



# **Pearson BTEC Level 2 Certificate in Fitness Instructing**

## **Specification**

BTEC specialist qualification

First teaching March 2012

Issue 2

## **Edexcel, BTEC and LCCI qualifications**

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This specification is Issue 2. Key changes are listed in the summary table on the next page. We will inform centres of any changes to this issue. The latest issue can be found on the Pearson website: [qualifications.pearson.com](http://qualifications.pearson.com)

This qualification was previously known as:

Edexcel BTEC Level 2 Certificate in Fitness Instructing (QCF)

The QN remains the same.

*References to third party material made in this specification are made in good faith. Pearson does not endorse, approve or accept responsibility for the content of materials, which may be subject to change, or any opinions expressed therein. (Material may include textbooks, journals, magazines and other publications and websites.)*

*All information in this specification is correct at time of publication.*

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## Summary of Pearson BTEC Level 2 Certificate in Fitness Instructing specification Issue 2 changes

Summary of changes made between previous Issue 1 and this current Issue 2	Page/section number
All references to QCF have been removed throughout the specification	Throughout
Definition of TQT added	Section 1
Definition of sizes of qualifications aligned to TQT	Section 1
TQT value added	Section 2
GLH range removed and replaced with lowest GLH value for the shortest route through the qualification	Section 2
QCF references removed from unit titles and unit levels in all units	Section 11
Guided learning definition updated	Section 11

Earlier issue(s) show(s) previous changes.

If you need further information on these changes or what they mean, contact us via our website at: [qualifications.pearson.com/en/support/contact-us.html](http://qualifications.pearson.com/en/support/contact-us.html).



# Contents

<b>1</b>	<b>Introducing BTEC Specialist qualifications</b>	<b>1</b>
<b>2</b>	<b>Qualification summary and key information</b>	<b>2</b>
	Qualification title and Qualification Number	3
	Objective of the qualification	3
	Apprenticeships	3
	Progression opportunities through Pearson qualifications	3
	Industry support and recognition	3
	Relationship with National Occupational Standards	3
<b>3</b>	<b>Centre resource requirements</b>	<b>4</b>
	General resource requirements	4
<b>4</b>	<b>Qualification structure</b>	<b>5</b>
	Pearson BTEC Level 2 Certificate in Fitness Instructing	5
<b>5</b>	<b>Assessment</b>	<b>6</b>
<b>6</b>	<b>Recognising prior learning and achievement</b>	<b>7</b>
	Recognition of Prior Learning	7
<b>7</b>	<b>Quality assurance of centres</b>	<b>8</b>
<b>8</b>	<b>Programme delivery</b>	<b>9</b>
<b>9</b>	<b>Access and recruitment</b>	<b>10</b>
<b>10</b>	<b>Access to qualifications for learners with disabilities or specific needs</b>	<b>11</b>
<b>11</b>	<b>Units</b>	<b>12</b>
	Unit format	12
	Unit title	12
	Unit reference number	12
	Level	12
	Credit value	12
	Guided learning hours	12
	Unit aim	12
	Essential resources	12
	Learning outcomes	13
	Assessment criteria	13

Unit amplification	13
Information for tutors	13
Unit 1: Health, Safety and Welfare in a Fitness Environment	15
Unit 2: Principles of Exercise, Fitness and Health	24
Unit 3: Know How to Support Clients who Take Part in Exercise and Physical Activity	38
Unit 4: Anatomy and Physiology for Exercise	45
Unit 5: Planning Gym-based Exercise	59
Unit 6: Instructing Gym-based exercise	69
Unit 7: Planning Group Exercise to Music Sessions	82
Unit 8: Instructing Group Exercise to Music	92
Unit 9: Planning Water-Based Exercise	106
Unit 10: Instructing Water-based Exercise	118
Unit 11: Planning Health — related Exercise and Physical Activity for Children	135
Unit 12: Instructing Health Related Exercise and Physical Activity to Children	145
<b>12 Further information and useful publications</b>	<b>161</b>
<b>13 Professional development and training</b>	<b>163</b>
<b>Annexe A</b>	<b>165</b>
Progression opportunities	165
<b>Annexe B</b>	<b>168</b>
Mapping with National Occupational Standards	168
<b>Annexe C</b>	<b>170</b>
Mapping to Level 1 Functional Skills	170

## Purpose of this specification

This specification sets out:

- the qualification's objective
- any other qualification which a learner must have completed before taking the qualification
- any prior knowledge, skills or understanding which the learner is required to have before taking the qualification
- units which a learner must have completed before the qualification will be awarded and any optional routes
- any other requirements which a learner must have satisfied before the learner will be assessed or before the qualification will be awarded
- the knowledge, skills and understanding which will be assessed as part of the qualification (giving a clear indication of their coverage and depth)
- the method of any assessment and any associated requirements relating to it
- the criteria against which learners' level of attainment will be measured (such as assessment criteria)
- any specimen materials
- any specified levels of attainment.





# 1 Introducing BTEC Specialist qualifications

BTEC Specialist qualifications are work-related qualifications available from Entry to Level 3 in a range of sectors. They give learners the knowledge, understanding and skills they need to prepare for employment in a specific occupational area. The qualifications also provide career development opportunities for those already in work. The qualifications may be offered as full-time or part-time courses in schools or colleges. Training centres and employers may also offer these qualifications.

## Sizes of Specialist qualifications

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For all regulated qualifications, we specify a total number of hours that learners are expected to undertake in order to complete and show achievement for the qualification – this is the Total Qualification Time (TQT). The TQT value indicates the size of a qualification.

Within the TQT, we identify the number of Guided Learning Hours (GLH) that a centre delivering the qualification needs to provide. Guided learning means activities that directly or immediately involve tutors and assessors in teaching, supervising, and invigilating learners, for example lectures, tutorials, online instruction and supervised study.

As well as guided learning, there may be other required learning that is directed by tutors or assessors. This includes, for example, private study, preparation for assessment and undertaking assessment when not under supervision, such as preparatory reading, revision and independent research.

As well as TQT and GLH, qualifications can also have a credit value – equal to one tenth of TQT, rounded to the nearest whole number.

TQT and credit values are assigned after consultation with users of the qualifications.

BTEC Specialist qualifications are available in the following sizes:

- Award – a qualification with a TQT value of 120 or less (equivalent to a range of 1–12 credits)
- Certificate – a qualification with a TQT value in the range of 121–369 (equivalent to a range of 13–36 credits)
- Diploma – a qualification with a TQT value of 370 or more (equivalent to 37 credits and above).

## 2 Qualification summary and key information

Qualification title	Pearson BTEC Level 2 Certificate in Fitness Instructing
Qualification Number (QN)	600/4355/6
Accreditation start date	01/03/2012
Approved age ranges	16-18 19+
Credit value	23
Assessment	Centre-devised assessment (internal assessment)
Total Qualification Time (TQT)	230
Guided learning hours	157
Grading information	The qualification and units are at pass grade.
Entry requirements	No prior knowledge, understanding, skills or qualifications are required before learners register for this qualification. However, centres must follow the Pearson Access and Recruitment policy (see <i>section 9, Access and Recruitment</i> ).

## Qualification title and Qualification Number

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Centres will need to use the Qualification Number (QN) when they seek public funding for their learners. The qualification title, unit titles and QN are given on each learner's final certificate. You should tell your learners this when your centre recruits them and registers them with us. There is more information about certification in our *UK Information Manual*, available on our website, [qualifications.pearson.com](http://qualifications.pearson.com)

## Objective of the qualification

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The Pearson BTEC Level 2 Certificate in Fitness Instructing is for learners who work in, or want to work in the health and fitness industry.

It gives learners the opportunity to:

- develop knowledge and skills related to health and fitness
- achieve a nationally-recognised level 2 qualification
- develop their own personal growth and engagement in learning

## Apprenticeships

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The Sector Skills Council (SSC), SkillsActive approve the Pearson BTEC Level 2 Certificate in Fitness Instructing as a knowledge component for the Intermediate Apprenticeship in Instructing Exercise and Fitness.

## Progression opportunities through Pearson qualifications

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Learners who have achieved the Level 2 Certificate in Fitness Instructing can progress to the Level 3 Certificate in Personal Training. There are also progression opportunities within the health and fitness industry at both intermediate and advanced level.

## Industry support and recognition

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SkillsActive, the SSC for Sport and Recreation, supports this qualification.

## Relationship with National Occupational Standards

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This qualification relates to the National Occupational Standards in Instructing Exercise and Fitness. The mapping document in *Annexe B* shows the links between the units within this qualification and the National Occupational Standards.

## 3 Centre resource requirements

As part of the approval process, centres must make sure that the resources requirements below are in place before offering the qualification.

### General resource requirements

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- Centres must have appropriate physical resources (for example, equipment, IT, learning materials, teaching rooms) to support the delivery and assessment of the qualification.
- Staff involved in the assessment process must have relevant expertise and occupational experience.
- There must be systems in place to make sure continuing professional development for staff delivering the qualification.
- Centres must have appropriate health and safety policies in place relating to the use of equipment by learners.
- Centres must deliver the qualifications in accordance with current equality legislation.

## 4 Qualification structure

### Pearson BTEC Level 2 Certificate in Fitness Instructing

The learner will need to meet the requirements outlined in the table below before Pearson can award the qualification.

Minimum number of credits that must be achieved	23
Minimum number of credits that must be achieved at level 2 or above	23
Number of mandatory units that must be achieved	4
Number of optional units that must be achieved*	2

\* Learners must achieve **all units** from a chosen pathway

Unit	URN	Mandatory units	Level	Credit	GLH
1	T/600/9016	Health, safety and welfare in a fitness environment	2	2	16
2	A/600/9017	Principles of exercise, fitness and health	2	4	28
3	M/600/9015	Know how to support clients who take part in exercise and physical activity	2	2	13
4	H/600/9013	Anatomy and physiology for exercise	2	6	41
<b>Optional Pathway P1 – Gym-Based Exercise</b>					
5	F/600/9018	Planning gym-based exercise	2	4	23
6	A/600/9020	Instructing gym-based exercise	2	6	37
<b>Optional Pathway P2 – Exercise to Music</b>					
7	F/600/9021	Planning group exercise to music sessions	2	4	24
8	J/600/9022	Instructing group exercise to music	2	6	37
<b>Optional Pathway P3 – Water-Based Exercise</b>					
9	L/600/9023	Planning water-based exercise	2	5	26
10	R/600/9024	Instructing water-based exercise	2	6	38
<b>Optional Pathway P4 – Exercise and Physical Activity for Children</b>					
11	A/600/9048	Planning health-related exercise and physical activity for children	2	3	23
12	T/600/9050	Instructing health-related exercise and physical activity to children	2	6	36

# 5 Assessment

## Assessment method

All the units in this qualification are assessed through centre-devised assessment.

### Centre-devised assessment (internal assessment)

Each unit has specified learning outcomes and assessment criteria. To pass an internally assessed unit, learners must meet all the assessment criteria. Centres may find it helpful if learners index and reference their evidence to the relevant learning outcomes and assessment criteria.

Centres need to write assignment briefs for the learners to show what evidence is required. Assignment briefs should indicate clearly, which assessment criteria are being targeted.

Assignment briefs and evidence produced by learners must also meet any additional requirements in the *Information for tutors* section of the unit.

Unless otherwise indicated within *Information for tutors*, the centre can decide what form assessment evidence will take (eg performance observation, presentations, projects, tests, extended writing) as long as the methods chosen allow learners to produce valid, sufficient and reliable evidence of meeting the assessment criteria.

Centres are encouraged to provide learners with realistic scenarios and maximise the use of practical activities in delivery and assessment.

Opportunities to link the delivery and assessment of units with other units should also be encouraged to avoid over assessment.

Further guidance about internal assessment is on the Pearson website. See *Section 12* for further details.

## 6 Recognising prior learning and achievement

### Recognition of Prior Learning

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Recognition of Prior Learning (RPL) is a method of assessment (leading to the award of credit) that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and so do not need to develop through a course of learning.

Pearson encourages centres to recognise learners' previous achievements and experiences in and outside the workplace, as well as in the classroom. RPL provides a route for the recognition of the achievements resulting from continuous learning.

RPL enables recognition of achievement from a range of activities using any valid assessment methodology. If the assessment requirements of a given unit or qualification have been met, the use of RPL is acceptable for accrediting a unit, units or a whole qualification. Evidence of learning must be sufficient, reliable and valid.

Further guidance is available in our policy document *Recognition of Prior Learning Policy and Process*, available on our website, [qualifications.pearson.com](http://qualifications.pearson.com)

## 7 Quality assurance of centres

Quality assurance is at the heart of vocational qualifications. The centre assesses BTEC qualifications. The centre will use quality assurance to make sure that their managers, internal verifiers and assessors are standardised and supported. Pearson use quality assurance to check that all centres are working to national standards. It gives us the opportunity to identify and provide support, if needed, to safeguard certification. It also allows us to recognise and support good practice.

For the qualification in this specification, the Pearson quality assurance model will follow one of the processes listed below.

- 1 Delivery of the qualification as part of a BTEC apprenticeship (single click registration)
  - an annual visit by a Standards Verifier to review centre-wide quality assurance systems and sampling of internal verification and assessor decisions.
- 2 Delivery of the qualification outside the apprenticeship
  - an annual visit to the centre by a Centre Quality Reviewer to review centre-wide quality assurance systems.
  - Lead Internal Verifier accreditation. This involves online training and standardisation of Lead Internal Verifiers using our OSCA platform, accessed via Edexcel Online. Please note that not all qualifications will include Lead Internal Verifier accreditation. Where this is the case, we will annually allocate a Standards Verifier to conduct postal sampling of internal verification and assessor decisions for the Principal Subject Area.

For further details, please go to the UK BTEC Quality Assurance Handbook on our website [qualification.pearson.com](http://qualification.pearson.com).



## 8 Programme delivery

Centres are free to offer the qualifications using any mode of delivery (for example full time, part time, evening only, distance learning) that meets their learners' needs. Whichever mode of delivery is used, centres must make sure that learners have access to the resources identified in the specification and to the subject specialists delivering the units.

Those planning the programme should aim to enhance the vocational nature of the qualification by:

- liaising with employers to make sure a course is relevant to learners' specific needs
- accessing and using non-confidential data and documents from learners' workplaces
- developing up-to-date and relevant teaching materials that make use of scenarios that are relevant to the sector
- giving learners the opportunity to apply their learning in practical activities
- including sponsoring employers in the delivery of the programme and, where appropriate, in the assessment
- making full use of the variety of experience of work and life that learners bring to the programme.

Centres must make sure that current legislation is taught when it is part of a unit.

## 9 Access and recruitment

Pearson's policy regarding access to our qualifications is that:

- they should be available to everyone who is capable of reaching the required standards
- they should be free from any barriers that restrict access and progression
- there should be equal opportunities for all those wishing to access the qualifications.

Centres are required to recruit learners to BTEC specialist qualifications with integrity.

Applicants will need relevant information and advice about the qualification to make sure it meets their needs.

Centres should review the applicant's prior qualifications and/or experience, considering whether this profile shows that they have the potential to achieve the qualification.

For learners with disabilities and specific needs, this review will need to take account of the support available to the learner during teaching and assessment of the qualification. The review must take account of the information and guidance in *Section 10, Access to qualifications for learners with disabilities or specific needs*.

## 10 Access to qualifications for learners with disabilities or specific needs

Equality and fairness are central to our work. Pearson's Equality Policy requires that all learners should have equal opportunity to access our qualifications and assessments and that our qualifications are awarded in a way that is fair to every learner.

We are committed to making sure that:

- learners with a protected characteristic (as defined by the Equality Act 2010) are not, when they are undertaking one of our qualifications, disadvantaged in comparison to learners who do not share that characteristic
- all learners achieve the recognition they deserve from undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers.

Learners taking a qualification may be assessed in British sign language or Irish sign language where it is permitted for the purpose of reasonable adjustments.

Details on how to make adjustments for learners with protected characteristics are in the policy document Reasonable Adjustment and Special Considerations for BTEC and Pearson NVQ Qualifications, which are on our website: [qualification.pearson.com](http://qualification.pearson.com)

# 11 Units

## Unit format

Units have the following sections.

## Unit title

This is the formal title of the unit that will appear on the learner's certificate.

## Unit reference number

Each unit is assigned a unit reference number that appears with the unit title on the Register of Regulated Qualifications.

## Level

All units and qualifications have a level assigned to them. The level assigned is informed by the level descriptors defined by Ofqual, the qualifications regulator.

## Credit value

When a learner achieves a unit, they gain the specified number of credits.

## Guided learning hours

Guided Learning Hours (GLH) is the number of hours that a centre delivering the qualification needs to provide. Guided learning means activities that directly or immediately involve tutors and assessors in teaching, supervising, and invigilating learners, for example lectures, tutorials, online instruction and supervised study.

## Unit aim

This gives a summary of what the unit aims to do.

## Essential resources

This section lists any specialist resources that are needed to deliver the unit. The centre will be asked to make sure that these resources are in place when it seeks approval from Pearson to offer the qualification.

## Learning outcomes

The learning outcomes of a unit set out what a learner knows, understands or is able to do as the result of a process of learning.

## Assessment criteria

The assessment criteria specify the standard required by the learner to achieve the learning outcome.

## Unit amplification

This section gives further clarification on what a learner needs to know to achieve a learning outcome. Information in brackets gives exemplification for specific areas of knowledge.

## Information for tutors

This section gives tutors information on delivery and assessment. It usually contains the following subsections.

- *Delivery* – explains the content's relationship to the learning outcomes and offers guidance on possible approaches to delivery.
- *Assessment* – gives information about the evidence that learners must produce, together with any additional guidance if appropriate. This section should be read in conjunction with the assessment criteria.
- *Indicative resource material* – lists resource materials that can be used to support the teaching of the unit, for example books, journals and websites.



# Unit 1: Health, Safety and Welfare in a Fitness Environment

**Unit reference number:** T/600/9016

**Level:** 2

**Credit value:** 2

**Guided learning hours:** 16

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## Unit aim

The aim of this unit is to develop learner knowledge and understanding of the requirements for health, safety and welfare in a fitness environment. The learner will understand how to assess and control any hazards and risks that compromise the health, safety and welfare of staff and customers. The unit also aims to develop learner knowledge and understanding of safeguarding children and vulnerable adults.

Learners will explore the organisational procedures, legislation and regulations in place to ensure a healthy, safe and secure work environment for employees, customers and visitors.

Learners will have the opportunity to investigate the main hazards, how to risk assess these hazards, how to control the associated risks and the security procedures that may be in place within fitness environments.

Finally, learners will explore the associated organisational procedures and policies, and the statutory agencies responsible, for safeguarding children and vulnerable adults.

## Essential resources

For this unit, centres need to give learners access to:

- computers, the internet and library facilities to enable them to carry out research, for example on current legislation and regulations
- information on key factors that influence health and safety, specifically in the fitness sector. This information can be obtained from the Health and Safety Executive, governing bodies, local authorities and local education authorities.

