UNIT 15: Physical fitness for public services (LEVEL 3)

Learning outcomes

By completing this unit candidates will develop knowledge, understanding and skills associated with the principles and methods of fitness training. They will investigate public service fitness requirements and combine the knowledge gained to plan a personal training programme.

Candidates will produce evidence to meet the unit assessment objectives in order to show that they understand:

- principles of fitness and their affect on performance
- fitness testing and the use of tests in the public services
- the principles of fitness training
- the different methods of fitness training
- how to design, undertake and evaluate a training programme.

Candidates will also demonstrate their practical skills by carrying out fitness tests and interpreting the results.

<table>
<thead>
<tr>
<th>Assessment objectives</th>
<th>Knowledge, understanding and skills</th>
</tr>
</thead>
</table>
| 1 Describe the components of fitness and explain their effect on performance | Health related fitness  
  - cardiovascular endurance  
  - muscular endurance  
  - speed  
  - strength (dynamic, explosive, static)  
  - flexibility  
  Skill related fitness  
  - balance  
  - co-ordination  
  - reaction time  
  - agility  
  - timing  
  Role in physical activity  
  - identification of elements required in different sports and activities  
  - effect on performance |
| 2 Investigate, explain and justify the use of fitness testing in a range of public services | Public services  
  - Armed Forces (Army, Navy, RAF and Royal Marines)  
  - Police  
  - Fire and Rescue Service  
  - Prison Service |

(continued overleaf)
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<tr>
<th>Assessment objectives</th>
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</table>
| 2 Cont. Investigate, explain and justify the use of fitness testing in a range of public services | Fitness testing  
- entry tests  
- content of tests  
- standards required  
- components of fitness being tested  
- relationship between tests and public service tasks  
- testing fitness of employees |
| 3 Investigate and undertake a range of fitness tests and analyse the results | Selection of appropriate tests  
Test that could be used include:  
- simulation of public service tests  
- Harvard step test  
- Cooper 12 minute run  
- multistage fitness test  
- sit ups  
- chins  
- press ups  
- 30 metre sprint  
- grip dynamometer  
- 1 rep max test  
- Sargent jump  
- standing broad jump  
- sit and reach  
- shoulder hyperextension  
- stork stand  
- alternate hand-wall throw  
- ruler drop test  
- Illinois agility run  
- body mass index  
- skin fold callipers  
- weight height ratio  
Health and safety  
- screening prior to testing (health/lifestyle questions, Physical Activity Readiness Questionnaire – PARQ)  
Testing protocol  
Factors affecting validity and reliability of results  
Analysis of results  
- use of normative data  
- use of public service standards |
| 4 Describe the principles of fitness training | Principles of training  
- specificity  
- overload (by means of frequency, intensity or duration)  
- progression  
- reversibility  
- recovery periods |
<table>
<thead>
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<th>Assessment objectives</th>
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</table>
| 5 Analyse through participation the different methods of fitness training | Methods of training include:  
Aerobic training:  
• steady state (continuous) interval training  
• fartlek training  
Anaerobic training:  
• interval training  
• sprint training  
Muscular strength, muscular endurance and power training:  
• resistance machines  
• free weights  
• reps and sets  
• plyometrics  
Circuit training:  
• designing a circuit (skills or fitness, number of stations, number of reps, time for each activity, rest time, number of circuits)  
Flexibility training:  
• static stretching  
• passive stretching  
• PNF  
• active stretching (ballistic stretching) |
| 6 Design, undertake and evaluate a personal fitness training programme | Health and Safety  
• warm up  
• cool down  
• introduction to equipment  
FITT  
• frequency, intensity, time, type  
Training Zone  
Planning a single session  
• warm up  
• fitness/skill phase  
• cool down  
Long term planning  
• periodisation  
• evaluation and reassessment of goals  
Evaluation  
• appropriateness of choice of activity  
• appropriateness of frequency of activity  
• appropriateness of intensity of activity  
• improvement of fitness level |

**Assessment**

This unit is centre assessed and externally moderated.

In order to achieve this unit candidates must produce a portfolio of evidence showing that they have met all of the assessment objectives.
Portfolios of work must be produced independently. They will need to be made available, together with witness statements and any other supporting documentation, to the OCR Visiting Moderator when required.

