learners must be taught:	Exemplification
	a. type of activity (e.g. contact or non-contact, high impact or low impact) b. environmental factors (e.g. dangerous playing surface, severe weather conditions) c. equipment (e.g. incorrect use of training machines, being injured by a cricket ball) 2. intrinsic factors a. participant preparation (e.g. training, warm up and cool down, level of fitness) b. individual factors (e.g. gender, age, nutrition, sleep patterns) c. psychological factors (e.g. levels of aggression, motivation and anxiety) d. posture 5.3 Treatment of injuries to rehabilitate, i.e. 1. SALTAPS on field assessment, i.e. See, Ask, Look, Touch, Active, Passive, Strength 2. RICE, i.e. Rest, Ice, Compress, Elevate 3. referring for professional advice, i.e. a. when i.e. i. head injury or concussion ii. any acute injury b. how i.e. i. how to contact first aider ii. emergency contact details	

LEARNING OUTCOME (LO) WEIGHTINGS

Each learning outcome in this unit has been given a percentage weighting. This reflects the size and demand of the content you need to cover and its contribution to the overall understanding of this unit. See table below:

LO1	25%
LO2	25%
LO3	15%
LO4	25%
LO5	10%

ASSESSMENT GUIDANCE

All Learning Outcomes are assessed through an externally set and marked examination paper worth a maximum of 40 marks and 1 hour in duration. The examination paper will be made up of short and extended answer questions.

This unit will require learners to apply learning acquired in Unit 1. Knowledge and understanding from this unit will also be required in the assessment of units 3 - 13.

SYNOPTIC ASSESSMENT

It will be possible for learners to make connections between other units over and above the unit containing the key tasks for synoptic assessment, please see section 6 of the centre handbook for more detail.

MEANINGFUL EMPLOYER INVOLVEMENT - a requirement for Technical Certificate qualifications

These qualifications have been designed to be recognised as Technical certificates in performance tables in England. It is a requirement of these qualifications for centres to secure employer involvement through delivery and/or assessment of these qualifications for every learner.

The minimum amount of employer involvement must relate to at least one or more of the elements of the mandatory content. This unit is mandatory in all pathways.

Eligible activities and suggestions/ideas that may help you in securing meaningful employer involvement for this unit are given in the table below.

Please refer to the Qualification Handbook for further information including a list of activities that are not considered to meet this requirement.

Meaningful employer involvement – eligible activities	Suggestion/ideas for centres when delivering this unit
1. Learners undertake structured work-experience or work-placements that develop skills and knowledge relevant to the qualification.	Learners could undertake a work-placement alongside a sports coach or fitness instructor to witness warm ups and cool downs being carried out and to understand the short and long term effects of sport and physical activity.
2. Learners take one or more units delivered or co-delivered by an industry practitioner(s). This could take the form of master classes or guest lectures.	A physiotherapist or sports therapist could deliver a workshop or lesson on LOs 1, 2 and 5. A sports coach could deliver a workshop or lesson on LO3 and 4.

You can find further information on employer involvement in the delivery of qualifications in the following documents:

- Employer involvement in the delivery and assessment of vocational qualifications
- DfE work experience guidance

To find out more
ocr.org.uk/sport
or call our Customer Contact Centre on **02476 851509**

Alternatively, you can email us on **vocational.qualifications@ocr.org.uk**

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