It would also be beneficial for learners to see examples of the types of tools, equipment and materials needed to deal with the hazards found in a fitness environment.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand emergency procedures in a fitness environment	1.1	Identify the types of emergencies that may occur in a fitness environment	Depending on the type of workplace Types eg fire, chemical leaks, bomb scare, power cut, structural failure, medical emergency, accidents, threatening behaviour, missing persons
		1.2	Describe the roles that different staff and external services play during an emergency	Internal staff eg contacting and advising emergency services, informing colleagues when emergency services arrive, responding on site as situation occurs, responding within limits of own competence and authority, seeking help and advice as appropriate Specific roles of external services eg paramedics, police, fire service
		1.3	Explain the importance of following emergency procedures calmly and correctly	Importance eg maintain safety of other staff, customers and visitors, contact relevant emergency services, resolve emergency situation safely and quickly
		1.4	Describe how to maintain the safety of people involved in typical emergencies, including children, older people and disabled people	Take appropriate actions eg stop the activity, give clear and correct instructions, evacuate the area and move people to a safe area Ensure evacuation route accessible by all eg wheelchair users Contact relevant people eg parents, emergency services



Learning outcomes		Assessment criteria		Unit amplification
2	Understand health and safety requirements in a fitness environment	2.1	Outline why health and safety is important in a fitness environment	<p>Importance eg ensure staff work in a safe environment, ensure safety of areas used by customers and visitors, ensure equipment is safe to use, minimise risk of injury and accidents to staff, customers and visitors</p> <p>Compliance with legal requirements eg Health and Safety Executive guidelines, expected industry standards</p>
		2.2	Identify the legal and regulatory requirements for health and safety relevant to working in a fitness environment	<p>Legislation and regulations eg Health and Safety at Work Act, Control of Substances Hazardous to Health (COSHH) Regulations, Manual Handling Operations Regulations, Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations (RIDDOR), Management of Health and Safety at Work Act (Amendment) Regulations</p> <p>Regulatory bodies eg Health and Safety Executive, Register of Exercise Professionals, local authorities, authorities appropriate to specific activities or specific types of activities</p>
		2.3	Describe Duty of Care and professional role boundaries in relation to special population groups	<p>Special populations – 14-16 year olds, older people (50+), antenatal and postnatal women</p> <p>Duty of care – legal requirement that individuals adhere to a reasonable standard of care when carrying out activities that could harm self or others</p> <p>Professional boundaries relating to lack of appropriate qualifications eg cannot instruct exercise sessions for special populations, cannot advertise as a special populations instructor, cannot instruct special population clients 1:1 or in groups on a regular or progressive basis, cannot plan progressive long-term exercise programmes for special populations, clients to be made aware of any role boundary issues prior to participation</p>

Learning outcomes		Assessment criteria		Unit amplification
		2.4	Identify the typical roles of individuals responsible for health and safety in a fitness organisation	<p>Specific roles eg qualified first aiders, Health and Safety Executive inspectors, internal health and safety officers, local council health and safety advisers, facility managers, fitness instructors</p> <p>Responsibilities eg carrying out and reviewing risk assessments, monitoring health and safety, ensuring appropriate safety checks are carried out on facilities and equipment , maintaining safety during exercise sessions , reporting any incidents promptly and in line with organisational procedures</p>
		2.5	Describe the types of security procedures that may apply in a fitness environment	<p>Procedures eg restricting access to certain areas, ensuring all visitors sign in and out, use of CCTV, procedures for reporting incidents to the appropriate person</p> <p>Use of secure storage areas eg personal belongings, cleaning products</p>
		2.6	Describe the key health and safety documents that are relevant in a fitness environment	For example organisational policy and procedures for health and safety, risk assessments, records of external inspections, maintenance schedules
3	Understand how to control risks in a fitness environment	3.1	<p>Identify possible hazards in a fitness environment, relating to:</p> <ul style="list-style-type: none"> <li>□ facilities</li> <li>□ equipment</li> <li>□ working practices, including lifting and handling of equipment</li> <li>□ client behaviour</li> <li>□ security</li> <li>□ hygiene</li> </ul>	<p>Hazards relating to facilities eg slippery floors, trailing cables, inadequate first aid facilities</p> <p>Hazards relating to equipment eg lack of regular testing, unclean and badly maintained equipment, equipment being left unattended</p> <p>Hazards relating to working practices eg lack of or poor training, no control of hazardous waste, untidy work area, inappropriate/unsafe lifting and handling of equipment, inappropriate exercise type or intensity</p> <p>Hazards relating to client behaviour eg poor attitude, unsafe behaviour, disregard for health and safety requirements and safety of others, aggressive behaviour</p> <p>Hazards relating to security eg open gates, doors or other barriers, unauthorised use of equipment, suspicious packages or persons,</p>

Learning outcomes		Assessment criteria		Unit amplification
				vandalism to premises or equipment Hazards relating to hygiene eg risk of infection, cross contamination
		3.2	Describe how to risk assess the types of possible hazards in a fitness environment	Identify items/area to be assessed eg equipment operation, public area Carry out risk assessment eg identify hazards, identify those at risk, assess chance of hazard causing harm, grade risks, record findings
		3.3	Describe how to control risks associated with hazards in a fitness environment	Take action to reduce the risk of a hazard actually causing harm eg following correct procedures, putting up warning signs when cleaning, removing an unsafe piece of equipment from use, do not carry out an activity or exercise session, provide appropriate safety equipment, provide appropriate supervision for participants, seek advice from relevant colleagues
		3.4	Identify the appropriate person/position to contact within a fitness organisation when hazards and risks cannot be controlled personally	Internal eg health and safety officer, supervisor, manager, qualified first aider, relevant colleagues External eg local authority health and safety advisers, Health and Safety Executive officers
4	Understand how to safeguard children and vulnerable adults	4.1	Describe what is meant by safeguarding the welfare of children and vulnerable adults	<ul style="list-style-type: none"> <li>□ Taking reasonable measures to ensure the risk of harm to the welfare of children and vulnerable adults is minimised,</li> <li>□ Taking all appropriate actions to address concerns about children and vulnerable adults</li> </ul>
		4.2	Describe the responsibilities and limitations of a fitness instructor in regard to safeguarding children and vulnerable adults	<ul style="list-style-type: none"> <li>□ Responsibilities eg duty of care, report suspected or disclosed abuse to the appropriate person within the organisation</li> <li>□ Limitations eg referral of suspected or disclosed abuse only</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		4.3	Identify the types of abuse which an instructor may encounter: physical, emotional, neglect, bullying and sexual	<ul style="list-style-type: none"> <li>□ Physical eg hitting, kicking, biting, forced participation</li> <li>□ Emotional eg negative criticism, use of sarcasm, deliberate isolation</li> <li>□ Neglect eg no regard for safety</li> <li>□ Bullying eg calling names, deliberate humiliation, physical threats</li> <li>□ Sexual eg inappropriate sexual behaviour, exposure to inappropriate images</li> </ul>
		4.4	Identify possible signs of abuse: physical, emotional, neglect, bullying and sexual	<ul style="list-style-type: none"> <li>□ Physical eg bruising, unexplained injuries, fractures, burns, scalds, refusal to explain injuries, avoidance of physical contact</li> <li>□ Emotional eg passive or compliant behaviour, withdrawn, aggressive behaviour, low self-esteem</li> <li>□ Neglect eg poor hygiene, dirty clothes, hunger reluctance to go home</li> <li>□ Bullying eg unexplained injuries, low self-confidence and esteem, withdrawn, distress, poor appetite</li> <li>□ Sexual eg displays sexual behaviour</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		4.5	Describe a fitness organisation's policies and procedures in relation to safeguarding children and vulnerable adults, including typical reporting procedures	<ul style="list-style-type: none"> <li>□ Clarification of roles and responsibilities eg lines of communication, systems for recording information</li> <li>□ Provision of staff training eg ensure staff have adequate induction, training and up-to-date information, train and advise staff how to identify and manage risk</li> <li>□ Reflect relevant legislation and regulations eg Safeguarding Vulnerable Groups Act, Mental Health Act, Mental Capacity Act, Equality Act 2010, Race Relations Act, Human Rights Act, Data Protection Act, NSPCC standards for safeguarding and protecting</li> <li>□ Specific policies and procedures eg activity areas designed to be transparent, ensure staffing levels are appropriate, procedures for reporting any concerns or issues, guidance on confidentiality and information sharing, guidance on appropriate/expected standards of behaviour, processes for dealing with behaviour that is unacceptable and/or discriminatory</li> </ul>
		4.6	Describe the procedures to follow to protect oneself from accusations of abuse	<ul style="list-style-type: none"> <li>□ Relevant organisational policies and procedures</li> </ul>
		4.7	Identify the statutory agencies responsible for safeguarding children and vulnerable adults	<ul style="list-style-type: none"> <li>□ Relevant statutory agencies eg Local Safeguarding Children Boards, Local Adult Safeguarding Boards, the Independent Safeguarding Authority (ISA), social services, police, NSPCC</li> </ul>
		4.8	Explain when it may be necessary to contact statutory agencies	<ul style="list-style-type: none"> <li>□ In cases when abuse is suspected or has been disclosed</li> </ul>
		4.9	Describe how to maintain the confidentiality of information relating to possible abuse	Follow organisational policies and procedures regarding confidentiality and information sharing eg referral to the appropriate member of staff, discuss issues in an appropriate area

## Information for tutors

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### Delivery

This unit should be delivered in a way that develops knowledge and understanding of health, safety and welfare within a fitness environment. Learners need to know and understand:

- the requirements for health, safety and security within a fitness environment, including organisational procedures and legal and regulatory requirements
- the type of emergencies that can occur within fitness environments and how to respond to them correctly
- hazards and risks within a fitness environment and how to deal with them
- safeguarding children and vulnerable adults, including organisational policies and procedures and the associated statutory agencies.

A useful opening would be small-group discussions, during which learners can exchange their experiences of health, safety and security within fitness environments. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Although this unit is predominantly theoretical, it is recommended that centres combine it with a practical unit that requires learners to instruct an exercise session/physical activity. This will give learners a real situation on which to base their learning.

Learners should be encouraged to engage with employers and, where possible, other employees to gain knowledge and understanding of how to maintain health, safety and security within fitness environments.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible through learners working with those responsible for ensuring that any environment used for exercise and physical activities is healthy, safe and secure, for example, a gym instructor and through the use of guest speakers and video/DVD training programmes.

A presentation by a sports centre manager, will support delivery, as well as adding vocational relevance and currency by illustrating real situations that have occurred relating to health and safety. The visiting speaker could deliver a summary of the policies and procedures within their organisation relating to health, safety and security, the associated legal and regulatory requirements and the responsibilities of employers and employees to follow these procedures and meet legal requirements.

This could be supported by examples drawn from industry or through developed case studies that highlight the:

- emergency situations that can occur within fitness environments, the importance of following emergency procedures calmly and correctly, and the possible consequences if this does not happen
- hazards and risks that can occur in a fitness environment and the importance of carrying out appropriate risk assessments
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importance of having procedures in place to safeguard children and vulnerable adults, including procedures for reporting, dealing with statutory agencies and maintaining confidentiality of information.

This unit could be delivered through distance learning. However, this will involve additional, and different, considerations, such as planning, and other measures to ensure learners can gain the required knowledge and understanding.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Alternatives could be logbooks or workbooks completed in the workplace or during visits.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Crouch M – *Protecting Children: A Guide for Sports People* (Coachwise, 2002)  
ISBN 9780947850500

Duncan M, Cahill F, Heighway P – *Health and Safety at Work Essentials: The One-stop Guide for Anyone Responsible for Health and Safety Issues in the Workplace* (Lawpack Publishing Ltd, 5th revised edition, 2006) ISBN 9781905261246

Frosdick S et al – *Safety and Security at Sports Grounds* (Paragon Publishing, 2005)  
ISBN 9781899820146

Gervis M and Brierley J – *Effective Coaching for Children* (The Crowood Press, 1999)  
ISBN 9781861261373

Health and Safety Executive – *Essentials of Health and Safety at Work* (HSE Books, 2006) ISBN 9780717661794

### Journals

*Occupational Safety and Health*

*Policy and Practice in Health and Safety*

### Websites

Adventurous Activities Licensing Authority	<a href="http://www.aals.org.uk">www.aals.org.uk</a>
Central Council for Physical Recreation	<a href="http://www.ccpr.org.uk">www.ccpr.org.uk</a>
Health and Safety Executive	<a href="http://www.hsegov.uk">www.hsegov.uk</a>
National Society for the Prevention of Cruelty to Children (NSPCC)	<a href="http://www.nspcc.org.uk">www.nspcc.org.uk</a>
Royal Society for the Prevention of Accidents	<a href="http://www.rosipa.com">www.rosipa.com</a>
Safe Sport	<a href="http://www.safesport.co.uk">www.safesport.co.uk</a>
SkillsActive	<a href="http://www.skillsactive.com">www.skillsactive.com</a>

## **Unit 2: Principles of Exercise, Fitness and Health**

**Unit reference number: A/600/9017**

**Level: 2**

**Credit value: 4**

**Guided learning hours: 28**

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### **Unit aim**

The aim of this unit is to develop knowledge and understanding of the key principles of exercise, fitness and health, including the components, principles and variables of fitness, the health benefits of physical activity and the importance of healthy eating.

Learners will cover the effects of exercise on the musculoskeletal, cardiovascular and respiratory systems, including how the various body systems adapt to training and the health benefits of physical activity.

Learners will have the opportunity to investigate how the principles and variables of fitness are applied in practice, including the principles of progression, adaptation, modification and regression, and exercise contraindications and key safety guidelines for working with special populations.

Finally, learners will explore key health eating advice, key nutrients and their sources, and the health risks associated with poor nutrition.

### **Essential resources**

For this unit, centres need to give learners access to computers, the internet and library facilities to enable them to carry out research. Centres could invite independent health and fitness experts to be guest speakers.



## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand the effects of exercise on the body	1.1	Describe cardiovascular and respiratory adaptations to endurance/aerobic training	Cardiovascular adaptations eg increased heart rate, decreased blood pressure, increase in stroke volume, increase in cardiac output, decrease in resting heart rate, increase in blood volume, improved blood flow  Respiratory adaptations eg increase in breathing rate, decrease in resting breathing rate, increased tidal volume, increased strength of respiratory muscles, increase in oxygen diffusion rate, improved lung capacity
		1.2	Identify the short and long term effects of exercise on blood pressure	Short-term effect eg systolic pressure rises, diastolic pressure stays almost the same  Long-term effect eg systolic and diastolic pressures are reduced
		1.3	Describe the 'blood pooling' effect following exercise	Force pushing the blood back to the heart stops  Blood and waste products stay in the muscles  Causes swelling and pain
		1.4	Describe the effects of exercise on bones and joints including the significance of weight bearing exercise	Effects eg increased range of movement, improved bone density  Weight bearing exercise eg running, resistance training;  Significance eg prevention of osteoporosis

Learning outcomes		Assessment criteria		Unit amplification
		1.5	Describe delayed onset of muscle soreness (DOMS)	DOMS eg muscle pain, soreness or stiffness occurring in the day or two after exercise, structural muscle damage
		1.6	Identify exercises or techniques likely to cause delayed onset of muscle soreness	Causes eg eccentric exercise, lowering weights, the downward motion of squats and push-ups, unaccustomed or strenuous exercise, dramatic increase to duration or intensity of an exercise routine
		1.7	Describe the short and long term effects of different types of exercise on muscle	Short term effects eg heat generation, increased elasticity, increased excitability, increased production of synovial fluid, improved blood flow to muscles, improved range of joint movement  Long-term effects eg increased muscle strength, increased strength of tendons and ligaments, increased myoglobin stores, increased number of mitochondria
		1.8	Describe different exercises that can improve posture	Strengthening core muscles eg basic crunches, side planks, back extensions  Stretches eg leg, wall, simple chest  Progression eg increased range of motion, increase speed, combined movements
2	Understand the components of fitness	2.1	Define the components of health related fitness	Components eg aerobic endurance, muscular endurance, flexibility, speed, strength, body composition
		2.2	Define the components of skill related fitness	Components eg agility, balance, coordination, power, reaction time
		2.3	Identify the factors that affect health and skill related fitness	Physical factors eg diet, weight, gender, body type, medical history  Lifestyle factors eg stress, alcohol, smoking, drugs, demands of work, level of activity, sports participation (training and competition)

Learning outcomes		Assessment criteria		Unit amplification
3	Understand how to apply the principles and variables of fitness to an exercise programme	3.1	Describe the physiological implications of: <ul style="list-style-type: none"> <li>□ specificity</li> <li>□ progressive overload</li> <li>□ reversibility</li> <li>□ adaptability</li> <li>□ individuality</li> <li>□ recovery time</li> </ul>	<p>Specificity eg muscles adapt specifically to the nature of the exercise stress, muscle exercised is the muscle that adapts to training</p> <p>Progressive overload eg stimulates muscle hypertrophy, development of stronger and denser bones, ligaments, tendons and cartilage, more responsive nerve connection between the brain and the muscles involved</p> <p>Reversibility eg extended rest intervals reduce physical fitness, physiological effects of fitness training diminish over time, decreased strength and muscle mass</p> <p>Adaptability eg body adapts to the stress of exercise with increased fitness, muscles and cardiorespiratory system adapt through consistent training or activity sessions</p> <p>Individuality eg people have different physical and physiological constitutions, tolerate training in different ways</p> <p>Recovery time eg allows the body to replenish energy stores, repair damaged tissues, short term recovery eg immediately after intense exercise, low-intensity exercise during cool-down phase, long term recovery eg techniques that are built in to a seasonal training programme</p>
		3.2	Explain the principles of FITT (Frequency, Intensity, Time and Type)	<p>Frequency – how often exercise is carried out</p> <p>Intensity – how hard a person works during exercise</p> <p>Time – length of the exercise session</p> <p>Type – the type of activity/exercise</p>

Learning outcomes	Assessment criteria		Unit amplification
	3.3	Explain the principles of a progressive training programme in developing components of fitness	<p>Application of FITT principles</p> <p>Progressive training eg identifying training needs, making progress with each session, increasing the intensity of sessions, increasing range of motion, changing sessions (adding new exercises, deleting old ones, changing the order of exercises), setting SMART goals</p>
	3.4	Explain how to recognise when and how to regress a training programme	<p>When eg when participants are hitting a `plateau`, coming back from an injury, training with joint pain, working the same routine for long periods of time, frustrated or not seeing results, have been inactive for long periods</p> <p>How eg recognise signs and symptoms, follow appropriate guidelines to avoid over training, adapt principles and variable of training, stress the importance of adequate recovery time</p>
	3.5	Explain the principles of adaptation, modification and progression for each component of FITT (Frequency, Intensity, Time and Type)	<p>Modification eg making an exercise more or less difficult, adjusting exercise to meet client's physical capabilities</p> <p>Adaptation eg exercise/training forces adaptation to increase performance, varies according to the initial level of fitness</p> <p>Progression eg build up the level of work intensity over a period of time, progress through increasing levels of fitness over several weeks or months</p>
	3.6	Describe the effect of speed on posture, alignment and intensity	<p>Effect of slow speeds eg build muscle strength, posture easier to control, alignment easier to control</p> <p>Effect of faster speeds eg increased risk of injury, increased intensity of exercise</p>

Learning outcomes		Assessment criteria		Unit amplification
		3.7	Describe the effect of levers, gravity and resistance on exercise	<p>Levers eg classification (class 1, class 2, class 3)</p> <p>Effects of levers eg torque, pushes, pulls</p> <p>Effect of gravity eg movement control</p> <p>Effect of resistance eg intensity</p>
		3.8	Describe the differences between programming exercise for physical fitness and for health benefits	<p>Programming exercise for physical fitness eg improving skill levels, increasing intensity, increasing strength</p> <p>Programming exercise for health benefits eg using muscles, maintaining bone strength, maintaining good blood flow, controlling blood pressure</p>
4	Understand the exercise contraindications and key safety guidelines for special populations	4.1	Describe the exercise contraindications and key safety guidelines for working with older people (50 plus)	<p>Absolute contraindications eg recent ECG changes, recent heart attack, unstable angina</p> <p>Relative contraindications eg high blood pressure, joint stiffness, poor balance and posture, sensory decline</p> <p>Key safety guidelines eg appropriate screening prior to exercise, seek/refer to specialist advice, longer and gradual warm-up and cool-down, ensure intensity level is appropriate and safe, emphasise correct use of exercise techniques, simplify/adapt exercise as required</p>

Learning outcomes		Assessment criteria		Unit amplification
		4.2	Describe the exercise contraindications and key safety guidelines for working with antenatal and postnatal clients	<p>Absolute contraindications eg heart disease, a history of spontaneous abortions or miscarriages</p> <p>Relative contraindications eg high blood pressure, anaemia, diabetes, thrombosis, pelvic floor problems</p> <p>Key safety guidelines eg appropriate screening prior to exercise, seek/refer to specialist advice, ensure the environment is at the correct temperature and humidity, avoid activity which places undue strain on vulnerable areas of the body, avoid excessive stretching, avoid heavy resistance exercise, avoid high impact exercise, minimise risks of falls or slips, monitor if joints have regained strength and stability in good alignment, emphasise use of correct exercise techniques, retraining motor skills (balance, coordination)</p>
		4.3	Describe the exercise contraindications and key safety guidelines for working with young people (14-16)	<p>Contraindications eg stage of development, injuries, fractures</p> <p>Key guidelines eg appropriate screening prior to exercise , seek/refer to specialist advice, take regular breaks, emphasise use of correct exercise techniques, avoid heavy resistance training, avoid flexibility training, ensure participants hydrate before, during and after exercise</p>
		4.4	Describe the key safety considerations for working with disabled people	<p>Considerations eg appropriate screening prior to exercise, seek/refer to specialist advice, ensure the environment is appropriate and accessible, ensure goals are realistic and motivating, provide appropriate level of support and supervision, provide specialist equipment</p>