Centres must confirm to OCR that the evidence produced by candidates is authentic. An OCR Centre Authentication Form is provided in the Centre Handbook and includes a declaration for assessors to sign. It is a requirement of the QCA Common Criteria for all Qualifications that proof of authentication is received.

**Guidance on assessment and evidence requirements**

The nature of public service work and the entry requirements mean that for most services a certain measurable level of fitness is necessary. This unit aims to develop the candidates’ knowledge and understanding of the principles and methods of training and the application of these to designing training programmes. In addition, candidates will develop knowledge of the fitness requirements of a range of public services.

The assessment objectives for this unit should be met by focusing on the candidates’ own fitness, consequently tutors should underpin the theoretical sessions with a wide range of practical activities. These activities should include fitness testing sessions where candidates can practise administering correct test protocols and participation in a variety of training methods as outlined in Assessment Objectives 3 and 5.

Centres may wish to utilise the expertise of public service personnel to support learning with regard to recruitment entry tests, undertaking fitness tests and with supporting candidates as they plan appropriate training programmes.

Evidence may be presented in a number of forms including written notes, reports, witness observations, video evidence, the production of instructions or guides, spreadsheets and a personal training diary or log book, information leaflets and group or individual presentations.

**Centres are advised to screen all clients taking part in fitness testing activities. Centres must ensure appropriate supervision by qualified staff. OCR does not accept any liability for injury as a result of carrying out or taking part in physical performance testing.**

**Signposting to Key Skills**

- The unit contains opportunities for developing the Key Skill, and possibly for generating portfolio evidence, if teaching and learning is focused on that aim.

<table>
<thead>
<tr>
<th>Key Skill reference</th>
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<td>N3.2a</td>
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Mapping to National Occupational Standards

<table>
<thead>
<tr>
<th>Occupational Standards</th>
<th>Unit number</th>
<th>Title</th>
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<tbody>
<tr>
<td>Sport Recreation and Allied Occupations</td>
<td>D49</td>
<td>Plan, manage and evaluate a basic physical conditioning programme</td>
</tr>
<tr>
<td></td>
<td>B29</td>
<td>Manage and evaluate a programme to achieve goals</td>
</tr>
<tr>
<td></td>
<td>D47</td>
<td>Apply basic sports psychology to enhance performance</td>
</tr>
<tr>
<td>Emergency Fire Services Standards</td>
<td>CO2.1/FF2.1/WM4.1</td>
<td>Take responsibility for personal performance</td>
</tr>
</tbody>
</table>

Resources

This section provides suggestions of suitable resources. The list is neither prescriptive nor exhaustive, and candidates should be encouraged to gather information from a variety of sources. Some suggested resources are intended for Tutor use. The resources in this section were correct at the time of production.

Books


Davis, Bull, Roscoe & Roscoe *Physical Education and the Study of Sport.*

Wesson, Wiggins, Thompson & Hartigan *Sport and PE*  

Honeybourne et al *Advanced Physical Education and Sport*

Videos

Designing Fitness Programmes *Coachwise*

Websites

*Sports Coach.* URL: [http://www.brianmac.demon.co.uk](http://www.brianmac.demon.co.uk). An excellent site – browse through the site index for all aspects of fitness testing and training.

*ExRX.* URL: [http://www.exrx.net/Testing.html](http://www.exrx.net/Testing.html). Information about fitness testing. The relevant recruitment offices will be able to offer advice on their physical entry tests however there is some information available on the internet.

*Territorial Army.* URL: [http://www.getfitta.co.uk](http://www.getfitta.co.uk). Territorial Army website with fitness advice and training programme (currently being re-developed).

*London Fire Brigade.* URL: [http://www.london-fire.gov.uk/recruitment/measure_up/appraisal.asp](http://www.london-fire.gov.uk/recruitment/measure_up/appraisal.asp). Details of the physical test. Centre should check the websites of their local brigades for fitness test information.


*Police, Metropolitan Police Fitness Test.* URL: [http://www.policecouldyou.co.uk/default.asp?action=article&ID=26](http://www.policecouldyou.co.uk/default.asp?action=article&ID=26). Centres should check the websites of their local forces for fitness test information.

Royal Marine commandos. URL: http://www.royal-navy.mod.uk/static/pages/2667.html. Details of PRMC and how to prepare.

