OCR
Oxford Cambridge and RSA

Cambridge **TECHNICALS LEVEL 2**

Cambridge TECHNICALS 2016

SPORT AND PHYSICAL ACTIVITY

Pathway Delivery Guide – Assistant Fitness Instructor

Unit 1 Physical activity, health and wellbeing

Version 1

ocr.org.uk/sport

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INTRODUCTION

This Delivery Guide has been developed to provide practitioners with a variety of creative and practical ideas to support the delivery of this qualification. The Guide is a collection of lesson ideas with associated activities, which you may find helpful as you plan your lessons and covers all the units within this pathway.

OCR has collaborated with current practitioners to ensure that the ideas put forward in this Delivery Guide are practical, realistic and dynamic. The Guide is structured by unit and learning outcome so you can see how each activity helps you cover the requirements of this unit.

We've also included some English and maths activities. **These are designed to demonstrate the importance of English and maths skills within real life job roles; and to help those learners who may be re-sitting their English or maths GCSE.**

We appreciate that practitioners are knowledgeable in relation to what works for them and their learners. Therefore, the resources we have produced should not restrict or impact on practitioners' creativity to deliver excellent learning opportunities.

Whether you are an experienced practitioner or new to the sector, we hope you find something in this guide which will help you to deliver excellent learning opportunities.

If you have any feedback on this Delivery Guide or suggestions for other resources you would like OCR to develop, please email resources.feedback@ocr.org.uk.

To find out more about this qualification, go to: http://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-sport-and-physical-activity-level-2-2016-suite/

Please note

The timings for the suggested activities in this Delivery Guide **DO NOT** relate to the Guided Learning Hours (GLHs) for each unit.

Assessment guidance can be found within the Unit document available from www.ocr.org.uk.

The latest version of this Delivery Guide can be downloaded from the OCR website.

This Delivery Guide **MUST NOT** be used directly for assessment purposes. It is intended to support the teaching and learning of the unit specified.

This pathway includes the following units:

Unit no.	Unit title	GLH	How are they assessed?
Unit 1	Physical activity, health and wellbeing	60	Examined by OCR
Unit 2	Physical preparation and readiness for sport and physical activity	30	Examined by OCR
Unit 3	Inclusivity, equality and diversity in delivering sport and physical activity	30	Centre assessed, moderated by OCR
Unit 4	Leading sport and physical activity sessions	60	Centre assessed, moderated by OCR
Unit 5	Customer service in sport and physical activity	30	Centre assessed, moderated by OCR
Unit 6	Components and principles of fitness training for sport and physical activity	60	Centre assessed, moderated by OCR
Unit 9	Fitness induction and testing	30	Centre assessed, moderated by OCR
Unit 10	Using fitness equipment	30	Centre assessed, moderated by OCR
Unit 11	Assisting in the delivery of exercise and fitness sessions	30	Centre assessed, moderated by OCR

Delivery Guides for all the units listed above are available from: http://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-sport-and-physical-activity-level-2-2016-suite/

2016 Level 2 Cambridge Technicals Suite

- New suite for first teaching September 2017
- Externally assessed content
- Student focused internal assessment rules
- Eligible for Key Stage 5 performance points from 2019
- OCR visiting moderation providing centre feedback and support
- Designed to meet the DfE technical guidance

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UNIT 1 PHYSICAL ACTIVITY, HEALTH AND WELLBEING

UNIT AIM

Physical inactivity is of growing concern and is now one of the top ten causes of premature death globally. In order to stop the decline in activity, people need to know the benefits of participation in sport and physical activity for the body systems and physical health, and also for their mental wellbeing and overall quality of life. It is easier for people to understand the benefits if they are able to measure their progress and so knowledge of measurements of health and wellbeing can support in demonstrating the positive effects of participation. It is also important to know why and how levels of activity are measured, by whom and strategies that are in place to overcome barriers to participation.

By completing this unit, you will gain knowledge of the effects that participation in physical activity can have on the body systems and how this in turn can impact a person's physical and mental health. You will also gain knowledge of how health can be measured and the wider goings on in society in relation to sport and physical activity.

http://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-sport-and-physical-activity-level-2-2016-suite/

LO1	Know the effects and benefits of participation in sport and physical activity on the musculoskeletal system
LO2	Know the effects and benefits of participation in sport and physical activity on the cardio-respiratory system
LO3	Know measures of health and wellbeing
LO4	Know trends in participation in sport and physical activity

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KEY TERMS

Explanations of the key terms used within this unit, in the context of this unit	
Key term	**Explanation**
Blood Pressure	The force of blood around the cardiovascular system, there are two values. Systolic (where the heart contracts), and Diastolic (which represents the relaxation phase of the heart beat). Measured in mmHg.
Body Mass Index (BMI)	An approximate measure of whether a person is under or over weight, based on height and weight.
Cardiac Output	The amount of blood which is ejected by the heart per minute. Made up of heart rate (bpm) and stroke volume (ml).
Cardio-Pulmonary Disease (CPD)	A term used to describe a range of medical conditions which affect the heart and lungs.
Cardio-respiratory System	This is a combination of both the cardiovascular system (heart, blood vessels and blood), and also the respiratory system (lungs etc.) which work together to take in and transport oxygen around the body, as well as remove carbon dioxide from the body.
Coronary Heart Disease (CHD)	A condition where fatty substances build up in the cardiovascular system which can lead to a heart attack.
Musculoskeletal System	This is the combination and interaction of both the skeleton and the attached muscles.