Learning outcomes		Assessment criteria		Unit amplification
5	Understand how to safely monitor exercise intensity	5.1	Describe the benefits and limitations of different methods of monitoring exercise intensity including: <ul style="list-style-type: none"> <li>□ the talk test</li> <li>□ Rate of Perceived Exertion (RPE)</li> <li>□ heart rate monitoring and the use of different heart rate zones</li> </ul>	Benefits and limitations eg used to meet client needs, easy to administer, reliability of results, validity of results
6	Understand the health benefits of physical activity	6.1	Describe the health benefits of physical activity	Reduce risk of developing health conditions eg heart disease, hypertension, type 2 diabetes, obesity, back pain, osteoporosis Improve overall quality of life and wellbeing eg improved circulation, increased energy, increased self-confidence, increased motor skills, reduced risk of injury, improved posture
		6.2	Describe the effect of physical activity on the causes of certain diseases including: <ul style="list-style-type: none"> <li>□ coronary heart disease</li> <li>□ some cancers</li> <li>□ type 2 diabetes</li> <li>□ hypertension</li> <li>□ obesity</li> <li>□ Osteoporosis</li> </ul>	Coronary heart disease eg strengthens heart muscle, lowers blood pressure, improves cholesterol levels, improves blood flow Some cancers eg promotes lifestyle changes Type 2 diabetes eg reduces body fat, improves regulation of insulin and blood glucose Hypertension eg lowers blood pressure, reduces body fat, improves blood flow, reduces muscular tension, reduces stress level Obesity eg reduces body fat, builds or preserves muscle mass, improves body's ability to use calories Osteoporosis eg weight-bearing exercise promotes bone formation, prevents bone loss associated with age, improves bones density, reduces risk of injury

Learning outcomes		Assessment criteria		Unit amplification
7	Understand the importance of healthy eating	7.1	Describe the national food model/guide	<ul style="list-style-type: none"> <li>□ Guidance on healthy eating and nutrition eg dietary intake guidelines, Food Standards Agency (FSA) Nutrient and Food Based Guidelines for UK Institutions, FSA Eatwell plate, Health Eating – Live Well (NHS), British Nutrition Foundation Guidelines, five-a-day recommendations</li> </ul>
		7.2	Describe key healthy eating advice that underpins a healthy diet	<ul style="list-style-type: none"> <li>□ Meal plans eg type, amount, preparation</li> <li>□ Strengths and areas for improvement eg eating less or more food, eating less or more of a particular food group, eating at different times, preparing food in a different way, drinking more fluid or drinking different types of fluid</li> </ul>
		7.3	Explain the importance of adequate hydration	<ul style="list-style-type: none"> <li>□ For example to maintain internal conditions within the body(homeostasis), enhance performance(physical and mental), avoid dehydration, pre, during and post-session</li> <li>□ Sources eg water, sports drinks</li> </ul>
		7.4	Explain professional role boundaries in relation to offering nutritional advice	<ul style="list-style-type: none"> <li>□ Identify need to refer client eg to GP, registered dietician</li> </ul>
		7.5	Explain the dietary role of the key nutrients	<ul style="list-style-type: none"> <li>□ Proteins eg make enzymes, antibodies, body fluids, hormones, important in building ,maintaining and repairing body tissues and cells, important for growth and development during childhood, adolescence, and pregnancy</li> <li>□ Fats eg necessary for good health, make certain vitamins (eg A, D, E, K) available for use in the body, cushion vital organs, help maintain body temperature, important for proper growth and development</li> </ul>



Learning outcomes	Assessment criteria	Unit amplification
		<ul style="list-style-type: none"> <li>□ Fibre eg keep digestive system healthy and functioning properly, aids and speeds up the excretion of waste and toxins from the body</li> <li>□ Carbohydrates eg provide the body with a source of fuel and energy, important for the correct working of brain, heart and the nervous, digestive and immune systems</li> </ul>
	7.6 Identify the common dietary sources of the key nutrients	<p>Proteins eg lean meat products, poultry, fish, eggs, milk, cheese, dried beans</p> <p>Fats saturated eg butter, cheese, whole milk, ice cream, cream, fatty meats; unsaturated eg most vegetable oils, fish (salmon, tuna, mackerel, herring, trout, sardines), avocados, olives ,nuts</p> <p>Fibres insoluble eg bran, wholemeal flour and breads, brown rice, whole grain cereals, vegetables, edible peels of fruit, nuts and seeds; soluble eg fruits, vegetables, lentils, peas, beans, oats, barley, oatmeal, potatoes, dried fruit, soya milk and soya products</p> <p>Carbohydrates complex eg in most grains, cereals, potatoes, brown rice, bread, pasta, legumes and certain fruits and vegetables; simple eg natural (fruit, milk), refined (cakes, chocolate, jam, fruit juice)</p>
	7.7 Describe the energy balance equation	<ul style="list-style-type: none"> <li>□ Factors affecting energy balance eg basal metabolism, age, gender, climate, physical activity</li> <li>□ Energy balance equation –differences between energy intake (from food) and energy output eg neutral energy balance (calories taken in equal to calories expended, weight is maintained), positive energy balance (calories taken in are greater than calories expended, weight is gained, fat stores are increased), negative energy balance (calories taken in are less than calories expended)</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		7.8	Explain the health risks of poor nutrition	<p>Health risks eg lower core strength, increased body fat, slower mental problem solving, less alertness, slower muscle response time</p> <p>Young adults- affect potential growth and development</p> <p>Increased risk of developing serious diseases and conditions eg type 2 diabetes, heart disease, high blood pressure, high cholesterol, obesity, osteoporosis, cancer</p>

## Information for tutors

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### Delivery

This unit should be delivered in a way that develops knowledge and understanding of the principles of exercise, fitness and health. Learners need to know and understand:

- the effects of exercise on the main body systems, including how these systems adapt to training
- components of and factors affecting health and skill-related fitness
- how the principles and variables of fitness can be applied in practice
- the special requirements associated with working with special populations, including exercise contraindications and key guidelines
- the health benefits of physical activity and importance of healthy eating.

A useful opening would be small-group discussions, during which learners can exchange their experiences of exercise, fitness and health-related issues, either as employees or clients in the sector. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Learners can carry out activities where they identify the main nutrient(s) in a range of different foods, and discuss healthy eating guidelines and how to ensure a balanced diet.

Learners should be encouraged to engage with employers and, where possible, employees to gain knowledge and understanding of the principles of exercise, fitness and health.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others whose role it is to deliver fitness and exercise programmes to clients and work with them to maintain their health and fitness, for example a fitness instructor, where possible, and through the use of guest speakers and video/DVD training programmes.

For example, a presentation by a personal trainer will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of the effects of exercise on the body, how the body's systems adapt to training and the health benefits of physical activity. They could also provide real-life examples of applying the principles and variables of training and of, for example, progressing or regressing exercise/fitness programmes. This should be supported by examples drawn from industry or through developed case studies that highlight:

- the components of health and skill-related fitness
- working with special populations and what can happen if exercise contraindications or key guidelines are ignored
- the importance of healthy eating and how a well-balanced diet contributes to health, including the effects of poor nutrition.

This unit could be delivered through distance learning. However, this will involve additional, and different, considerations, such as planning, and other measures to ensure learners can gain the required knowledge and understanding.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Other alternatives could be logbooks or workbooks completed in the workplace or during visits.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193

American Council on Exercise – *Exercise for Older Adults: ACE's Guide for Fitness Professionals* (American Council on Exercise, 1998) ISBN 9780880119429

Bean A – *Food for Fitness* (A&C Black, 2008) ISBN 9780713681284

Buckley J, Holmes J and Mapp G – *Exercise on Prescription: Cardiovascular Activity for Health* (Butterworth-Heinemann, 1999) ISBN 9780750632881

Burke L – *Practical Sports Nutrition* (Human Kinetics, 2007) ISBN 9780736046954

Dalglish J and Dollery S – *The Health and Fitness Handbook* (Longman, 2001) ISBN 9780582418790

DiFiore J – *The Complete Guide to Postnatal Fitness* (Complete Guides) (A&C Black Publishers Ltd, May 2010) ISBN 9781408124550

Griffin J – *Food for Sport: Eat Well, Perform Better* (Crowood, 2001) ISBN 9781861262165

Griffin S – *Training the Over 50s: Developing Programmes for Older Clients (Fitness Professionals)* (A&C Black Publishers Ltd, 2006) ISBN 9780713672015

Manore M et al – *Sport Nutrition for Health and Performance* (Human Kinetics, 2000) ISBN 9780873229395

Sharkey B J and Gaskill S E – *Fitness and Health* (Human Kinetics, 2006) ISBN 9780736056144

Williamson P – *Exercise for Special Populations* (Lippincott Williams and Wilkins, 2010) ISBN 9780781797795

Winnick P – *Adapted Physical Education and Sport* (Human Kinetics Publishers, October 2010) ISBN 9780736089180

## **Journals**

*American College of Sport Medicine's Health and Fitness Journal*

*International Journal of Sports Nutrition*

*International Journal of Sports Science and Coaching*

*Journal of Nutrition*

*Journal of Sports Nutrition*

*Research Quarterly for Exercise and Sport*

## **Websites**

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

British Nutrition Foundation

[www.nutrition-org.uk](http://www.nutrition-org.uk)

Coachwise

[www.1st4sport.com](http://www.1st4sport.com)

Peak Performance

[www.pponline.co.uk](http://www.pponline.co.uk)

Sports Coach UK

[www.sportscoachuk.org](http://www.sportscoachuk.org)

## **Unit 3: Know How to Support Clients who Take Part in Exercise and Physical Activity**

**Unit reference number: M/600/9015**

**Level: 2**

**Credit value: 2**

**Guided learning hours: 13**

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### **Unit aim**

The aim of this unit is to develop knowledge and understanding of how to develop effective working relationships with clients, how to provide ongoing customer service, and how to support clients to adhere to exercise/physical activity.

This unit will give learners an overview of customer service within a fitness environment. Learners will explore the importance of meeting client needs to ensure client satisfaction, how to exceed client expectations and how to deal with client complaints promptly and effectively.

Learners will look at the communication skills that can help to motivate clients and at the importance of valuing equality and diversity when working with clients.

In this unit, learners will consider the barriers to exercise clients face and the strategies that can be used to help clients overcome these barriers.

### **Essential resources**

For this unit, centres need to give learners with access to computers, the internet and library facilities to enable them to carry out research.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand how to form effective working relationships with clients	1.1	Explain why it is important to form effective working relationships with clients	<p>Importance eg build client trust and confidence, clients feel valued and motivated, clients more likely to adhere to exercise and physical activity programmes, clients understand your role and responsibilities, develop mutual trust and respect</p> <p>Requirements eg in line with good practice, ethical requirements, professional conduct</p> <p>Characteristics eg objectivity, patience, persistence, empathy, approachable, consistent, committed, empowering</p>
		1.2	Explain why it's important to present oneself and the organisation positively to clients	<p>Importance eg creates positive impression of the organisation as a whole, builds trust with the client, client feels at ease and assured, client confidence in organisation and its services</p> <p>Client loyalty eg repeat business, client recommendations to friends and family</p>
		1.3	Describe how different communication skills can be used to assist clients with motivation	<p>Verbal communication eg appropriate tone and pitch of voice, language appropriate to client, use of positive language, use of praise and encouragement, avoid use of slang/jargon, opportunities to discuss client needs</p> <p>Non-verbal communication eg posture, expression, gestures, eye contact, positive body language</p> <p>Listening eg asking appropriate questions, seeking client views on their performance</p> <p>Taking the initiative in communicating with clients eg if they seem unsure, recognising when clients need help and assistance</p>

Learning outcomes		Assessment criteria		Unit amplification
		1.4	Explain the importance of valuing equality and diversity when working with clients	<p>Compliance with legal requirements eg Race Relations Act 2010, Sex Discrimination Act, Equality Act 2010, Gender Recognition Act, age discrimination legislation, REP Exercise and Fitness Code of Ethical Practice</p> <p>Importance eg maintain individual's respect and dignity, serve the needs of the whole community, ensure fair and equal treatment, ensure inclusive provision, encourage participation, remove barriers to participation, provide specialist equipment to enable participation</p>
2	Understand how to address barriers to exercise/physical activity that clients experience	2.1	Identify the typical barriers to exercise/physical activity that clients experience	Typical barriers eg health issues, age, fear of injury, time, access, transport, cost, facilities, lack of self-motivation, lack of self-esteem, lack of self-confidence, lack of encouragement or support
		2.2	Explain how incorporating clients' exercise/physical activity preferences into their programme can strengthen motivation and adherence	<p>Opportunity to identify and discuss client preferences for exercise eg health, fitness, social</p> <p>Supports motivation and adherence eg increase client confidence and autonomy, allow client to take responsibility for own fitness</p>
		2.3	Describe different incentives and rewards that can strengthen clients' motivation and adherence	<p>Incentives eg enjoyment, social interaction, related health benefits, improvement in fitness and skill levels</p> <p>Rewards eg achievement of goals, praise and encouragement from others, positive feedback</p> <p>Services eg free exercise sessions, crèche, discounts</p>
		2.4	Describe different strategies that can help clients overcome typical barriers to exercise/physical activity	Strategies eg inform client of benefits of taking part in exercise and physical activity, look at different types of physical activity appropriate for client, refer client to other relevant professionals, implement enjoyable activities, hold activities at appropriate times; provide appropriate facilities



Learning outcomes		Assessment criteria		Unit amplification
3	Understand how to support clients to adhere to exercise/physical activity	3.1	Explain why it is important for a client to take personal responsibility for their own fitness and motivation	Importance eg client more likely to adhere to exercise, client feels empowered, promotes self-reflection on progress and identification of any necessary improvements/changes to goals
		3.2	Describe how to assist clients to develop their own strategy for motivation and adherence	Discuss issues with client eg client needs, barriers to exercise Build client confidence eg select situations or environments they enjoy exercising in, set achievable goals with clients, provide support and reinforcement, offer alternatives and rewards for achieving goals
		3.3	Identify different behaviour change approaches/strategies to encourage adherence to exercise/physical activity	Stages in behaviour change eg pre-contemplation, contemplation, preparation, action, maintenance, relapse Approaches/strategies eg providing positive feedback, encouragement and support, setting and reviewing goals, working with client to remove barriers, providing advice and information
		3.4	Describe how to set short, medium and long term SMART goals	SMART (specific, measurable, achievable, realistic, time bound) goals Short, medium and long terms goals eg increase number of press-ups from 10 to 30 over two week period commencing next Saturday
		3.5	Describe how to review and revise short, medium and long term SMART goals	Review and revise eg against client targets, in response to changing client needs and preferences, update targets
4	Understand how to provide ongoing customer service to clients	4.1	Explain the importance of client care both for the client and the organisation	For the organisation eg keep existing clients, repeat clients and business, client recommendations to family and friends, develop a good reputation For the client eg client satisfaction, ensure client safety, responsive to client needs, client exercise and fitness goals are met

Learning outcomes		Assessment criteria		Unit amplification
		4.2	Explain why it is important to deal with clients needs to their satisfaction	Importance eg maintain client satisfaction and trust, client more likely to attend exercise sessions, client recommendations to family and friends
		4.3	Identify where to source relevant and appropriate information to meet clients needs	Sources eg internet, textbooks, journals, REP publications Appropriate professionals eg GP, physiotherapist
		4.4	Explain the importance of dealing with any delay in meeting clients needs timely and effectively	Importance eg client is aware of progress, to maintain client trust and confidence, to maintain client satisfaction, to maintain professional reputation of the organisation, suggest appropriate alternatives
		4.5	Give examples of how to exceed customer expectations, when appropriate	Providing additional help and assistance Dealing promptly with problems Offering discounts or additional products or services Exceptional help and assistance for customers with special requirements Delivering excellent standards of service and facilities
		4.6	Explain the importance of handling client complaints positively following an organisation's procedure	Importance eg maintain client trust and confidence, maintain client satisfaction, maintain professional reputation of the organisation

## Information for tutors

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### Delivery

This unit should be delivered in a way that develops learner knowledge and understanding of supporting clients who are taking part in exercise and physical activity. Learners need to know and understand:

- the importance of customer service within a fitness environment and of making a positive impression with clients
- how to develop effective working relationships with clients, including valuing equality and diversity within the sector
- typical barriers to exercise and physical activity, how to help clients overcome these barriers and adhere to exercise and physical activity.

A useful opening would be small-group discussions, during which learners can exchange their experiences of customer service and supporting clients within a fitness environment, including issues relating to equality and diversity. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Learners should be encouraged to engage with employers and, where possible, employees to gain knowledge and understanding of the importance of effective customer service and of supporting clients taking part in exercise and physical activity within a fitness environment.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others who work directly with clients within a fitness environment, for example a health fitness instructor, and through the use of guest speakers and video/DVD training programmes.

A presentation by a personal trainer will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of how they develop effective working relationships with their clients and provide ongoing customer service. They could also provide real-life examples of how they have helped clients to overcome barriers to exercise and physical activity. This should be supported by examples drawn from industry or through developed case studies that highlight:

- the importance of making a positive impression on clients
- the typical barriers to exercise and physical activity clients face
- the different strategies that can be used to help overcome these barriers, motivate clients and support them in adhering to exercise and physical activity.

This unit could be delivered through distance learning. However, this will involve additional, and different, considerations, such as planning, and other measures to ensure learners can gain the required knowledge and understanding.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Alternatives could be logbooks or workbooks completed in the workplace or during visits.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193

Bird S R et al – *Exercise Benefits and Prescription* (Stanley Thornes, 1998) ISBN 9780743733156

Carlaw P & Deming VK – *The Big Book of Customer Service Training Games* (McGraw Hill, 2007) ISBN 139780077114763

Dick F W – *Sports Training Principles* (A&C Black, 2007) ISBN 9780713682786

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

Jarvis, M – *Sport Psychology: A Student's Handbook* (Routledge, 2006) ISBN 9781841695822

Leland K and Bailey K – *Customer Service for Dummies* (John Wiley & Sons, 2006) ISBN 139780471768692

Sharkey B J and Gaskill S E – *Fitness and Health* (Human Kinetics, 2006) ISBN 9780736056144

Timm P – *Customer Service: Career Success Through Customer Loyalty* (Prentice Hall, 2010) ISBN 139780135063972

### Journals

*Customerfirst* (Institute of Customer Service)

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

### Websites

BBC Sport

[www.bbc.co.uk/sportBritish](http://www.bbc.co.uk/sportBritish)

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

Sports Coach UK

[www.sportscoachuk.org](http://www.sportscoachuk.org)

# Unit 4: Anatomy and Physiology for Exercise

**Unit reference number:** H/600/9013

**Level:** 2

**Credit value:** 6

**Guided learning hours:** 41

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## Unit aim

The aim of this unit is to develop knowledge and understanding of the anatomy and physiology of the human body and how this relates to exercise and fitness, including working with special population groups.

In this unit, learners will explore the basic anatomy and physiology of the main body systems: cardiovascular system, respiratory system, skeletal system, energy and nervous systems

Learners will also have the opportunity to investigate the life-course of the musculoskeletal system and, in particular, the implications of this when working with special populations – 14-16 year olds, over 50s and antenatal and postnatal women.