Hampshire Fire and Rescue Service. URL: http://www.hantsfire.gov.uk/jobs/tests/fitness.html. Includes information on a physical fitness training programme.
## Grading

<table>
<thead>
<tr>
<th>Assessment Objective</th>
<th>Pass</th>
<th>Merit</th>
<th>Distinction</th>
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<tbody>
<tr>
<td><strong>AO1</strong> Describe the components of fitness and explain their effect on performance</td>
<td>Candidates provide a <strong>basic</strong> description of fitness and the components of fitness, making an <strong>appropriate</strong> comment about their effect on performance.</td>
<td>Candidates provide a <strong>detailed</strong> description of fitness and the components of fitness, showing a <strong>good</strong> understanding of their effect on performance making reference to <strong>some</strong> examples.</td>
<td>Candidates provide a <strong>comprehensive</strong> description of fitness and the components of fitness, showing a <strong>critical</strong> understanding of their effect on performance making reference to <strong>relevant</strong> examples.</td>
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<tr>
<td><strong>AO2</strong> Investigate, explain and justify the use of fitness testing in a range of public services</td>
<td>Candidates demonstrate <strong>limited</strong> knowledge of physical fitness in-service and entry tests. They <strong>briefly</strong> explain the tests and the standard required making <strong>some basic</strong> links between the tests and the tasks undertaken in a range of public services.</td>
<td>Candidates demonstrate <strong>sound</strong> knowledge of physical fitness in-service and entry tests. They provide a <strong>clear</strong> explanation of the tests and the standard required making <strong>appropriate</strong> links between the tests and the tasks undertaken in a range of public services.</td>
<td>Candidates demonstrate <strong>comprehensive</strong> knowledge of physical fitness in-service and entry tests. They provide a <strong>detailed accurate</strong> explanation of the tests and the standard required making <strong>appropriate</strong> links between the tests and the tasks undertaken in a range of public services.</td>
</tr>
<tr>
<td><strong>AO3</strong> Investigate and undertake a range of fitness tests and analyse the results</td>
<td>Candidates conduct a <strong>variety</strong> of fitness tests and will, overall, adhere to the accepted protocols for the tests with supervision. Candidates provide a <strong>basic</strong> analysis of their own fitness results.</td>
<td>Candidates <strong>independently</strong> conduct a <strong>variety</strong> of fitness tests and adhere to the accepted protocols for the tests with supervision. Candidates provide a <strong>clear</strong> analysis of their own fitness results.</td>
<td>Candidates <strong>confidently</strong> and <strong>independently</strong> conduct a <strong>variety</strong> of fitness tests and adhere to the accepted protocols for the tests. Candidates provide a <strong>perceptive</strong> and <strong>detailed</strong> analysis of their own fitness results.</td>
</tr>
<tr>
<td><strong>AO4</strong> Describe the principles of fitness training</td>
<td>Candidates provide a <strong>basic</strong> description of the principles of fitness training.</td>
<td>Candidates provide a <strong>detailed</strong> description of the principles of fitness training.</td>
<td>Candidates provide a <strong>highly detailed</strong> description of the principles of fitness training.</td>
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<td>AO5</td>
<td>Candidates participate in a <strong>range</strong> of different methods of fitness training and provide a <strong>simple</strong> analysis of the benefits and drawbacks of each method.</td>
<td>Candidates participate in a <strong>range</strong> of different methods of fitness training and provide a <strong>clear</strong> analysis of the benefits and drawbacks of each method.</td>
<td>Candidates participate in a <strong>range</strong> of different methods of fitness training and provide a <strong>detailed</strong> analysis of the benefits and drawbacks of each method.</td>
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<tr>
<td>AO6</td>
<td>Candidates design a <strong>basic</strong> fitness training programme using knowledge and experience gained from participating in a variety of fitness training methods. Candidates will produce a <strong>limited</strong> and <strong>basic</strong> evaluation of the success of their personal fitness training programme.</td>
<td>Candidates design a <strong>detailed</strong> fitness training programme using knowledge and experience gained from participating in a variety of fitness training methods. Candidates will produce a <strong>realistic</strong> evaluation of the success of their personal fitness training programme.</td>
<td>Candidates design a <strong>comprehensive</strong> fitness training programme using knowledge and experience gained from participating in a variety of fitness training methods. Candidates will produce a <strong>critical</strong> and <strong>realistic</strong> evaluation of the success of their personal fitness training programme.</td>
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