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COMMON MISCONCEPTIONS

Some common misconceptions and guidance on how they could be overcome		
What is the misconception?	**How can this be overcome?**	**Resources which could help**
Learners may not fully grasp the combinations of each system	Where possible, the unit content should be taught in order. Therefore learners will gain an understanding of the skeletal system, muscular system, cardiovascular system and respiratory systems individually and as paired systems. It may be useful to produce materials, such as posters, wall displays etc. which details the required content for each system.	This YouTube video gives a good overview how all the systems work together in cycling: https://www.youtube.com/watch?v=9_CGdwnIH6Y
Learners may not fully understand the impact of CHD	It is important to note that CHD doesn't only cause heart attacks,. It is the fatty deposits around the arteries which can be the cause of other conditions, such atherosclerosis, arteriosclerosis, and angina. Learners could research each condition in small groups, and as a class, could produce a 'healthy heart' leaflet which could be displayed in a local sports/fitness centre.	This website provides a clear understanding of CHD: https://www.bhf.org.uk/heart-health/conditions/coronary-heart-disease
Learners may be confused by the BMI calculation	To help learners better understand BMI, measurements could be carried out practically and calculations made of themselves or their peers. This could be conducted as a mini-lab report, alongside body fat percentage measurements. Learners should use the correct units and should interpret BMI tables correctly. This information could then be presented as a graph.	This website gives a comprehensive overview of BMI, with a video which explains the process and some of the limitations: http://www.nhs.uk/Livewell/loseweight/Pages/BodyMassIndex.aspx

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SUGGESTED ACTIVITIES

LO1 Know the effects and benefits of participation in sport and physical activity on the musculoskeletal system			
Title of suggested activity	**Suggested activities**	**Suggested timings**	**Also related to**
Identifying the musculoskeletal system	Working in pairs, learners could be given a number of sticky labels. One learner would identify the bones of the skeleton and stick these on the correct areas on their partner, whilst the other learner could identify the major muscles which surround the skeleton and stick these on the correct areas on their partner. Learners could use textbooks or their own research to help them identify the correct location of bones and muscles. The BBC website contains revision activities and quizzes about the skeletal and muscular systems: http://www.bbc.co.uk/education/guides/zkpv4wx/revision (Skeletal System) http://www.bbc.co.uk/education/guides/z8n39j6/revision (Muscular System)	45 minutes	
Understanding muscle movements	As a group learners could set up a simple exercise based circuit session, e.g. press ups, bench dips, sit ups, plank, squats, lunges etc. Learners could then take part in this circuit. Once this is completed, learners could then complete a muscle movement table which aims to identify; which joints are being used during the exercise (could include which bones make up the joint); which muscles are being used; which muscle movement is being carried out etc. This website gives a good overview of the various components which help muscles move: http://www.bbc.co.uk/schools/gcsebitesize/science/triple_ocr_21c/further_biology/movement_and_exercise/revision/1/ **English extension activity** Having completed the circuit and muscle movement table, each Learner could use the website to find a fact about the positive effects of physical activity on the musculoskeletal system. Each learner could then explain clearly to the rest of the group how this fact supports the view that it has a positive effect.	1 hour 45 minutes	

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SUGGESTED ACTIVITIES

LO2 Know the effects and benefits of participation in sport and physical activity on the cardio-respiratory system			
Title of suggested activity	**Suggested activities**	**Suggested timings**	**Also related to**
Identifying the components of the cardiovascular system	Working individually, learners could create a simple schematic diagram of the cardiovascular system, this should start by labelling the four chambers of the heart. From here they could identify the blood vessels which carry blood into the heart, the blood vessels which carry blood away from the heart, and the location of the various valves. Once this is complete, learners could also use different colours to identify the flow of both oxygenated (red) and deoxygenated (blue) blood around the heart. This video provides detailed information on the heart and the flow of blood: https://www.youtube.com/watch?v=7XaftdE_h60	45 minutes	
Understanding the positive effects of sport and physical activity on the cardiorespiratory system	As a group, learners could complete a simple cardiovascular based exercise session; a simple shuttle run based session should be enough. The learners could identify various physiological measurements before and after this session, including (if possible); heart rate, peak flow, blood pressure etc. Once this is complete, learners could then compare results, or research results of trained athletes (see links below): https://www.verywell.com/resting-heart-rate-p2-3120109 http://www.healthline.com/health/peak-expiratory-flow-rate#NormalResults5 http://www.livestrong.com/article/524559-blood-pressure-range-for-athletes/ Learners could then discuss the reasons for differences in the results, i.e. the effect of long term training on the cardio-respiratory system. The tutor could then use these findings to discuss further adaptations.	1 hour	Unit 6, LO2, LO3
	Maths extension activity As small groups or in pairs, learners could measure heart rates and blood pressure before and after cardiovascular exercises and compare the results of various groups. The activity could include determining the information required, designing a method of collecting the information, recording the information and displaying and communicating the results. This may involve designing a table to best record the desired information, deciding on the optimum time to take the measurements, how to display the results (graph, chart etc.) to give a best comparison between sets of data. This data could then be analysed to give percentage differences, average comparisons and these results used to formulate conclusions.	1 hour	