## Essential resources

For this unit, centres need to provide learners with access to:

- diagrams of the skeletal, muscular, cardiovascular and respiratory systems. Models of each body system would be beneficial but are not essential for unit delivery
- laboratory equipment and/or models/images relating to the body systems
- computers and the internet to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand the structure and function of the circulatory system	1.1	Identify the location of the heart	Centre of the circulatory system Middle of the chest in between the lungs
		1.2	Describe the function of the heart	Circulate blood throughout the body and through veins and arteries Receive and pump out blood to the body and lungs
		1.3	Describe the structure of the heart	Myocardium, atria, ventricles, superior and inferior vena cava, semilunar valves (aortic, pulmonary), atrioventricular valves (bicuspid, tricuspid), aorta, pulmonary artery, pulmonary veins
		1.4	Describe how blood moves through the four chambers of the heart	Pulmonary circulation, de-oxygenated blood  Movement eg right-hand side of the heart receives de-oxygenated blood into the right atrium via the superior and inferior vena cava, blood passes through the tricuspid valve into the right ventricle, blood pumped under higher pressure via the pulmonary artery to the lungs  Systemic circulation, oxygenated blood  Movement eg left-hand side of the heart receives oxygenated blood into the left atrium via the pulmonary veins, blood passes through the bicuspid valve into the left ventricle, blood pumped to the aorta under greater pressure, blood delivered to other parts of the body via the blood vessels

Learning outcomes		Assessment criteria	Unit amplification
	1.5	Describe systemic and pulmonary circulation	<p>Systemic circulation eg part of the cardiovascular system, carries oxygenated blood from the lungs away from the heart to the body, returns deoxygenated blood to the heart</p> <p>Pulmonary circulation eg part of cardiovascular system, carries de-oxygenated blood away from the heart to the lungs, returns oxygenated blood to the heart</p>
	1.6	Describe the structure and functions of blood vessels	<p>Structure eg arteries (walls contain smooth muscle fibre, controlled by the sympathetic nervous system), arterioles (tiny branches of arteries leading to capillaries, controlled by the sympathetic nervous system), capillaries (tiny, extremely narrow blood vessels), veins (walls consist of three layers of tissues, thinner and less elastic than corresponding layers of arteries, contain valves), venules (minute vessels, unite to form a vein)</p> <p>Functions eg arteries (transport blood away from the heart, carry oxygenated blood), arterioles (transport blood from arteries to capillaries, constrict and dilate to regulate blood flow and pressure), capillaries (remove waste from the surrounding cells, facilitate exchange of nutrients and gas), veins (transport blood to the heart, carry de-oxygenated blood, prevent blood from flowing in the reverse direction), venules (drain blood from capillaries into veins for return to the heart)</p>
	1.7	Define blood pressure	<p>Definition – pressure exerted by the blood on blood vessel walls</p> <p>Variations eg due to strength of the heartbeat, elasticity of arterial walls, volume and viscosity of the blood, a person's health, age and physical condition</p> <p>Classifications – low, normal, high-normal, mild hypertension (grade 1), moderate hypertension (grade 2), severe hypertension (grade 3)</p>

Learning outcomes		Assessment criteria		Unit amplification
2	Understand the structure and function of the respiratory system	2.1	Identify the location of the lungs	Behind and either side of the heart Extend from the collarbone to the diaphragm
		2.2	Describe the function of the lungs	Mechanics of breathing (internal and external expiration) To supply oxygen to the body To remove carbon dioxide
		2.3	Describe the structure of the lungs	Structure eg lobes (right lung- three lobes, left lung – two lobes), bronchi, bronchioles, alveoli, alveolar sacs, capillaries Protected by the pleura (fluid cushioning system);
		2.4	Identify the main muscles involved in breathing	Inspiration (inhalation) and expiration (exhalation) eg diaphragm, external intercostal muscles Forced expiration eg internal intercostal muscles, abdominal muscles Accessory muscles eg sternocleidomastoid, scalene muscles
		2.5	Describe the passage of air through the respiratory tract	Upper respiratory tract (mouth, nose, pharynx) Lower respiratory tract (larynx, trachea, bronchi, bronchioles)
		2.6	Describe the process of gaseous exchange of oxygen and carbon dioxide in the lungs	Diffusion of oxygen into the blood Diffusion of carbon dioxide out of the blood and into the lungs
3	Understand the structure and function of the skeleton	3.1	Describe the basic functions of the skeleton	<ul style="list-style-type: none"> <li>□ Protection, movement, shape, support, attachment for skeletal muscle</li> <li>□ Source of blood cell production</li> <li>□ Store of minerals</li> </ul>



Learning outcomes		Assessment criteria	Unit amplification
		3.2 Identify the structures of the axial skeleton	<ul style="list-style-type: none"> <li>□ Upper body bones</li> <li>□ Cranium</li> <li>□ Backbone/spinal column (vertebrate — cervical (7), thoracic (12), lumbar (5), coccyx, sacrum)</li> <li>□ Bony thorax (sternum, ribs)</li> </ul>
		3.3 Identify the structures of the appendicular skeleton	<ul style="list-style-type: none"> <li>□ Bones of the arms and legs</li> <li>□ Upper structure (humerus, radius, ulna, carpus, metacarpals, phalanges)</li> <li>□ Lower structure (pelvis, tibia, fibula, tarsals, metatarsals, phalanges)</li> </ul>
		3.4 Explain the classification of bones	<ul style="list-style-type: none"> <li>□ Flat bones eg scapula, sternum, pelvis, ribs</li> <li>□ Long bones eg femur, humerus</li> <li>□ Irregular bones eg vertebrae, mandible; sesamoid bones eg patella</li> <li>□ Short bones eg carpals, tarsals</li> </ul>
		3.5 Explain the structure of long bone	<ul style="list-style-type: none"> <li>□ Diaphysis (body), epiphysis (terminal parts), medullary cavity (contains bone marrow), metaphysis (wider part of a long bone), periosteum (muscular fibre enveloping the bone), articular cartilage (smooth resistant elastic tissue covering the terminal part of the bone), endosteum (thin layer of connective tissue in the medullary cavity), compact bone (dense bone tissue), spongy bone (tissue made of bony compartments), bone marrow (contained in bone cavities)</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		3.6	Explain the stages of bone growth	<ul style="list-style-type: none"> <li>□ Stages eg development of cartilage and connective tissue membranes, ossification</li> <li>□ Cells involved in ossification eg osteoblasts, osteocytes, osteoclasts</li> <li>□ Factors affecting bone density eg lack of calcium, age, gender, exercise, osteoporosis, medication</li> </ul>
		3.7	Describe posture in terms of: <ul style="list-style-type: none"> <li>□ curves of the spine</li> <li>□ neutral spine alignment</li> <li>□ potential ranges of motion of the spine</li> <li>□ postural deviations to include kyphosis, lordosis, scoliosis and the effect of pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>□ Natural curves of the spine — kyphotic and primary curves (thoracic, sacral), lordotic and secondary curves (cervical, lumber)</li> <li>□ Optimum position to maintain balance and proportion, minimise stress to joints, muscles, vertebrae and tissue, spine maintained in its natural position</li> <li>□ Lumber and thoracic (rotation, extension, flexion, bending); cervical (rotation, extension, flexion); sacral and coccyx (no range of motion)</li> <li>□ Definitions and causes — kyphosis, lordosis, scoliosis</li> <li>□ Categories eg excessive, less than normal</li> </ul>
4	Understand joints in the skeleton	4.1	Describe the classification of joints	<ul style="list-style-type: none"> <li>□ Classification — fixed/immovable (fibrous), slightly moveable (cartilaginous), freely moveable (synovial)</li> </ul>
		4.2	Describe the structure of synovial joints	<ul style="list-style-type: none"> <li>□ Synovial cavity, synovial membrane (secretes synovial fluid)</li> <li>□ Synovial fluid (lubrication, shock absorption)</li> <li>□ Articular capsule</li> <li>□ Ligaments (joint stability)</li> <li>□ Articular cartilage (reduces friction between bones, shock absorption)</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		4.3	Describe the types of synovial joints and their range of motion	<ul style="list-style-type: none"> <li>□ Gliding joints- gliding or sliding movements only eg carpals</li> <li>□ Hinge joints — flexion and extension in one plane eg the elbow</li> <li>□ Joints where one bone rotates about another eg atlanto-axial joint</li> <li>□ Ellipsoidal joints — flexion, extension, abduction, adduction eg the wrist</li> <li>□ Saddle joints — flexion, extension, abduction, adduction eg thumb between the metacarpal and carpal</li> <li>□ Ball and socket joints- all movements except gliding eg the shoulder</li> </ul>
		4.4	Describe joint movement potential and joint actions	<ul style="list-style-type: none"> <li>□ Flexion eg bending the elbow</li> <li>□ Extension eg straightening the elbow, hyper extension eg bending backwards</li> <li>□ Horizontal flexion, horizontal extension, lateral flexion;</li> <li>□ Inversion, eversion; rotation ;adduction; abduction ; circumduction retraction, protraction</li> <li>□ Elevation eg shoulder shrugs, depression eg dropping the jaw,</li> </ul>
5	Understand the muscular system	5.1	Identify the three types of muscle tissue	<ul style="list-style-type: none"> <li>□ Types – skeletal, smooth and cardiac</li> </ul>

Learning outcomes		Assessment criteria	Unit amplification
		5.2 Define the characteristics and functions of the three types of muscle tissue	<ul style="list-style-type: none"> <li>□ Skeletal -characteristics eg striated, long, thin fibres, fibres with different structures and functions; functions eg produce skeletal movement, maintain posture and body position, support soft tissues, maintain body temperature</li> <li>□ Smooth – characteristics eg involuntary, no striations, small fibres; functions eg regulate flow of blood in the arteries, contract to push food through the body, expel urine from the body</li> <li>□ Cardiac- characteristics eg striated, involuntary, large fibres, work constantly; functions eg pump blood in and out of the heart</li> </ul>
		5.3 Describe the basic structure of skeletal muscle	<ul style="list-style-type: none"> <li>□ Basic structure -epimysium (connective tissue around the whole muscle), perimysium (connective tissue that groups muscle fibres), endomysium (connective tissue surrounding muscle fibres), sarcolemma (cell membrane), fascicle (bundle of muscle fibres), myofibril, myofilaments, tendons, muscle fibres</li> </ul>
		5.4 Name and locate the anterior skeletal muscles	<ul style="list-style-type: none"> <li>□ Anterior skeletal muscles eg biceps, rectus abdominis, obliques, transverse abdominis pectoralis, hip flexors major, anterior deltoids, medial deltoids, quadriceps, adductors, anterior tibialis</li> </ul>
		5.5 Name and locate the posterior skeletal muscles	<ul style="list-style-type: none"> <li>□ Posterior skeletal muscles eg latissimus dorsi, erector spinae, gluteals, trapezius, rhomboids, triceps, medial deltoids, posterior deltoids abductors, hamstrings, gastrocnemius, soleus</li> </ul>
		5.6 Describe the structure and function of the pelvic floor muscles	<ul style="list-style-type: none"> <li>□ Structure eg levator ani, coccygeusit</li> <li>□ Functions eg support organs in the pelvis and lower abdomen, control bladder and bowel movements</li> </ul>
		5.7 Describe the different types of muscle action	<ul style="list-style-type: none"> <li>□ Types of muscle contraction eg isometric (muscle tension and length remain constant), isotonic (muscle tension remains constant and muscle length varies), isokinetic (varying muscle tension and length)</li> <li>□ Functions eg antagonist acts in contrast to agonist, stabiliser holds a joint in place, assistors help the agonist</li> </ul>

Learning outcomes		Assessment criteria	Unit amplification
		5.8 Identify the joint actions brought about by specific muscle group contractions	<ul style="list-style-type: none"> <li>□ Muscles contractions and joint actions eg quads (hip and knee flexion), gluteus maximus (hip extension, external rotation), adductors (adduction and external rotation, adduction, flexion and internal rotation), gastrocnemius (plantar flexion at ankle), rectus abdominus (forward spinal flexion), external and internal obliques (torso rotation), erector spinae (trunk extension), pectoralis major (flexion, adduction, internal rotation),</li> <li>□ deltoid (flexion, internal rotation, extension, external rotation), trapezius (elevation, adduction , depression), rhomboid major (adduction and elevation), biceps (elbow flexion), triceps (extension at the elbow), latissimus dorsi (extension, adduction, internal rotation)</li> </ul>
		5.9 Identify skeletal muscle fibre types and their characteristics	<ul style="list-style-type: none"> <li>□ Slow twitch (Type I) eg efficient at using oxygen to generate more fuel (known as ATP), extended muscle contractions over a long period of time, resistance to fatigue, slow contraction speed, red in colour, large amounts of myoglobin</li> <li>□ Fast twitch (Type II) eg fatigue easily, fast contraction speed, low number of myoglobin, relatively few mitochondria, relatively few blood capillaries, large amounts of glycogen, white in colour</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
6	Understand the life-course of the musculoskeletal system and its implications for special populations exercise	6.1	Describe the life-course of the musculoskeletal system, including relevant tendon, ligament, muscle, joint and bone mineral density changes, and their implications for exercise, plus specific implications for working with: <ul style="list-style-type: none"> <li>□ young people in the 14-16 age range</li> <li>□ antenatal and postnatal women</li> <li>□ older people (50 plus)</li> </ul>	<ul style="list-style-type: none"> <li>□ Considerations including relevant tendon, ligament, muscle, joint and bone mineral density changes</li> <li>□ Implications for exercise</li> <li>□ 14-16 year olds eg avoid heavy resistance exercises, be aware of joint development, stress importance of using the correct techniques</li> <li>□ Antenatal and postnatal women eg avoid high impact exercise, reduce risk of slips or falls</li> <li>□ Older people eg ensure intensity of exercise is appropriate, increase warm-up time</li> </ul>
7	Understand energy systems and their relation to exercise	7.1	Describe how carbohydrates, fats and proteins are used in the production of energy/adenosine triphosphate	<ul style="list-style-type: none"> <li>□ Carbohydrates – broken down into glucose, used immediately by the body or stored in muscle and liver</li> <li>□ Fats – broken down into fatty acids, storage as adipose tissue, energy store</li> <li>□ Proteins – broken down into amino acids, converted into glucose, used when stores of other nutrients are depleted</li> </ul>
		7.2	Explain the use of the three energy systems during aerobic and anaerobic exercise	<ul style="list-style-type: none"> <li>□ Aerobic system – long duration energy system, low to moderate intensity</li> <li>□ Creatine phosphste system-short durations of up to 10-15 seconds, anaerobic, does not use fat or carbohydrate , uses chemical energy</li> <li>□ Glycolytic system – supplies energy for exercises lasting less than about two minutes</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
8	Understand the nervous system and its relation to exercise	8.1	Describe the role and functions of the nervous system	<ul style="list-style-type: none"> <li>□ Role eg central nervous system, peripheral nervous system (autonomic nervous system, somatic nervous system, sympathetic system, parasympathetic system)</li> <li>□ Use of electrical and chemical means to send and receive messages</li> <li>□ Functions eg control of muscular contraction, transmit signals between different parts of the body and between different cells, extracts information from the environment, processes information, determines and activates an appropriate response, reacts to changes inside and outside the body</li> </ul>
		8.2	Describe the principles of muscle contraction	<ul style="list-style-type: none"> <li>□ Principles- isotonic and isometric contraction, motor unit recruitment, sliding filament mechanism</li> </ul>
		8.3	Describe the 'all or none law'/motor unit recruitment	<ul style="list-style-type: none"> <li>□ Principle that the strength by which a nerve or muscle fibre responds to a stimulus does not depend on the strength of the stimulus</li> <li>□ If a stimulus is above a certain threshold a nerve or muscle fibre will 'fire'</li> </ul>
		8.4	Describe how exercise can enhance neuromuscular connections and improve motor fitness	<ul style="list-style-type: none"> <li>□ Through eg increased use of fat, improved motor recruitment, stronger muscle contractions, brain makes new connections making activities easier, greater coordination between muscles, improved communication between brain and muscle fibres</li> </ul>

## Information for tutors

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### Delivery

This unit should be delivered in a way that develops knowledge and understanding of anatomy and physiology in relation to exercise. Learners need to know and understand:

- the structure and function of the four main body systems – circulatory, respiratory, skeletal and muscular
- the life course of the musculoskeletal system and how it impacts on exercise for special populations – 14-16 year olds, older people (50+), antenatal and postnatal women
- the energy and nervous systems and how they relate to exercise.

A useful opening would be through small-group discussions focusing on the anatomy and physiology of the body and how they relate to, and impact on, exercise. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

A wide range of delivery methods could be used including lectures, tutorials, presentations, videos, worksheets, anatomy models, laboratory work and internet research. There will be a great deal of scientific anatomical language within the unit so practical application should be used wherever possible.

Study of the skeletal system requires the use of diagrams, and preferably a life-sized, hinged model skeleton. X-rays can be used to illustrate the different bones of the skeleton.

Study of the muscular system requires pictures of, or access to, microscopes and slides of cardiac, voluntary and involuntary muscles so learners can see the differences between the tissues. Diagrams of the muscular system showing all the named muscles will also be required.

To explore the circulatory and respiratory systems learners could use laboratory work. Again, labelled diagrams and hand-drawn diagrams should be used to show the anatomical structure of the heart, circulatory and respiratory systems.

Learners should be encouraged to engage with employers and, where possible, other employees to gain a broad knowledge and understanding of the relationship between anatomy and physiology and exercise. Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom this knowledge and understanding is a key requirement of their job role, for example a health fitness instructor, where possible, and through the use of guest speakers and video/DVD training programmes.

For example, a presentation by a health education professional will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of the structure and functions of the human body and their implications for, and relation to, exercise and fitness, which all learners wishing to pursue a career in health and fitness need to be aware of.



This should be supported by examples drawn from industry or through developed case studies that highlight:

- the life course of the musculoskeletal system and how this affects planning and delivering exercise sessions for the special populations of 14-16 year olds, over 50s and ante-natal and post-natal women
- how the three energy systems are used during aerobic and anaerobic exercise
- how exercise can improve neuromuscular connections and motor fitness.

This unit could be delivered through distance learning. However, this will involve additional, and different, considerations, such as planning, and other measures to ensure learners can gain the required knowledge and understanding.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Other alternatives could be logbooks or workbooks completed in the workplace or during visits.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Clegg C – *Exercise Physiology and Functional Anatomy* (Studies in Sport & Physical Education) (Feltham Press Ltd; Revised edition, 1994) ISBN 9780952074311

Hazeldine R – *Fitness for Sport* (The Crowood Press, 2000) ISBN 9781861263360

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

Palastanga N – *Anatomy and Human Movement* (Butterworth-Heinemann, 2006) ISBN 9780750688147

Rowett H G Q – *Basic Anatomy and Physiology* (Hodder Murray, 1999) ISBN 9780719585920

Sharkey B and Gaskill E – *Fitness and Health* (Human Kinetics, 2006) ISBN 9780736056144

Sharkey B J – *Physiology of Fitness, 3rd Edition* (Human Kinetics, 1990) ISBN 9780873222679

Tortora G J and Derrickson B H – *Principles of Anatomy and Physiology* (John Wiley and Sons, 2008) ISBN 9780470233474

### Journals

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

*Research Quarterly for Exercise and Sport*

## Websites

BBC Health	<a href="http://www.bbc.co.uk/health">www.bbc.co.uk/health</a>
British Association of Sport and Exercise Sciences	<a href="http://www.bases.org.uk">www.bases.org.uk</a>
British Heart Foundation	<a href="http://www.bhf.org.uk">www.bhf.org.uk</a>
Coachwise	<a href="http://www.1st4sport.com">www.1st4sport.com</a>
Health Development Agency	<a href="http://www.nice.org.uk">www.nice.org.uk</a>
NHS Information Centre	<a href="http://www.ic.nhs.uk/">www.ic.nhs.uk/</a>

# Unit 5: Planning Gym-based Exercise

**Unit reference number:** F/600/9018

**Level:** 2

**Credit value:** 4

**Guided learning hours:** 23

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## Unit aim

This unit aims to develop knowledge and understanding of how to plan gym-based exercise for clients, both individuals and groups. Learners will also develop the skills needed to collect and use client information and to plan safe and effective gym-based exercise programmes.

Learners will follow the planning process involved in developing gym-based exercise programmes. They will begin by exploring the methods used to collect client information prior to any gym-based exercise and the importance of this.

Learners will then have the opportunity to apply their knowledge and understanding and collect and use client information to plan safe and effective gym-based exercise to develop cardiovascular fitness, muscular fitness, flexibility and motor skills.

## Essential resources

For this unit, centres need to provide learners with access to:

- examples of informed consent forms and to normative data for interpreting fitness test results
- computers, the internet and library facilities to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand how to collect client information to plan gym-based exercise	1.1	Explain the process of informed consent	<p>Ensure client fully aware of what the exercise session involves eg physical and technical demands, aims and objectives, benefits of the exercise session, any potential risks</p> <p>Establish client understanding eg give the client the opportunity to consider information provided and to ask questions</p> <p>Obtain signed consent documentation</p>
		1.2	Describe different methods to collect client information, including: <ul style="list-style-type: none"> <li><input type="checkbox"/> questionnaire</li> <li><input type="checkbox"/> interview</li> <li><input type="checkbox"/> observation</li> <li><input type="checkbox"/> physical measurements</li> </ul>	<p>Type of information eg lifestyle, medical history, physical exercise history, dietary history, personal goals, physical activity preferences, potential barriers</p> <p>Questionnaire eg PA-Q, lifestyle</p> <p>Interview (questioning, listening)</p> <p>Observation eg client carrying out set exercise</p> <p>Physical measurements eg height, weight, record of BMI</p>
		1.3	Describe how to determine which method/s of collecting information are appropriate according to the individual	<p>Appropriate to client eg needs , objectives, level of confidence</p> <p>Availability of resources eg time, equipment, facilities</p>

Learning outcomes		Assessment criteria		Unit amplification
		1.4	Explain the principles of screening clients prior to gym-based exercise to include the use of the physical activity readiness questionnaire (PARQ)	<p>Identify client needs, objectives and preferences, discuss any barriers to participation</p> <p>Collect information to use in setting goals and objectives</p> <p>Identify any contraindications to exercise eg with special population clients</p> <p>Identify any risks eg age related, injury related, specific needs</p>
2	Understand how to use client information to plan gym-based exercise	2.1	Describe the factors, based on client screening, which may affect safe exercise participation	<p>Factors eg modifiable and unmodifiable risk factors of coronary heart disease, relating to specialist population groups</p> <p>Medical history/condition eg medication</p> <p>Injury, current fitness level</p>
		2.2	Give examples of how client information affects the planning of gym-based exercise	<p>Used to determine goals and objectives, type, duration and intensity of exercise</p> <p>Informs any modifications eg to warm-up and cool-down sessions, to main activities, to meet individual needs, identify alternative exercise</p>
		2.3	Identify the reasons for temporary deferral of exercise	Reasons eg minor illness or injury, inappropriate clothing, referral to another professional
		2.4	Explain the reasons for referring clients to other professionals	<p>Compliance with legal requirements eg outside level of competence or authority</p> <p>Contraindications to exercise, medical conditions eg cardiac, pulmonary or metabolic disease, arthritis, osteoporosis</p> <p>Professionals eg GP, special populations instructors, physiotherapists</p>

Learning outcomes		Assessment criteria		Unit amplification
3	Understand how to plan gym-based exercise with clients	3.1	Describe how to plan gym-based exercise to meet the needs of clients with different objectives	<p>Identify objectives eg improve fitness, improve motivation, address barriers to participation, improve skills and techniques, opportunities for fun and enjoyment</p> <p>FITT (frequency, intensity, time, type)</p> <p>Apply principles of training eg overload, specificity, progression, individual differences, variation, reversibility</p> <p>Consider participants eg age, ability, gender, numbers, medical issues, specific needs</p> <p>Consider available resources eg equipment, time, environment</p> <p>Take account of other considerations eg legal requirements</p>
		3.2	Explain why it is important to agree goals and objectives for gym-based exercise with clients	<p>Goals eg short-term, medium-term and long-term, SMART goals (specific, measureable, attainable, realistic, time bound)</p> <p>To ensure client understanding, inclusion and motivation</p>
		3.3	Identify a range of exercises for individual clients to develop: <ul style="list-style-type: none"> <li>□ cardio-vascular fitness</li> <li>□ muscular fitness</li> <li>□ flexibility</li> <li>□ motor skills</li> </ul>	<p>Exercises safe and appropriate for clients</p> <p>Cardio-vascular fitness eg upright cycle, recumbent cycle, treadmill, stepper, rowing machine, elliptical trainer, cross trainer</p> <p>Muscular fitness eg push-ups, chin-ups, arm curls, leg lifts, leg extension, leg press, leg curls, back extension. sit ups/crunches, bench presses, resistance machines, free weights</p> <p>Flexibility – stretching static eg cool-down, hold for 30-60 seconds, dynamic eg arm swings, leg swings, joint rotations</p> <p>Motor skills – exercises that involve eg agility, coordination, balance, reaction time</p>

Learning outcomes		Assessment criteria		Unit amplification
		3.4	Identify a range of cardiovascular and resistance machines, and their uses	Cardiovascular eg upright cycle, recumbent cycle, treadmill, stepper, rowing machine, elliptical trainer, cross trainer Resistance machines eg bench press, free weights, barbells, dumbbells, utility benches, seated calf machine, power squat, seated rowing machine
		3.5	Describe how to plan gym-based exercise using circuit formats	Completion of all prescribed exercises Apply principles and variable of fitness eg intensity, order of exercise, duration, build in appropriate warm-up and cool-down Types of circuit formats eg machine, body weight, with cardiovascular exercise, timed Uses eg develop muscle strength, heart-lung fitness
4	Be able to collect and use client information to plan a gym-based exercise programme	4.1	Use appropriate methods to collect information to plan a gym-based programme	Information: eg personal goals, lifestyle, medical history, physical activity history, dietary history, physical activity preferences, potential barriers Questionnaire eg PARQ, lifestyle interview (questioning, listening) Observation eg client carrying out set exercise, signs of fatigue or discomfort Physical measurements eg height, weight, record of BMI
		4.2	Check the information is accurate and up-to-date	Confirm information with client and amend if necessary

Learning outcomes		Assessment criteria		Unit amplification
		4.3	Identify client needs and potential and any possible risks from participation in a gym-based programme	<p>Analyse client information and identify the implications for gym-based exercise</p> <p>Refer clients as required</p> <p>In relation to different types of exercise (cardiovascular fitness, muscle fitness, flexible, motor skills)</p> <p>Needs and potential eg goals and objectives, current and potential fitness and skill levels</p> <p>Risks eg contraindications, medical history/conditions, injury</p>
		4.4	Maintain client confidentiality	<p>Follow organisational procedures</p> <p>Compliance with Data Protection Act and REP Code of Ethical Practice</p>
5	Be able to plan a safe and effective gym-based exercise programme with clients	5.1	<p>Agree objectives with clients appropriate to:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> their needs and potential</li> <li><input type="checkbox"/> accepted good practice in the industry</li> <li><input type="checkbox"/> own level of competence</li> </ul>	<p>Objectives eg improve fitness, improve motivation, address barriers to participation, improve skills and techniques, opportunities for fun and enjoyment</p> <p>Gain agreement eg ensure client understanding, use appropriate communication and interpersonal skills</p>
		5.2	<p>Select gym-based exercises that will help clients to develop:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> cardiovascular fitness</li> <li><input type="checkbox"/> muscular fitness</li> <li><input type="checkbox"/> flexibility</li> <li><input type="checkbox"/> motor skills</li> </ul>	<p>Exercises safe and appropriate for clients and meet client objectives</p> <p>Advise clients on any modifications</p> <p>Apply principles and variables of training eg frequency, intensity, time, type, adaptation, progression, variation</p>



Learning outcomes		Assessment criteria		Unit amplification
		5.3	Plan how to minimise any risks relevant to the programme	<p>Identify hazards and assess associated risks eg to the client, the planned activities, simultaneous activities</p> <p>Ensure exercises are safe and appropriate for clients</p> <p>Carry out appropriate risk assessment, plan how to control risks eg use of specialist equipment to minimise identified risk</p>
		5.4	Plan realistic timings and sequences for exercise	Plan eg to meet client needs, appropriate to the objectives of the exercise programme, include all components and exercises
		5.5	Record programme plans in an appropriate format	<p>Follow organisational procedures, comply with industry standards</p> <p>Record details of all exercises and activities eg warm-up, cool-down</p>

## Information for tutors

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### Delivery

This unit should be delivered in a way that develops knowledge and understanding of planning gym-based exercise for a range of clients. Learners need to know and understand:

- the methods used to collect client information, including the principles of screening clients prior to exercise
- how to use client information to plan gym-based exercise
- how to plan safe and effective gym-based exercise to develop cardiovascular fitness, motor fitness, flexibility and motor skills.

A useful opening would be small-group discussions, during which learners can exchange their experiences of gym-based exercise, either as employees in the sector or as clients. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Learners should be encouraged to engage with employers and, where possible, other employees to gain knowledge and understanding of the importance of planning gym-based exercise correctly to meet the needs of individual clients, based on the information gathered from clients.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom planning and instructing gym-based exercise is a key part of their role, for example a personal trainer, where possible, and through the use of guest speakers and video/DVD training programmes.

For example, a presentation by a health fitness instructor will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of the methods they use to collect client information and how they use this information to plan safe and effective gym-based exercise programmes with a range of clients. They could also talk about the importance of agreeing programme objectives with clients and of minimising any potential risks associated with the gym-based exercise. This should be supported by examples drawn from industry or through developed case studies that highlight:

- the importance of collecting the correct client information and what could happen if this is not carried out
- how client information affects planning gym-based exercise, including temporary deferral of exercise and referring clients to other professionals
- the range of exercises that can be used, cardiovascular and resistance machines and their uses, and how to use circuit formats in gym-based exercise.

To meet the practical aspect of the unit, in terms of collecting client information and using it to plan gym-based exercise, learners could either use documentation from their place of work or the tutor could supply learners with standard templates.

If learners are in work or on work placement they could be observed giving sensitive feedback to clients based on the information they have collected and communicating appropriately with clients to increase motivation.

This unit could be delivered through distance learning. However, this will involve additional, and different, considerations, such as planning, and other measures to ensure learners can gain the required knowledge and understanding.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

There must be evidence that the learner has carried out appropriate screening (for example use of the PARQ and informed consent) and taken physical measurements to include height, weight and a record of BMI.

The learner should demonstrate the ability to provide sensitive feedback and any relevant healthy lifestyle advice to clients (within the limits of their knowledge and competence) based on collected information and test results/'norms'.

Learners must show that they are able to communicate effectively with clients using motivational styles appropriate to the individual and the exercise format.

There must be evidence that the learner has planned a safe and effective warm-up and cool-down.

There must be evidence that the learner has planned a gym-based programme by applying the principles and variables of fitness to a range of activities to meet identified client goals and/or to achieve general fitness and health gains.

Learners must show they have planned for a minimum of three body weight exercises and a minimum of four exercises from each of the following:

- resistance machine lifts
- free weight lifts.

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Alternatives could be logbooks or workbooks completed in the workplace or during visits.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Adams G M – *Exercise Physiology Laboratory Manual: Health and Human Performance* (McGraw Hill Higher Education, 2001) ISBN 9780072489125

Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193

Buckley J, Holmes J, Mapp G – *Exercise on Prescription: Cardiovascular Activity for Health* (Butterworth-Heinemann, 1999) ISBN 9780750632881

Coulson M – *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness – Fitness Professionals* (A&C Black, 2007) ISBN 9780713682250

Dalglish J, Dollery S – *The Health and Fitness Handbook* (Longman, 2001) ISBN 9780582418790

Franks B D and Howley E T – *Fitness Leader’s Handbook* (Human Kinetics Europe, 1998) ISBN 9780880116541

Howley E T and Franks B D – *Health Fitness Instructor’s Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

## **Journals**

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

*Journal of Physical Activity and Health*

## **Websites**

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

Human Kinetics

[www.humankinetics.com](http://www.humankinetics.com)

Sports Coach UK

[www.sportscoachuk.org](http://www.sportscoachuk.org)

# Unit 6: Instructing Gym-based exercise

**Unit reference number:** A/600/9020

**Level:** 2

**Credit value:** 6

**Guided learning hours:** 37

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## Unit aim

The aim of this unit is to develop an understanding of and skills in instructing safe and effective gym-based exercise for individuals and groups.

Learners will develop their knowledge and understanding of providing gym-based exercise and have the opportunity to put this into practice by instructing gym-based exercise sessions with clients.

They will use appropriate methods to observe clients, respond to client needs and adapt exercises as necessary. Learners will bring the exercise session to an end safely and effectively, including using safe and effective cool-down activities.

The final part of the unit focuses on reviewing the outcomes of the exercise session, including client feedback. Learners will have the opportunity to reflect on their practice and identify how to improve their personal practice.

## Essential resources

For this unit, centres need to provide learners with access to:

- the appropriate fitness equipment and an appropriate area to carry out the practical activities required by this unit
- computers, the internet and library facilities to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand how to provide gym-based exercise	1.1	Identify safe and effective alignment for a range of gym-based exercise positions to cover use of: <ul style="list-style-type: none"> <li>□ cardiovascular machines</li> <li>□ resistance machines</li> <li>□ free weights</li> </ul>	Range of basic exercises (cardiovascular machines, resistance machines, free weights), safe and appropriate for clients, specific to type of exercise  Safe and effective alignment of exercise positions eg standing, sitting, range of motion, neutral spine alignment, joint alignment
		1.2	Identify different methods of adapting a gym-based exercise programme to ensure appropriate progression and/or regression	Appropriate progression and regression eg number of exercises, order of exercise, speed, intensity, repetitions, duration  To meet client needs  To meet objectives of the exercise programme
		1.3	Describe how to develop client co-ordination by building exercises/movements up gradually	In terms of eg complexity, speed
		1.4	Describe the principles of behaviour management for group inductions	Appropriate to the group  Explain purpose of the induction including positive communication, establish eye contact, professional self-image  Ensure client understanding  Set ground rules for conduct within the gym environment

Learning outcomes		Assessment criteria		Unit amplification
2	Be able to prepare self and equipment for gym-based exercise	2.1	Prepare self to supervise gym-based exercise	Collect all relevant information eg number of clients, range of clients, special population clients, objectives of the exercise session, appropriate set of planned exercises  Professional image, correct clothing and footwear
		2.2	Select equipment for gym-based programmes as appropriate to client needs	Appropriate to the objectives and content of the exercise session  Types of equipment eg upright cycle, recumbent cycle, treadmill, stepper, rowing machine, elliptical trainer, free weights, dumbbells, barbells
		2.3	Prepare the environment and equipment as appropriate to client needs	Appropriate to agreed exercises (cardiovascular fitness, muscular fitness, flexibility, motor skill)  Equipment eg set up and check, ensure sufficient equipment available  Environment — adequate space for number of clients and exercise session, correct temperature, lighting, ventilation  Identify and manage any hazards and risks within the environment
3	Be able to prepare clients for gym-based exercise	3.1	Help clients feel welcome and at ease	Professional behaviour eg dress, punctuality  Identify new clients  Adopt approachable manner eg encourage clients to ask questions, to express concerns, provide clients with full and accurate information

Learning outcomes		Assessment criteria	Unit amplification
		3.2 Explain the purpose and value of the exercises, including warm-up and cool-down	<p>Cardiovascular fitness eg raise metabolic rate, reduce risk of heart disease</p> <p>Muscular fitness eg develop muscles and muscle strength, improve bone density</p> <p>Flexibility eg reduce risk of injury, improve posture</p> <p>Motor skills eg improve, balance, agility, coordination, reaction time</p> <p>Importance of warm-up and cool-down, ensure client understanding</p> <p>Warm-up- structure eg mobility, pulse raising, static stretching, purpose eg prepare body for exercise, enhance flexibility, minimise discomfort, prevent injury</p> <p>Cool-down – structure eg pulse lowering, static stretching, developmental stretching, purpose eg enhance flexibility, minimise discomfort, prevent injury, avoid delayed onset of muscle soreness, provide recovery time</p>
		3.3 Describe the exercises, including their physical and technical demands	<p>Provide clear information about the planned exercise session eg purpose of exercises, components part, appropriateness to participants, physical and technical demands</p> <p>Check client understanding and give client opportunity to ask questions</p>
		3.4 Confirm or revise plans with clients as appropriate	<p>To meet client needs</p> <p>Develop realistic plans so goals can be achieved</p> <p>Check client understanding and give client opportunity to ask questions</p> <p>Ensure client agreement</p>



Learning outcomes		Assessment criteria		Unit amplification
		3.5	Advise clients of the facility's emergency procedures	Location of emergency equipment eg first aid kit, telephone, fire extinguishers Fire eg evacuation route, fire exits, assembly point
		3.6	Use warm-up activities that are safe and effective for the clients	Explain importance of warm-up and ensure client understanding Warm-up activities appropriate to client needs Structure eg mobility, pulse raising, static stretching
4	Be able to instruct gym-based exercise	4.1	Give explanations and demonstrations that are technically correct (with safe and effective alignment of exercise positions)	Safe and effective alignment of exercise positions appropriate to client needs and level of experience, appropriate to the planned exercise session Techniques eg lifting and passing techniques Demonstrations of movements and techniques appropriate to the gym environment, appropriate speed of movements Technically correct verbal explanations eg to reinforce technique, to correct poor technique
		4.2	Communicate as appropriate to client needs and the environment	Appropriate to client needs and the environment Appropriate to exercise session Appropriate methods of voice projection Effective use of volume and pitch of voice

Learning outcomes		Assessment criteria		Unit amplification
5	Be able to supervise clients undertaking gym-based exercise	5.1	Adopt appropriate positions to observe clients and respond to their needs	<p>Appropriate to client needs and the environment</p> <p>Use of a variety of positions, mirroring, demonstrating control of the client</p> <p>Correct poor technique where required,</p> <p>Regular teaching points to meet individual needs</p> <p>Move around the area to ensure all clients observed and needs responded to</p>
		5.2	Monitor the safety and intensity of exercise	<p>Ensure clients carry out exercises in a safe and effective manner</p> <p>Safe use of equipment</p> <p>Adapt exercises as necessary eg suitable progressions and regressions, respond appropriately to signs of discomfort or injury</p> <p>Types of monitoring eg rate of perceived exertion (RPE), talk test, target heart rate zones</p>
		5.3	Provide feedback and instructing points which are timely, clear and motivational	<p>Timely, clear, motivational</p> <p>Appropriate to client needs,</p> <p>Provide encouragement and motivation</p>

Learning outcomes		Assessment criteria		Unit amplification
		5.4	Adapt exercises with suitable progressions and regressions according to client needs	<p>Appropriate progressions and regressions eg number of exercises, order of exercise, speed, intensity, repetitions, duration</p> <p>To meet client needs eg fitness and skill levels, changing needs throughout the session</p> <p>To meet objectives of the exercise programme</p> <p>Adapting exercise for occasional special population clients eg young people aged 14-16 age, antenatal and postnatal women, older people (50 plus)</p> <p>Environmental factors eg available space, available equipment, number of participants</p>
6	Be able to bring a gym-based exercise session to an end	6.1	Allow sufficient time to end the session according to clients' level of experience	<p>Appropriate to client level of experience and fitness</p> <p>Plan timings eg safe and effective cool-down activities for clients</p> <p>Opportunity for client to ask questions,</p> <p>Provide feedback to clients on the session</p>
		6.2	Use cool-down activities that are safe and effective for the clients	<p>Explain importance of cool-down eg avoid delayed onset of muscle soreness and ensure client understanding</p> <p>Appropriate to client need and the environment</p> <p>Structure eg pulse lowering section, static stretching, developmental stretching</p>
		6.3	Give the clients an accurate summary of feedback on the session	<p>Accurate summary eg progress, strengths, areas for development, suggested additional/alternative exercise</p> <p>Provide encouragement and motivation</p>

Learning outcomes		Assessment criteria		Unit amplification
		6.4	Give the clients the opportunity to: <ul style="list-style-type: none"> <li><input type="checkbox"/> reflect on the session</li> <li><input type="checkbox"/> ask questions</li> <li><input type="checkbox"/> provide feedback</li> <li><input type="checkbox"/> identify further needs</li> </ul>	Reflect on the session eg on their progress, their experience, effectiveness of the instruction Ask questions eg about their performance, about alternative exercise Provide feedback eg on the effectiveness of the instruction, their experience Identify further needs eg future sessions, alternative activities
		6.5	Make sure the clients understand how to continue their programme of gym-based exercise without direct supervision	Provide necessary information and motivation eg goals/objectives of the exercise sessions, components of the exercise sessions, how exercise/components could be adapted, importance of not over exercising
		6.6	Leave the environment in a condition acceptable for future use	Correct procedures for checking and dealing with any equipment used eg clearing the area, storing and cleaning equipment correctly, reporting any faults Environment eg clean, safe, tidy, inform appropriate person about any health and safety issues
7	Be able to reflect on providing gym-based exercise	7.1	Review the outcomes of working with clients and client feedback	Review client progress eg offer fitness advice in response to changing needs of clients, in relation to goals/objectives Client opportunity to ask questions and provide feedback