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SUGGESTED ACTIVITIES

LO3 Know measures of health and wellbeing

Title of suggested activity	Suggested activities	Suggested timings	Also related to
Investigate BMI	Individually learners could measure the required information needed for BMI (see unit content). They could then use the provided calculation (weight kg÷height m2). Learners could then research their own BMI classification, using the website below: http://www.nhs.uk/tools/pages/healthyweightcalculator.aspx Learners could also research the BMI of elite athletes. The tutor could then form a discussion about the validity of the results, and the factors which could affect the BMI results.	30 minutes	
Investigate measures of health	This could be done alongside the practical circuit activity for the cardiorespiratory system in LO2, or could be conducted as a standalone lesson. In pairs, learners could complete a lab file for one of their peers, which investigates the other measures of health e.g. body fat percentage, resting heart rate, lung capacity, blood pressure etc. Learners could then research the normative values and present this information in the form of tables and graphs to show any differences. Norm values can be found using the following website: http://www.topendsports.com/testing/norms/	1 hour	

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SUGGESTED ACTIVITIES

LO4 Know trends in participation in sport and physical activity			
Title of suggested activity	**Suggested activities**	**Suggested timings**	**Also related to**
Identify the trends in sport and physical activity	In small groups, learners should be given a selected agency involved in sport/physical activity participation; these should be taken from the unit specification. In these small groups, the learners should research the current trends for various populations (see unit specification). When conducting the research, learners should discuss what data is being collected and how the data is collected. Learners could also identify the similarities and differences between trends in the different populations being investigated. The findings should be written on sticky labels, and could form the basis of a wall display which could explore the trends from different population groups. Learners could then create their own strategies for improving participation in a chosen sport. https://www.gov.uk/government/statistics/statistics-on-obesity-physical-activity-and-diet-england-2015 (UK Government report). https://www.sportengland.org/research/ (Sport England). https://www.youthsporttrust.org/national-pe-and-school-sport-survey (Youth Sport Trust).	1 hour	
	Maths extension activity As small groups or in pairs, learners could investigate the current headline that participation in sport is declining. A particular age range of social group could be chosen, historical data researched and this data compared with data collected from current comparative group. It could be, for example, hours timetabled for 8-10 year olds at school over the last 30 years, or the increase in extreme sports by 18-25 year olds. What effect are these figures having on achievement (Olympic medals or world ranking) or health? The findings could be presented by way of graphs, charts or by statistical analysis in a way to promote the benefits of increasing participation.	1 hour	

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LO4 Know trends in participation in sport and physical activity

Title of suggested activity	Suggested activities	Suggested timings	Also related to
Investigate barriers to participation	In pairs or small groups, learners could select a barrier from the unit content. In a limited time (e.g. 10 minutes), learners could identify: • Who is affected by that barrier? • How that barrier could affect that population group? • Identify possible solutions to that barrier. Upon completion of this task, learners should feedback to the group, who could discuss the advantages and disadvantages of the solutions. The BBC Bitesize website, contains some useful information surrounding the various barriers: http://www.bbc.co.uk/education/guides/z6vcwmn/revision/6	30 minutes	
	English extension activity In small groups, learners could select one solution to a barrier as identified in the Activity. They could then prepare and present to the rest of the groups an argument explaining the arguments in favour of their solution. This could include (i) a clear statement outlining the barrier (ii) clear explanation of their solution (iii) detailed explanation of evidence that shows why the solution is a good choice. The presentation to the whole group could include visual evidence.	1 hour	

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RELATED ACTIVITIES

The suggested activities in this delivery guide listed below have also been related to other units and learning outcomes (LOs) within this qualification. This could help with delivery planning and enable learners to cover multiple parts of units.

Unit 1	Title of suggested activity	Other units/LOs	
LO2	Understanding the positive effects of sport and physical activity on the cardiorespiratory system	Unit 6 Components and principles of fitness training for sport and physical activity	LO2 Be able to analyse the use of different components of fitness in a range of sports and physical activities
			LO3 Be able to identify training methods for components of fitness

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