Learning outcomes		Assessment criteria		Unit amplification
		7.2	Identify: <ul style="list-style-type: none"> <li>□ how well the exercises met client needs</li> <li>□ how effective and motivational the relationship with the client was</li> <li>□ how well the instructing style matched the clients' needs</li> </ul>	How well the exercises met client needs eg effectiveness of planned activities, achievement of goal/objectives  How effective and motivational the relationship with the client was eg client felt supported, encouraged and motivated, clear and appropriate communication, mutual respect  How well the instructing style matched client needs eg use of appropriate demonstrations, clear, accurate explanations, motivation and support
		7.3	Identify how to improve personal practice	Identify strengths and areas for improvement  Set SMART (specific, measurable, achievable, realistic, time-bound) targets  Personal development plan  Development opportunities eg specific training and courses; modify exercise programmes eg future planning to ensure adherence, changing activities to maintain interest and ensure fitness progression
		7.4	Explain the value of reflective practice	Learning from own experiences  Important source of personal professional development and improvement  Allows for continuous updating of skills and knowledge eg to plan and instruct more effective exercise session

Learning outcomes		Assessment criteria		Unit amplification
8	Be able to support clients taking part in gym-based exercise	8.1	Present a positive image of self and organisation to clients	<p>Self-presentation eg personal hygiene, clean and smart uniform/dress</p> <p>Organisation eg knowledgeable staff, consistent approach taken by all staff, staff work together, clear commitment to providing effective customer service, create client confidence in organisation and its services</p>
		8.2	Establish an effective working relationship with clients	<p>Build client trust and confidence, Clients feel valued and motivated</p> <p>Clients more likely to adhere to exercise and physical activity programmes</p> <p>Develop mutual trust and respect</p> <p>Requirements eg in line with good practice, ethical requirements, professional conduct</p>
		8.3	Communicate with clients in a way that makes them feel valued	<p>Verbal communication eg appropriate tone and pitch of voice, language appropriate to client, use of positive language , use of praise and encouragement, avoid use of slang/jargon, opportunities to discuss client needs</p> <p>Non-verbal communication eg posture, expression, gestures, eye contact, positive body language</p> <p>Listening eg asking appropriate questions, seeking client views on their performance</p>
		8.4	Use motivational styles appropriate to the client and the exercise format	<p>Appropriate to the client eg setting clear, realistic goals/objectives, building client self-confidence, positive encouragement, praise, encourage positive thinking in clients, help clients develop and follow through their own motivational strategies</p> <p>Appropriate to the exercise format eg in relation to goals/objective, in relation to planned sessions</p>

## Information for tutors

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### Delivery

This is a practical unit and needs to be delivered in a way that enables learners to demonstrate their ability to instruct gym-based exercise safely and effectively. Learners need to demonstrate that they can:

- communicate effectively with clients, applying appropriate voice projection and using the tone and pitch of their voice effectively
- plan and instruct safe and effective warm-up and cool-down activities
- plan and instruct safe and effective gym-based exercise sessions, including the correct use of equipment and bringing the session to an end
- instruct and observe clients from a variety of positions, including correcting poor technique as necessary.

A useful opening would be small-group discussions, during which learners can exchange their experiences of gym-based exercise, either as employees in the sector or as clients. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Tutor input will need to cover the theoretical aspect of the unit relating to the principles of gym-based exercise.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom planning and instructing gym-based exercise is a key part of their role, for example a personal trainer, where possible, and through the use of guest speakers and video/DVD training programmes.

Guest speakers, for example a health fitness instructor, will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of how they prepare themselves and clients for gym-based exercise and how they ensure that the exercise sessions they instruct are safe and effective. This could include the importance of using a variety of teaching positions, of observing clients regularly to ensure their safety and of adapting exercises as necessary to take account of the changing needs of clients.

This could be supported by examples drawn from industry or through developed case studies which highlight safe and unsafe practice.

The importance of health and safety, for both clients and instructors, needs to be emphasised throughout delivery of this unit. Appropriate risk assessments must be carried out before learners undertake any practical activities.

Tutors need to ensure that there are appropriate and sufficient opportunities to observe learners instructing and supervising gym-based exercise sessions and that the appropriate records are kept to evidence learner ability and achievement.

Learners should be encouraged to reflect positively on the outcomes of the exercise session and use client feedback constructively when identifying how to improve their personal performance.

Learners can produce exemplar case studies, logbooks/diaries, witness testimonies and presentations that demonstrate their involvement in gym-based exercise sessions.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

Learners must show that they are able to communicate effectively with clients using motivational styles appropriate to the individual and the exercise format.

There must be evidence that the learner has planned and instructed a safe and effective warm-up and cool-down.

There must be evidence that the learner has instructed participants in the use of a minimum of **three** of the following types of cardiovascular equipment:

- upright cycle
- recumbent cycle
- treadmill
- stepper
- rowing machine
- elliptical trainer
- cross trainer.

Learners must show they have planned and instructed for a minimum of **three** body weight exercises and a minimum of **four** exercises from each of the following:

- resistance machine lifts
- free weight lifts.

Learners must demonstrate correct lifting and passing techniques, including dead lifting the barbell safely from the floor and spotting.

Learners must show accurate demonstrations of movements and techniques appropriate to the gym environment with particular attention to the speed of movements.

Learners must show that they can apply methods of voice projection and can effectively use the volume and pitch of their voice.

Learners should be observed teaching from a variety of positions using mirroring, and demonstrating control of the client.

Learners must show the ability to observe their clients/participants and correct poor technique where required, giving regular teaching points to meet individual needs.

Learners must show evidence that they have the knowledge to safely adapt sessions for the individual and occasional apparently healthy special population clients including:

- young people in the 14-16 age range
- antenatal and postnatal women
- older people (50 plus).

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Other alternatives could be logbooks or workbooks completed in the workplace or during visits.



Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Textbooks

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Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

### Journals

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

*Journal of Physical Activity and Health*

### Websites

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

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# Unit 7: **Planning Group Exercise to Music Sessions**

**Unit reference number:** F/600/9021

**Level:** 2

**Credit value:** 4

**Guided learning hours:** 24

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## **Unit aim**

This unit aims to develop knowledge and understanding of how to plan exercise to music for groups. Learners will also develop the skills needed to identify appropriate programme objectives and to plan safe and effective group exercise to music.

In this unit, learners will follow the planning process involved in developing group exercise to music. They will begin by exploring the methods used to collect participant information prior to any exercise to music and the importance of this.

Learners will then have the opportunity to apply their knowledge and understanding. They will identify appropriate objectives for the exercise programme and select appropriate exercises in order to plan safe and effective group exercise to music, which develops cardiovascular fitness, muscular fitness, flexibility and motor skills.

## **Essential resources**

For this unit, centres need to provide learners with access to:

- examples of informed consent forms and to normative data for interpreting fitness test results
- computers, the internet and library facilities to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand how to collect participant information	1.1	Explain the process of informed consent	<p>Ensure participant fully aware of what the exercise session involves eg physical and technical demands, aims and objectives, benefits of the exercise session, any potential risks</p> <p>Establish participant understanding eg give participant opportunity to consider information provided, participant opportunity to ask questions</p> <p>Obtain signed consent documentation</p>
		1.2	Describe different methods to collect participant information: <ul style="list-style-type: none"> <li>□ questionnaire</li> <li>□ interview</li> <li>□ observation</li> </ul>	<p>Type of information eg lifestyle, medical history, physical exercise history, dietary history, personal goals, physical activity preferences, potential barriers</p> <p>Questionnaire eg PARQ, lifestyle</p> <p>Interview eg questioning, listening</p> <p>Observation eg participant carrying out set exercise</p> <p>Physical measurements eg height, weight, record of BMI</p>
		1.3	Describe how to determine which methods of collecting information are appropriate according to the situation	<p>Appropriate to participant eg needs, objectives, level of confidence</p> <p>Availability of resources eg time, equipment, facilities</p>

Learning outcomes		Assessment criteria		Unit amplification
		1.4	Explain the principles of screening participants prior to exercise to music to include the use of the physical activity readiness questionnaire (PARQ)	<ul style="list-style-type: none"> <li>□ Identify participant's needs, objectives and preferences</li> <li>□ Discuss any barriers to participation</li> <li>□ Collect information to use in setting goals and objectives</li> <li>□ Identify any contraindications to exercise eg with special population clients</li> <li>□ Identify any risks eg age related, injury related, specific needs</li> </ul>
2	Understand how to use participant information to plan group exercise to music	2.1	Describe the factors, based on client screening, which affect safe exercise participation	<p>Factors eg modifiable and unmodifiable risk factors of coronary heart disease, relating to specialist population groups</p> <p>Medical history/condition eg medication</p> <p>Injury, current fitness level</p>
		2.2	Give examples of how participant information could affect the planning of group exercise to music	<p>Used to determine goals and objectives, type, duration and intensity of exercise</p> <p>Identify modifications eg to warm-up and cool-down sessions, to main activities, to meet individual needs, identify alternative exercise</p>
		2.3	Identify the reasons for temporary deferral of exercise	Reasons eg minor illness or injury, inappropriate clothing, referral to another professional
		2.4	Explain the reasons for referring participants to other professionals	<p>Comply with legal requirements eg outside level of competence or authority</p> <p>Contraindications to exercise</p> <p>Medical conditions eg cardiac, pulmonary or metabolic disease, arthritis, osteoporosis</p> <p>Professionals eg GP, special populations instructors, physiotherapists</p>

Learning outcomes		Assessment criteria		Unit amplification
3	Understand how to plan group exercise to music	3.1	Describe how to plan exercise to music to meet the needs of clients with different objectives	<p>Objectives eg improve fitness, improve motivation, address barriers to participation, improve skills and techniques, opportunities for fun and enjoyment</p> <p>Based on collected information; principles and variables of training eg FITT principles, overload, specificity, progression, individual differences, variation, reversibility</p> <p>Consider participants eg age, ability, gender, medical issues, specific needs, barriers to participation, numbers</p> <p>Consider available resources eg equipment, time, environment</p> <p>Take account of other considerations eg legal requirements</p>
		3.2	Identify a range of group exercises to music, to develop: <ul style="list-style-type: none"> <li><input type="checkbox"/> cardio-vascular fitness</li> <li><input type="checkbox"/> muscular fitness</li> <li><input type="checkbox"/> flexibility</li> <li><input type="checkbox"/> motor skills</li> </ul>	<p>Safe and appropriate for participants</p> <p>Cardiovascular fitness eg walking, jogging, skipping, squats, lunges, step aerobics, star jumps</p> <p>Muscular fitness eg squats, presses, free weights</p> <p>Flexibility- static stretching eg cool-down, hold for 30-60 seconds, dynamic stretching eg arm swings, leg swings, joint rotations</p> <p>Motor skills eg- exercises that involve eg agility, coordination, eg moving in time to the music, reaction time, speed of movement, balance</p>
		3.3	Identify a range of equipment used in group exercise to music and its uses	Types eg dumbbells, hand weights, body bars, tubing, bands, mats

Learning outcomes		Assessment criteria		Unit amplification
		3.4	Describe how to plan group exercise to music using circuit formats	<ul style="list-style-type: none"> <li>□ Completion of prescribed exercises</li> <li>□ Apply principles and variables of fitness eg intensity, order of exercise, duration, appropriate warm-up and cool-down</li> <li>□ Types of circuit format eg weight, cardiovascular, timed</li> <li>□ Use eg develop muscle strength, heart-lung fitness</li> </ul>
4	Understand how to use music to enhance group exercise	4.1	Describe how to select speed and type of music as appropriate to the participants and phase of the class	<p>Appropriate to the participants and phase of the class eg type of exercise/class, desired outcome of the session, tailored to exercise component, safe and effective pace, modifications to alter range of motion for each exercise</p> <p>Consider participants eg age, ability, level of fitness, preferences</p> <p>Warm-up eg establish atmosphere, uplifting music, 120-134 bpm</p> <p>Cardiovascular fitness eg strong beat, motivate participants, allow for variety of movements , low impact 125-140 bpm, high impact 135-150 bpm</p> <p>Muscular fitness eg strong regular beat, good pace, maintain speed exercise performed at, 110-125 bpm</p> <p>Cool-down eg slower pace, allow for stretch positions to be held, 80-110 bpm</p>
		4.2	Describe the legal requirements covering the use of music	For example Public Phonographic Licence (PPL), Performing Rights Society (PRS)

Learning outcomes		Assessment criteria		Unit amplification
		4.3	Describe the principles involved in developing choreography for a group exercise session	Principles eg dynamics, space, relationships, actions, body parts Add on choreography (adding one move to another) Verse and chorus choreography (different sequence of movements for verse, chorus and instrumental segments) Layering (changes to original sequence of established movement(s)) Create patterns instructors can use eg 32 count phrase (numbers of beats or pulses that go by in one 'phrase' of music)
5	Be able to plan safe and effective group exercise to music	5.1	Identify objectives that are appropriate to: <ul style="list-style-type: none"> <li>□ the likely needs and potential of the participants</li> <li>□ accepted good practice in the industry</li> <li>□ own level of competence</li> </ul>	Objectives eg improve fitness, improve motivation, address barriers to participation, improve skills and techniques, increase opportunities for fun and enjoyment Gain agreement eg ensure participant understanding, use appropriate communication and interpersonal skills
		5.2	Select exercises that will help clients to develop: <ul style="list-style-type: none"> <li>□ cardiovascular fitness</li> <li>□ muscular fitness</li> <li>□ flexibility</li> <li>□ motor skills</li> </ul>	Develop client cardiovascular fitness, muscular fitness, flexibility, motor skills

Learning outcomes		Assessment criteria		Unit amplification
		5.3	Plan safe and effective group exercise to music to achieve planned objectives for the session	<p>To meet participant objectives</p> <p>Advise on any modifications</p> <p>Develop cardiovascular fitness, develop muscular fitness, develop flexibility, develop motor skills</p> <p>Apply principles and variables of training eg frequency, intensity, time, type, adaptation, progression, variation</p>
		5.4	Select a range of exercises that are safe and appropriate for participants and include possible alternatives	<p>Apply principles and variables of training eg FITT principles, overload, specificity, progression, individual differences, variation, reversibility</p> <p>Effective alignment of exercise positions, alternatives to potentially harmful exercises</p>
		5.5	Plan realistic timings and original choreography for sessions	<p>To meet participant needs</p> <p>Appropriate to the objectives of the exercise programme, include all components and exercises</p>
		5.6	Record plans in an appropriate format	<ul style="list-style-type: none"> <li>□ Follow organisational procedures</li> <li>□ Comply with industry standards</li> <li>□ Record details of all exercises and activities eg warm-up, cool-down</li> </ul>



## Information for tutors

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### Delivery

This unit should be delivered in a way that develops knowledge and understanding of planning exercise to music programmes for a range of participants. Learners need to know and understand:

- the methods used to collect participant information, including the principles of screening participants prior to exercise
- how to use participant information to plan group exercise to music
- how to plan safe and effective exercise to music programmes to develop cardiovascular fitness, motor fitness, flexibility and motor skills.

A useful opening would be small-group discussions during which learners can exchange their experiences of exercise to music, either as employees in the sector or as participants. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Learners should be encouraged to engage with employers and, where possible, other employees to gain knowledge and understanding of the importance of planning exercise to music correctly to meet the needs of individual participants, based on the information gathered from participants.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom planning and instructing exercise to music is a key part of their role, for example a personal trainer, where possible, and through the use of guest speakers and video/DVD training programmes.

For example, a presentation by a health fitness instructor will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of the methods they use to collect participant information and how they use this information to plan safe and effective group exercise to music programmes with a range of participants. They could also talk about the importance of identifying appropriate programme objectives and of ensuring that all group exercise to music sessions are safe and effective. This should be supported by examples drawn from industry or through developed case studies that highlight:

- the importance of collecting the correct participant information and what could happen if this is not carried out
- how participant information affects planning exercise to music, including temporary deferral of exercise and referring participant to other professionals
- the range of exercises that can be used, the equipment used and how to select the correct music and choreography.

To meet the practical aspect of the unit, in terms of identifying objectives and selecting exercises to plan group exercise to music, learners could use documentation from their place of work or the tutor could supply learners with standard templates.

This unit could be delivered through distance learning. However, this will involve additional, and different, considerations, such as planning, and other measures to ensure learners can gain the required knowledge and understanding.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

Learners must show evidence that they have planned and instructed a group of clients through the following phases of the exercise to music session:

warm-up

- pulse raiser incorporating static and/or dynamic stretching
- mobility

main cardiovascular workout using the aerobic curve

- pulse raiser
- main workout
- build down
- muscle strength and endurance
- flexibility.

Using a minimum of one of the following methods of choreography design/teaching methods:

- add on
- 32 count phrase
- verse chorus
- layering.

Learners must show that they have structured their training session to work with the beats and phrases of the music (or the natural structure of the music if beats and phrases do not apply). Chosen music should be at the appropriate speed and suitable for the clients.

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Alternatives could be logbooks or workbooks completed in the workplace or during visits.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Adams G M – *Exercise Physiology Laboratory Manual: Health and Human Performance* (McGraw Hill Higher Education, 2001) ISBN 9780072489125

Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193

Buckley J, Holmes J, Mapp G – *Exercise on Prescription: Cardiovascular Activity for Health* (Butterworth-Heinemann, 1999) ISBN 9780750632881

Coulson M – *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness – Fitness Professionals* (A&C Black, 2007) ISBN 9780713682250

Cullum R, and Mowbray L – *The English YMCA Guide to Exercise to Music* (Pelham Practical Sports, 1992) ISBN 9780720720211

Dalglish J, and Dollery S – *The Health and Fitness Handbook* (Longman, 2001) ISBN 9780582418790

Franks B D and Howley E T – *Fitness Leader's Handbook* (Human Kinetics Europe, 1998) ISBN 9780880116541

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

Lawrence D – *The Complete Guide to Exercise to Music* (A & C Black Publishers Ltd, 2009) ISBN 9781408101391

Minton S C – *Choreography: A Basic Approach Using Improvisation, Third Edition* (Human Kinetics Europe, 2007) ISBN 9780736064767

## **Journals**

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

*Journal of Physical Activity and Health*

## **Websites**

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

Human Kinetics

[www.humankinetics.com](http://www.humankinetics.com)

Sports Coach UK

[www.sportscoachuk.org](http://www.sportscoachuk.org)

# Unit 8: Instructing Group Exercise to Music

**Unit reference number:** J/600/9022

**Level:** 2

**Credit value:** 6

**Guided learning hours:** 37

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## Unit aim

The aim of this unit is develop understanding of and skills in instructing safe and effective group exercise to music.

Learners will develop their knowledge and understanding of providing group exercise to music and have the opportunity to put this into practice by instructing group exercise to music sessions with participants.

Learners will use appropriate methods to observe participants, respond to participant needs and adapt exercises as necessary. Learners will bring the exercise session to an end safely and effectively, including using safe and effective cool-down activities.

The final part of the unit focuses on reviewing the outcomes of the exercise session, including participant feedback. Learners will have the opportunity to reflect on their practice and identify how to improve their personal practice.

## Essential resources

For this unit, centres need to provide learners with access to:

- the appropriate fitness equipment and an appropriate area to carry out the physical activities required in this unit
- computers, the internet and library facilities to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand how to provide group exercise to music	1.1	Identify the safe and effective alignment for a range of group exercise to music movements to develop: <ul style="list-style-type: none"> <li><input type="checkbox"/> cardio-vascular fitness</li> <li><input type="checkbox"/> muscular fitness</li> <li><input type="checkbox"/> motor skills</li> </ul>	Safe and appropriate for participants Safe and effective alignment of exercise positions eg standing, sitting; range of motion, neutral spine alignment, joint alignment
		1.2	Identify different methods of adapting exercise to music to ensure appropriate progression and regression	Appropriate progression and regression eg number of exercises, order of exercise, speed, intensity, repetitions, duration, layering, holding patterns To meet participant needs To meet objectives of the exercise programme
		1.3	Describe how to develop participant co-ordination by building exercises/movements up gradually, to include: <ul style="list-style-type: none"> <li><input type="checkbox"/> layering techniques</li> <li><input type="checkbox"/> holding patterns</li> </ul>	In terms of eg complexity, speed Use of layering techniques (adding changes to base moves eg rhythm, rotation, direction) Use of holding patterns eg movements a class can perform while teacher demonstrates the next layer stage of that movement

Learning outcomes		Assessment criteria		Unit amplification
		1.4	Describe effective methods of combining movements	Use of different methods of choreography eg add on, verse and chorus, 32 count phrase, layering, holding pattern
		1.5	Describe the principles of group behaviour management during exercise to music sessions	Appropriate to the group Explain purpose of the induction including positive communication, establish eye contact, professional self-image Ensure participant understanding Set ground rules for conduct within the gym environment
2	Be able to prepare self and equipment for group exercise to music	2.1	Prepare self to instruct the session	Collect all relevant information eg number of participants, range of participants, special population clients, objectives of the exercise session, appropriate set of planned exercises Professional image, correct clothing and footwear
		2.2	Provide safe and appropriate equipment sufficient for the participants	Suitable for participants Appropriate to the objectives and content of the exercise session eg dumbbells, hand weights, body bars, tubing, bands, mats
		2.3	Organise sufficient space for safe exercise performance	Appropriate for the number of participants Appropriate for the planned exercise session eg correct lighting, ventilation, temperature
3	Be able to prepare participants for group exercise to music	3.1	Help participants feel welcome and at ease in the exercise environment	Professional behaviour eg dress, punctuality Identify new participants Adopt approachable manner eg encourage participants to ask questions, to express concerns, provide participants with full and accurate information

Learning outcomes	Assessment criteria		Unit amplification
	3.2	Check participants' level of experience, ability and physical/medical condition	<p>Occasional special population clients</p> <p>Identify new participants</p> <p>Ask participants if they have any illnesses or injuries,</p> <p>Advise individuals of any reasons for non-participation in the exercise session</p> <p>Special needs participants may have</p>
	3.3	Explain the purpose and value of the session, including warm-up and cool-down	<p>Cardiovascular fitness eg raise metabolic rate, reduce risk of heart disease</p> <p>Muscular fitness eg develop muscles and muscle strength, improve bone density</p> <p>Flexibility eg reduce risk of injury, improve posture</p> <p>Motor skills eg improve, balance, agility, coordination, reaction time</p> <p>Importance of warm-up and cool-down</p> <p>Warm-up eg mobility, pulse raising, static stretching</p> <p>Purpose eg prepare body for exercise, enhance flexibility, minimise discomfort, prevent injury</p> <p>Cool-down eg pulse lowering, static stretching, developmental stretching</p> <p>Purpose eg enhance flexibility, minimise discomfort, prevent injury, avoid delayed onset of muscle soreness, provide recovery time</p>
	3.4	Describe the exercises, including physical and technical demands	<p>Provide clear information about the planned exercise session eg purpose of exercises, components part, appropriateness to participants, physical and technical demands</p> <p>Check participant understanding, participant opportunity to ask questions</p>

Learning outcomes		Assessment criteria		Unit amplification
		3.5	Confirm or revise plans as appropriate	To meet participant needs Develop realistic plans so goals can be achieved Check participant understanding, give participant opportunity to ask questions Gain participant agreement
		3.6	Advise participants of the facility's emergency procedures	Location of emergency equipment eg first aid kit, telephone, fire extinguishers Fire eg evacuation route, fire exits assembly point Health and safety requirements for the session
		3.7	Use warm-up activities that are safe and effective for the participants	Explain importance of warm-up and ensure participant understanding Appropriate to participant needs Structure eg mobility, pulse raising, static stretching
4	Be able to instruct group exercise to music	4.1	Give explanations and demonstrations that are technically correct with safe and effective alignment of exercise positions	Appropriate to participant needs and level of experience, appropriate to the planned exercise session, appropriate to the ETM environment Demonstrations eg of movements and techniques, safe and effective alignment of exercise positions, appropriate speed of movements Technically correct verbal explanations eg reinforce technique, correct poor technique
		4.2	Communicate as appropriate to participants' needs	Appropriate to participant needs and the environment Appropriate to exercise session Clear instructions eg correct level of detail
		4.3	Use volume, pitch and voice projection relative to the music, with or without a microphone	Appropriate methods of voice projection Effective use of volume and pitch of voice, with or without a microphone



Learning outcomes		Assessment criteria		Unit amplification
		4.4	Provide cueing to enable participants to work to the structure and phrase of the music	To enable participants to work to the structure and phrase of the music eg beats, blocks Types eg-verbal and visual Importance eg giving participants the information they need to carry out the exercises safely
		4.5	Vary the pace and speed of exercise to ensure safety and effectiveness	Ensure safe and effective pace Suitability of speed and type of music for participants Appropriate to the section of the class eg warm-up (establish atmosphere), cardiovascular fitness (strong beat, higher number of bpm), muscular fitness (strong regular beat), cool-down (slower pace, allow for stretch positions to be held)
		4.6	Ensure participants exercise safely	Provide clear instructions so participants know how to carry out exercise safely Environmental issues eg available space, number of participants, simultaneous exercise sessions Make participants aware if they are carrying out exercise incorrectly, explain safety risks/risk of injury
		4.7	Keep to the planned timings for the session	For the session overall For individual exercise components Ensure participants benefit adequately from the exercise session
5	Be able to improve participants performance in group exercise to music	5.1	Adopt appropriate positions to observe participants and respond to their needs	Appropriate to participant needs and the environment Use of appropriate instruction positions, variety of positions within the room Move around the area to ensure all participants observed and their needs responded to

Learning outcomes		Assessment criteria		Unit amplification
		5.2	Check that participants can perform the exercises as instructed	Carry out regular checks Exercises appropriate to participant needs and ability Apply appropriate progressions and regressions Use appropriate teaching methods to correct and reinforce technique Build up exercises gradually
		5.3	Use appropriate methods to correct and reinforce technique, including <ul style="list-style-type: none"> <li>□ changing teaching positions</li> <li>□ asking questions</li> <li>□ verbal and visual communication</li> <li>□ mirroring</li> </ul>	Change teaching positions and methods Asking questions Verbal and visual communication eg provide encouragement and support, mirroring Visual demonstrations to correct and reinforce technique Importance of correcting technique eg reduce risk of participant injury, safety
		5.4	Provide feedback and instructing points which are timely, clear and motivational	Clear, motivational, timely Appropriate to participants' needs Provide encouragement and support Recognise different motivational factors Positive verbal communication and body language Give participants opportunities to asks questions, listen to participants

Learning outcomes		Assessment criteria		Unit amplification
		5.5	Adapt exercises with suitable progressions and regressions according to participants' needs	<p>Appropriate progressions and regressions eg number of exercises, order of exercise, speed, intensity, repetitions, duration</p> <p>To meet participants' needs eg fitness and skill levels, changing needs throughout the session</p> <p>To meet objectives of the exercise programme</p> <p>Adapting exercise for occasional special population clients eg young people aged 14-16 age, antenatal and postnatal women, older people (50 plus)</p> <p>Environmental factors eg available space, available equipment, number of participants</p>
6	Be able to bring a group exercise to music session to an end	6.1	Allow sufficient time to end the session according to participants' needs	<p>Appropriate to participant level of experience and fitness</p> <p>Appropriate to exercise session eg, keep to planned timings, safe and effective cool-down activities for participants, opportunity for participants to ask questions, provide feedback to participants on the session, provide information on future sessions</p>
		6.2	Use cool-down activities that are safe and effective for the participants	<p>Explain importance of cool-down eg avoid delayed onset of muscle soreness and ensure participant understanding</p> <p>Appropriate to participant needs and the environment</p> <p>Structure eg pulse lowering section, static stretching, developmental stretching</p>
		6.3	Give the participants an accurate summary of feedback on the session	<p>Accurate summary eg progress, strengths, areas for development, suggested additional/alternative exercise</p> <p>Provide encouragement and motivation, positive feedback</p>

Learning outcomes		Assessment criteria		Unit amplification
		6.4	Give the participants the opportunity to: <ul style="list-style-type: none"> <li><input type="checkbox"/> reflect on the session</li> <li><input type="checkbox"/> ask questions</li> <li><input type="checkbox"/> provide feedback</li> <li><input type="checkbox"/> identify further needs</li> </ul>	Reflect on the session eg on their progress, their experience, effectiveness of the instruction Ask questions eg about their performance, about alternative exercise Provide feedback eg on the effectiveness of the instruction, their experience Identify further needs eg future sessions, alternative activities
		6.5	Follow the correct procedures for checking and dealing with any equipment used	Check equipment eg functionality, damage, broken cleanliness Deal with equipment in relation to checks carried out Store and clean equipment correctly Report any faults
		6.6	Leave the environment in a condition acceptable for future use	Environment eg clean, safe, tidy, inform appropriate person about any health and safety issues
7	Be able to reflect on providing group exercise to music	7.1	Review the outcomes of working with participants and their feedback	Review participant progress eg, offer fitness advice in response to changing needs of participants In relation to goals/objectives of the exercise session Give participants opportunity to ask questions Give participants opportunity to provide feedback

Learning outcomes		Assessment criteria		Unit amplification
		7.2	Identify: <ul style="list-style-type: none"> <li>□ how well the exercises met participants' needs</li> <li>□ how effective and motivational the relationship with the participants was</li> <li>□ how well the instructing style matched the participants' needs</li> </ul>	How well the exercises met participant needs eg effectiveness of planned activities, achievement of goal/objectives  How effective and motivational the relationship with the participant was eg participant felt supported, encourage and motivated, clear and appropriate communication, mutual respect  How well the instructing style matched participant needs eg use of appropriate demonstrations, clear, accurate explanations, motivation and support
		7.3	Identify how to improve personal practice	Identify strengths and areas for improvement  Set SMART (specific, measurable, achievable, realistic, time-bound) targets  Personal development plan  Development opportunities eg specific training and courses  Modify exercise programmes eg future planning to ensure adherence, changing activities to maintain interest and ensure fitness progression
		7.4	Explain the value of reflective practice	Learning from own experiences  Important source of personal professional development and improvement  Allows for continuous updating of skills and knowledge eg to plan and instruct more effective exercise sessions
8	Be able to support clients taking part in exercise to music	8.1	Present a positive image of self and organisation to clients	Self-presentation eg personal hygiene, clean and smart uniform/dress  Organisation eg knowledgeable staff, consistent approach taken by all staff, staff work together, clear commitment to providing effective customer service, create client confidence in organisation and its services

Learning outcomes		Assessment criteria		Unit amplification
		8.2	Establish an effective working relationship with clients	<p>Build client trust and confidence</p> <p>Clients feel valued and motivated</p> <p>Clients more likely to adhere to exercise and physical activity programmes</p> <p>Develop mutual trust and respect</p> <p>Requirements eg in line with good practice, ethical requirements, professional conduct</p>
		8.3	Communicate with clients in a way that makes them feel valued	<ul style="list-style-type: none"> <li>□ Verbal communication eg appropriate tone and pitch of voice, language appropriate to client, use of positive language, use of praise and encouragement, avoid use of slang/jargon, opportunities to discuss client needs</li> <li>□ Non-verbal communication eg positive body language, posture, expression, gestures, eye contact</li> <li>□ Listening eg asking appropriate questions, seeking client views on their performance</li> </ul>
		8.4	Use motivational styles appropriate to the client and the exercise format	<p>Appropriate to the clients eg setting clear, realistic goals/objectives, building client self-confidence, positive encouragement, praise, encourage positive thinking in clients, help clients develop and follow through their own motivational strategies</p> <p>Appropriate to the exercise format eg in relation to goals/objectives, in relation to planned sessions</p>

## Information for tutors

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### Delivery

This is a practical unit and needs to be delivered in a way that enables learners to demonstrate their ability to instruct group exercise to music safely and effectively. Learners need to demonstrate that they can:

- communicate effectively with participants, applying appropriate voice projection and using the tone and pitch of their voice effectively
- structure the exercise session to work with the music and cue effectively
- plan and instruct safe and effective group exercise sessions to music, including appropriate warm-up and cool-down activities, correct use of equipment, bringing the session to an end
- instruct and observe participants from a variety of positions, including correcting poor technique as necessary.

A useful opening would be small-group discussions, during which learners can exchange their experiences of group exercise to music, either as employees in the sector or as clients. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Tutor input will need to cover the theoretical aspect of the unit relating to the principles of group exercise to music.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom planning and instructing group exercise to music is a key part of their role, for example a personal trainer, where possible, and through the use of guest speakers and video/DVD training programmes.

Guest speakers, for example a health fitness instructor, will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of how they prepare themselves and clients for group exercise to music and how they ensure that the exercise sessions they instruct are safe and effective. This could include the importance of using a variety of teaching positions, of observing participants regularly to ensure their safety and of adapting exercises as necessary to take account of the changing needs of participants.

This could be supported by examples drawn from industry or through developed case studies which highlight safe and unsafe practice.

The importance of health and safety, for both clients and instructors, needs to be emphasised throughout delivery of this unit. Appropriate risk assessments must be carried out before learners undertake any practical activities.

Tutors need to ensure that there appropriate and sufficient opportunities to observe learners instructing and supervising group exercise to music sessions and that the appropriate records are kept to evidence learner ability and achievement.

Learners should be encouraged to reflect positively on the outcomes of the exercise session and use client feedback constructively when identifying how to improve their personal performance.

Learners can produce exemplar case studies, logbooks/diaries, witness testimonies and presentations that demonstrate their involvement in group exercise to music sessions.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

Learners must show evidence that they have planned and instructed a group of clients through the following phases of the exercise to music session:

warm-up

- pulse raiser incorporating static and/or dynamic stretching
- mobility

main cardiovascular workout using the aerobic curve

- pulse raiser
- main workout
- build down
- muscle strength and endurance
- flexibility.

Using a minimum of one of the following methods of choreography design/teaching methods:

- add on
- 32 count phrase
- verse chorus
- layering.

Learners must show that they have structured their training session to work with the beats and phrases of the music (or the natural structure of the music if beats and phrases do not apply). Chosen music should be at the appropriate speed and suitable for the clients.

Learners must show that they can cue effectively to ensure the group can participate in time with the beat/phrase or structure of the music.

Learners must show accurate demonstrations of movements and techniques appropriate to the Exercise to Music, (ETM) environment with particular attention to the speed of movements.

Learners must show that they can apply methods of voice projection and can effectively use the volume and pitch of their voice.

Learners should be observed teaching from a variety of positions in the room using mirroring, and demonstrating control of the participants.



Learners must show the ability to observe their clients/participants and correct poor technique where required, giving regular teaching points to meet individual needs.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Adams G M – *Exercise Physiology Laboratory Manual: Health and Human Performance* (McGraw Hill Higher Education, 2001) ISBN 9780072489125

Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193

Buckley J, Holmes J and Mapp G – *Exercise on Prescription: Cardiovascular Activity for Health* (Butterworth-Heinemann, 1999) ISBN 9780750632881

Coulson M – *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness – Fitness Professionals* (A&C Black, 2007) ISBN 9780713682250

Cullum R and Mowbray L – *The English YMCA Guide to Exercise to Music* (Pelham Practical Sports, 1992) ISBN 9780720720211

Dalglish J and Dollery S – *The Health and Fitness Handbook* (Longman, 2001) ISBN 9780582418790

Franks B D and Howley E T – *Fitness Leader's Handbook* (Human Kinetics Europe, 1998) ISBN 9780880116541

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

Lawrence D – *The Complete Guide to Exercise to Music* (A & C Black Publishers, 2009) ISBN 9781408101391

Minton S C – *Choreography: A Basic Approach Using Improvisation, Third Edition* (Human Kinetics Europe, 2007) ISBN 9780736064767

### Journals

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

*Journal of Physical Activity and Health*

### Websites

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

Human Kinetics

[www.humankinetics.com](http://www.humankinetics.com)

Sports Coach UK

[www.sportscoachuk.org](http://www.sportscoachuk.org)

# Unit 9: Planning Water-Based Exercise

**Unit reference number:** L/600/9023

**Level:** 2

**Credit value:** 5

**Guided learning hours:** 26

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## Unit aim

This unit aims to develop knowledge and understanding of how to plan water-based exercise for clients. Learners will also develop the skills needed to identify appropriate programme objectives and to plan safe and effective water-based exercise programmes.

In this unit, learners will follow the planning process involved in developing a water-based exercise programme. They will begin by exploring the methods used to collect participant information prior to any water-based exercise and the importance of this. Learners will also look at how this information is used in the planning of water-based exercise, including how to identify session objectives and when deferral of exercise or client referral may be necessary.

Learners will then focus on how water depth and thermoregulation affect the planning of water-based exercise programmes and the factors that need to be taken into account, such as environmental factors, safety factors and the inclusion of non-swimmers.

Learners will then have the opportunity to apply their knowledge and understanding. They will identify appropriate objectives for the exercise programme and select appropriate exercises that develop cardiovascular fitness, muscular fitness, and flexibility and motor skills.

## Essential resources

For this unit, centres need to provide learners with access to:

- examples of informed consent forms and to normative data for interpreting fitness test results
- computers, the internet and library facilities to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand how to collect participant information to plan water-based exercise	1.1	Explain the process of informed consent	<p>Ensure participant fully aware of what the exercise session involves eg physical and technical demands, aims and objectives, benefits of the exercise session, any potential risks</p> <p>Establish participant understanding eg give participant opportunity to consider information provided, participant opportunity to ask questions</p> <p>Obtain signed consent documentation</p>
		1.2	Describe different methods to collect client information, to include: <ul style="list-style-type: none"> <li><input type="checkbox"/> questionnaire</li> <li><input type="checkbox"/> interview</li> <li><input type="checkbox"/> observation</li> </ul>	<p>Type of information eg lifestyle, medical history, physical exercise history, dietary history, personal goals, physical activity preferences, potential barriers</p> <p>Questionnaire eg PARQ, lifestyle</p> <p>Interview eg questioning, listening</p> <p>Observation eg participant carrying out set exercise</p> <p>Physical measurements eg height, weight, record of BMI</p>
		1.3	Describe how to determine which method/s of collecting information are appropriate according to the individual	<p>Methods eg questionnaire, interview, observation</p> <p>Appropriate to participant preference eg needs, objectives, level of confidence</p>

Learning outcomes		Assessment criteria		Unit amplification
		1.4	Explain the principles of screening clients prior to water-based exercise to include the use of the physical activity readiness questionnaire (PARQ)	<p>Identify participant's needs, objectives and preferences</p> <p>Discuss any barriers to participation</p> <p>Collect information to use in setting goals and objectives</p> <p>Identify any contraindications to exercise eg with special population clients</p> <p>Identify any risks eg age related, injury related, specific needs</p>
2	Understand how to use participant information to plan water-based exercise	2.1	Describe the factors, based on client screening, which may affect safe exercise participation	<p>Factors eg modifiable and unmodifiable risk factors of coronary heart disease, relating to specialist population groups</p> <p>Medical history/condition eg medication</p> <p>Injury, current fitness level</p>
		2.2	Give example of how client information affects the planning of water-based exercise	<p>Planning eg used to determine goals and objectives, type, duration and intensity of exercise</p> <p>Identify modifications eg to warm-up and cool-down sessions, to main activities, to meet individual needs, identify alternative exercise</p>
		2.3	Identify the reasons for temporary deferral of exercise	Reasons eg minor illness or injury, inappropriate clothing, referral to another professional
		2.4	Explain the reasons for referring clients to other professionals	<p>Comply with legal requirements eg outside level of competence or authority</p> <p>Contraindications to exercise</p> <p>Medical conditions eg cardiac, pulmonary or metabolic disease, arthritis, osteoporosis</p> <p>Professionals eg GP, special populations instructors, physiotherapists</p>

Learning outcomes		Assessment criteria		Unit amplification
3	Understand how to plan water-based exercise	3.1	Describe how to plan water-based exercise to meet the needs of clients with different objectives	<p>Objectives eg improve fitness, improve motivation, address barriers to participation, improve skills and techniques, opportunities for fun and enjoyment</p> <p>Based on collected information</p> <p>Apply principles and variables of training eg FITT principles, overload, specificity, progression, individual differences, variation, reversibility</p> <p>Consider participants eg age, ability, gender, medical issues, specific needs, barriers to participation, numbers</p> <p>Consider available resources eg equipment, time, environment</p> <p>Take account of other considerations eg legal requirements</p>
		3.2	Identify a range of water-based exercises to develop: <ul style="list-style-type: none"> <li>□ cardio-vascular fitness</li> <li>□ muscular fitness</li> <li>□ flexibility</li> <li>□ motor skills</li> </ul>	<p>Cardiovascular fitness eg walking, jogging, marching, step aerobics, jumps, leaps</p> <p>Muscular fitness eg pull ups, squats, lunges, leg extension/raises, knee lifts, lateral raises, free weights, resistance equipment</p> <p>Flexibility eg — stretching static, dynamic, arm swings, joint rotations</p> <p>Motor skills — exercises that involve eg agility, coordination, balance, reaction time, speed of movement, moving in time to music, balance</p>
		3.3	Identify the range of equipment used in water-based sessions and their uses	Equipment eg buoyant water weights, woggles, flotation belts, floats water dumbbell, water barbells, aqua mitts, aqua step, kickboards

Learning outcomes		Assessment criteria		Unit amplification
		3.4	Describe the correct preparation of the range of equipment used in water-based sessions	<p>Check equipment eg in safe working, damage, wear and tear</p> <p>Correct handling and lifting of equipment</p> <p>Sufficient equipment for participants, sufficient space for safe exercise</p> <p>Safe use of electrical equipment</p> <p>Follow organisational procedures eg health and safety, dealing with unsafe equipment, manufacturers' guidelines</p>
		3.5	Describe how to plan water-based exercise using circuit formats	<p>Determine components of a circuit</p> <p>Apply principles and variable of fitness eg intensity, range of movements, order of exercise, build in appropriate warm-up and cool-down</p> <p>Types eg body weight, with cardiovascular exercise, aerobic, timed</p> <p>Use eg develop muscle strength, heart-lung fitness</p>
4	Understand how to use music to enhance water-based exercise	4.1	Describe how to select the speed and type of music for the participants and phase of the class	<p>Appropriate to the participants and phase of the class eg type of exercise/class, desired outcome of the session, tailored to exercise component, safe and effective pace, modifications to alter range of motion for each exercise</p> <p>Appropriate to the component eg warm-up, cardiovascular fitness, muscular fitness, flexibility, cool-down</p> <p>Participants eg age, ability, level of fitness, preferences, speed of movements</p>
		4.2	Describe the legal requirements covering the use of music	For example Public Phonographic Licence (PPL), Performing Rights Society (PRS)
		4.3	Describe the effect of pacing and speed of exercises in an aquatic environment	Effect eg buoyancy, viscosity and drag resistance, hydrostatic pressure

Learning outcomes		Assessment criteria		Unit amplification
5	Understand the particular features of the pool environment that affect session planning	5.1	Describe the effect of the use of shallow and deep water when planning water-based sessions	<p>Shallow water eg low or reduced impact, appropriate for weak or non-swimmers, reduced buoyancy, quicker movements, greater use of choreography</p> <p>Deep water eg no impact, increased exercise intensity, increased resistance for the body to work against, increased buoyancy and flotation, appropriate for fitter participants use of flotation equipment (belt, vest)</p>
		5.2	Describe the importance of the following environmental factors when planning sessions: <ul style="list-style-type: none"> <li>□ water temperature and depth</li> <li>□ humidity</li> <li>□ air temperature</li> </ul>	<p>Water temperature</p> <p>Industry standards and guidelines for recommended temperature ranges</p> <p>Depending on the type of pool eg swimming pool, children's pool</p> <p>Depending on type of exercise eg warmer water is beneficial for MSE as full body movement is limited, allows body to respond normally to exercise</p> <p>Depending on participants eg children, special population groups, water therapy</p> <p>Water depth eg appropriate for participants, appropriate for exercise programme, appropriate for non-swimmers</p> <p>Humidity</p> <p>Air temperature eg slightly higher than water temperature</p>
		5.3	Describe the effects of thermoregulation on class structure	<p>Water and air temperature, water depth</p> <p>Time participants are in water</p> <p>Participants eg level of insulation, body composition</p>

Learning outcomes		Assessment criteria		Unit amplification
		5.4	Identify the factors to consider when including non-swimmers in a session	<p>Ensure head remains above water</p> <p>Establish level of confidence in the water</p> <p>Ensure non-swimmers stay in shallow water and close to poolside</p> <p>Use of flotation aids</p> <p>Adequate awareness and supervision of non-swimmers</p>
		5.5	Describe specific factors which can affect safety during water-based sessions	<p>Features of the pool environment eg pool size, water depth, constant or sloping pool floor, water quality</p> <p>Entry and exit to the water</p> <p>Thermoregulation</p> <p>Maintaining continued visual contact with participants</p> <p>Appropriate use and storage of equipment, appropriate use of electrical equipment</p> <p>Appropriate clothing and footwear</p> <p>Adequate supervision of participants</p>
		5.6	Describe how to plan the management of risks during water-based sessions	<p>Follow organisational procedures specific to pool environment</p> <p>Identify hazards eg slippery floors, deeper areas of the pool, water temperature</p> <p>Assess associated risks eg to the participant, the planned activities, simultaneous activities, exercises are safe and appropriate for participants</p> <p>Carry out appropriate risk assessment, plan how to control risks eg location of safety equipment, use of specialist equipment to minimise identified risk</p>



Learning outcomes		Assessment criteria		Unit amplification
6	Be able to plan safe and effective water- based exercise	6.1	Identify objectives that are appropriate to: <ul style="list-style-type: none"> <li>□ the likely needs and potential of the participants</li> <li>□ accepted good practice in the industry</li> <li>□ own level of competence</li> </ul>	Objectives eg improve fitness, improve motivation, address barriers to participation, improve skills and techniques, opportunities for fun and enjoyment  Gain agreement eg ensure participant understanding, use appropriate communication and interpersonal skills
		6.2	Select water-based exercises that will help clients to develop: <ul style="list-style-type: none"> <li>□ cardiovascular fitness</li> <li>□ muscular fitness</li> <li>□ flexibility</li> <li>□ motor skills</li> </ul>	Safe and appropriate for participants  To meet participant objectives,  Objectives eg to develop cardiovascular fitness , to develop muscular fitness, to develop flexibility, to develop motor skills
		6.3	Plan safe and effective water-based exercise to achieve planned objectives for the session	To meet participants objectives eg improve fitness, improve motivation, address barriers to participation, improve skills and techniques, opportunities for fun and enjoyment  Advise on any modifications  Apply principles and variables of training eg FITT principles, overload, specificity, progression, individual differences, variation, reversibility

Learning outcomes		Assessment criteria	Unit amplification
		6.4 Select a range of exercises that are safe and appropriate for participants and include possible alternatives	<p>Safe and appropriate exercises for participants eg safe and effective alignment of exercise positions, alternatives to potentially harmful exercises</p> <p>Minimise risks- identify hazards and assess associated risks eg to the client, the planned activities, simultaneous activities</p> <p>Carry out appropriate risk assessment, plan how to control risks eg use of specialist equipment to minimise identified risk, lifeguard present at all times</p>
		6.5 Include the use of music where appropriate to the sessions' objectives	<p>Motivate participants, enhance participant experience</p> <p>Help with session planning</p>
		6.6 Plan realistic timings and sequences	<p>To meet participant needs</p> <p>Appropriate to the objectives of the exercise programme, include all components and exercises</p>
		6.7 Record plans in an appropriate format	<p>Follow organisational procedures, comply with industry standards</p> <p>Record details of all exercises and activities eg warm-up, cool-down</p>

## Information for tutors

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### Delivery

This unit should be delivered in a way that develops knowledge and understanding of planning water-based exercise programmes for a range of participants. Learners need to know and understand:

- the methods used to collect participant information, including the principles of screening clients prior to exercise
- how to use participant information to plan water-based exercise
- how to plan safe and effective water-based exercise programmes to develop cardiovascular fitness, motor fitness, flexibility and motor skills.

A useful opening would be small-group discussions during which learners can exchange their experiences of water-based exercise, either as employees in the sector or as participants. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Learners should be encouraged to engage with employers and, where possible, other employees to gain knowledge and understanding of the importance of planning water-based exercise correctly to meet the needs of individual participants, based on the information gathered from participants.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom planning and instructing water-based exercise is a key part of their role, for example a personal trainer, where possible, and through the use of guest speakers and video/DVD training programmes.

For example, a presentation by a health fitness instructor will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of the methods they use to collect participant information and how they use this information to plan safe and effective water-based exercise with a range of participants. They could also talk about the importance of identifying appropriate objectives for the sessions and of ensuring that all water-based exercise sessions are safe and effective. This should be supported by examples drawn from industry or through developed case studies that highlight:

- the importance of collecting the correct participant information and what could happen if this is not carried out
- how participant information affects planning water-based exercise, including temporary deferral of exercise and referring participants to other professionals
- the range of exercises that can be used, the equipment used and the associated risks
- the particular features of the pool environment that must be taken into account when planning water-based exercise programmes, such as the inclusion of non-swimmers, environmental factors, safety factors, water depth and thermoregulation.

To meet the practical aspect of the unit, in terms of identifying objectives and selecting exercises to plan water-based exercise, learners could either use documentation from their place of work or the tutor could supply learners with standard templates.

This unit could be delivered through distance learning. However, this will involve additional, and different, considerations, such as planning, and other measures to ensure learners can gain the required knowledge and understanding.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

Learners must show evidence that they have planned and instructed a group of participants in a water-based exercise session demonstrating specific considerations for the wet environment to include **all** of the following.

The safety and welfare of participants appropriate to the environment including:

- entry and exit to the water
- thermoregulation
- continued visual contact with participants
- use of electrical equipment
- methods/movements to maintain or regain balance of their participants in the water

through all phases of the exercise session to include:

- warm-up
- pulse raising
- dynamic stretching

main CV workout using the aerobic curve:

- pulse raiser
- main workout
- build down
- muscular conditioning
- cool-down and flexibility

Demonstrating the effective use of the properties of water to include:

- resistance
- buoyancy
- methods of increasing or lowering intensity related to the properties of
- water eg increased surface area, speed of movement.

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Alternatives could be logbooks or workbooks completed in the workplace or during visits.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Adams G M – *Exercise Physiology Laboratory Manual: Health and Human Performance* (McGraw Hill Higher Education, 2001) ISBN 9780072489125

Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193

Buckley J, Holmes J, Mapp G – *Exercise on Prescription: Cardiovascular Activity for Health* (Butterworth- Heinemann, 1999) ISBN 9780750632881

Coulson M – *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness – Fitness Professionals* (A&C Black, 2007) ISBN 9780713682250

Dalgleish J, Dollery S – *The Health and Fitness Handbook* (Longman, 2001) ISBN 9780582418790

Franks B D and Howley E T – *Fitness Leader's Handbook* (Human Kinetics Europe, 1998) ISBN 9780880116541

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

Lawrence D – *Exercise in Water: A Complete Guide to Planning and Instruction* (Fitness Professionals) (A & C Black Publishers Ltd; 2008) ISBN 9781408101407

### Journals

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

*Journal of Physical Activity and Health*

### Websites

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

Human Kinetics

[www.humankinetics.com](http://www.humankinetics.com)

Sports Coach UK

[www.sportscoachuk.org](http://www.sportscoachuk.org)

# Unit 10: Instructing Water-based Exercise

**Unit reference number:** R/600/9024

**Level:** 2

**Credit value:** 6

**Guided learning hours:** 38

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## Unit aim

The aim of this unit is develop understanding of and skills in instructing safe and effective water-based exercise.

In this unit, learners will develop their knowledge and understanding of providing water-based exercise and have the opportunity to put it into practice by instructing group water-based exercise sessions with participants.

Initially, learners will look at the principles of instructing water-based exercise including safe and effective alignment of exercise positions and how to identify different methods of adapting water-based exercises.

Learners will carry out the necessary preparation of self, the environment, the equipment and participants, for example selecting the correct equipment, explaining the purpose, benefits and demands of the exercise and checking participants level of fitness, physical condition etc.

Ensuring that individuals participate in water-based exercise safely is a key part of an instructor's role. In this unit, learners will use appropriate methods to observe participants, respond to participant needs and adapt exercises as necessary. Learners will bring the exercise session to an end safely and effectively, including using safe and effective cool-down activities.

The final part of the unit focuses on reviewing the outcomes of the exercise session, including participant feedback. Learners will have the opportunity to reflect on their practice and identify how to improve their personal practice.

## Essential resources

For this unit, centres need to provide learners with access to:

- the appropriate fitness equipment and an appropriate area to carry out the practical activities required by this unit
- computers, the internet and library facilities to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand the principles of instructing water-based exercise	1.1	Identify the safe and effective alignment for a range of water-based exercise positions to develop: <ul style="list-style-type: none"> <li>□ cardiovascular fitness</li> <li>□ muscular fitness</li> <li>□ motor skills</li> </ul>	Safe and appropriate for participants Safe and effective alignment of exercise positions eg standing, suspended Range of motion eg neutral spine alignment, joint alignment Effect of buoyancy eg support joints, provide resistance
		1.2	Identify different methods of adapting water-based exercises to ensure appropriate progression and/or regression	Appropriate progression and regression eg number of exercises, order of exercise, speed, intensity, repetitions, duration To meet participant needs To meet objectives of the exercise programme Buoyancy moves eg light bounce, suspended, propulsion
		1.3	Describe how to break a range of water-based exercises and their movements down to their component parts	Appropriate to participants Appropriate to the exercise programme Adapt or modify exercise and movements
		1.4	Describe how to develop participant co-ordination by building exercises/movements up gradually	In terms of eg complexity, speed, choreography

Learning outcomes		Assessment criteria		Unit amplification
		1.5	Describe effective methods of building combinations of movements	For example use of different methods of choreography
		1.6	Describe the principles of group behaviour management during water-based sessions	<p>Appropriate to the group</p> <p>Explain purpose of the induction including positive communication, establish eye contact, professional self-image</p> <p>Ensure participant understanding</p> <p>Set ground rules for conduct within the pool environment eg lane discipline, etiquette and direction</p>
	1.7	Describe the effect of levers, gravity, buoyancy, floatation, turbulence and resistance on water-based exercise	<p>Levers eg level of resistance depends on lever type</p> <p>Gravity eg reduced influence of gravity in water, reduced body weight, joints can easily be moved through the full range of motion, reduced stress on joints, helps to improve flexibility, resistance to movement is increased</p> <p>Buoyancy eg significant degree of weightlessness (standing in waist deep water reduces body weight by 50%), perform movements with ease, support for the body, reduced likelihood of muscle, bone and joint injuries, fat more buoyant in water than muscle, chest and abdomen provide greatest buoyancy (location of air and most body fat)</p> <p>Turbulence eg used as resistance to help strengthen muscles, use of equipment can increase turbulence, propulsion</p> <p>Resistance eg increased level, slower body movements</p>	



Learning outcomes		Assessment criteria		Unit amplification
		1.8	Describe the effect water has on the body for example static and travelling balance, greater range of joint movement, mobility, hydrostatic pressure on the chest	For example static and travelling balance, greater range of joint movement, increased mobility, hydrostatic pressure on the chest (increases with depth of immersion), water pressure on legs assists in circulation, massaging effect
		1.9	Describe how water-based exercise can assist injury rehabilitation	Reduced stress and impact on joints Therapeutic benefits of massage eg reduce pain, increase circulation Use of buoyancy eg weightlessness, as support, assistance or resistance, stretching easier to perform Reduced gravitational effect Helps with mobility and flexibility
2	Be able to prepare self and equipment for water-based exercise	2.1	Prepare self to teach the session	Collect all relevant information eg number of participants, range of participants, special population clients, objectives of the exercise session, appropriate set of planned exercises Professional image, correct clothing and footwear
		2.2	Provide safe and appropriate equipment sufficient for the participants	Appropriate to participants Appropriate to the objectives and content of the exercise session Types of equipment eg buoyant water weights, woggles, flotation belts water dumbbell, water barbells, aqua mitts, aqua step, kickboards Non-swimmers provided with adequate floatation devices Safe use of electrical equipment on the poolside

Learning outcomes		Assessment criteria		Unit amplification
		2.3	Organise sufficient space for safe exercise performance	<p>Appropriate for the number of participants</p> <p>Appropriate for the planned exercise session eg correct lighting, ventilation, temperature</p> <p>Importance of health and safety in the facility, possible hazards eg slippery surfaces, changes in water depth, pool temperature, entries and exits of the pool</p> <p>Scan area before participants arrive, inform all participants of possible hazards</p>
3	Be able to prepare participants for water- based exercise	3.1	Help participants feel welcome and at ease in the pool environment	<p>Professional behaviour eg dress, punctuality</p> <p>Identify new participants</p> <p>Adopt approachable manner eg encourage participants to ask questions, to express concerns, provide participants with full and accurate information</p>
		3.2	Check participants' level of experience, ability and physical/medical condition	<p>Occasional special population clients</p> <p>Identify if participants are swimmers or non-swimmers</p> <p>Identify new participants</p> <p>Ask participants if they have any illnesses or injuries,</p> <p>Advise individuals of any reasons for non- participation in the exercise session</p> <p>Special needs participants may have</p>
		3.3	Identify the correct attire for participants	<p>Appropriate for the exercise session</p> <p>Appropriate for the pool environment</p>

Learning outcomes		Assessment criteria	Unit amplification
		3.4 Explain the purpose and value of the exercises, including warm-up and cool-down	<p>Cardiovascular fitness eg raise metabolic rate, reduce risk of heart disease</p> <p>Muscular fitness eg develop muscles and muscle strength, improve bone density</p> <p>Flexibility eg reduce risk of injury, improve posture</p> <p>Motor skills eg improve, balance, agility, coordination, reaction time</p> <p>Warm-up eg mobility, pulse raising, static stretching; purpose eg prepare body for exercise, enhance flexibility, minimise discomfort, prevent injury</p> <p>Cool-down eg pulse lowering, static stretching, developmental stretching; purpose eg enhance flexibility, minimise discomfort, prevent injury, avoid delayed onset of muscle soreness, provide recovery time</p>
		3.5 Explain the agreed exercises, including physical and technical demands	<p>Provide clear information about the planned exercise session eg purpose of exercises, components part, appropriateness to participants, physical and technical demands</p> <p>Check participant understanding, participant opportunity to ask questions</p>
		3.6 Confirm or revise plans as appropriate	<p>To meet participant needs</p> <p>Develop realistic plans so goals can be achieved</p> <p>Check participant understanding, give participant opportunity to ask questions</p> <p>Gain participant agreement</p>

Learning outcomes		Assessment criteria		Unit amplification
		3.7	Advise participants of the facility's emergency procedures	Location of emergency equipment eg first aid kit, telephone, fire extinguishers Fire eg evacuation route, fire exits assembly point Health and safety requirements for the session
		3.8	Use warm-up activities that are safe and effective for the participants	Explain importance of warm-up and ensure participant understanding Appropriate to participant needs Structure eg mobility, pulse raising, static stretching
		3.9	Advise participants where to position themselves in the pool relevant to their level of experience	Appropriate to level of ability and confidence of participants, number of participants, non-swimmers Appropriate to the planned exercise
4	Be able to instruct water-based exercise	4.1	Give explanations and demonstrations that are technically correct with safe and effective alignment and timing and movement quality of exercise positions that clearly translate to participants in the water	Appropriate to participant needs and level of experience, appropriate to the planned exercise session, appropriate to the pool environment Demonstrations eg of movements and techniques, safe and effective alignment of exercise positions, appropriate speed of movements Technically correct verbal explanations eg reinforce technique, correct poor technique
		4.2	Communicate as appropriate to participants' needs	Appropriate to participant needs and the environment Appropriate to exercise session Clear instructions eg correct level of detail
		4.3	Use volume, pitch and voice projection with or without a microphone	Appropriate methods of voice projection Effective use of volume and pitch of voice

Learning outcomes		Assessment criteria		Unit amplification
		4.4	Provide cueing to enable participants as appropriate to the session	Types eg verbal and visual Importance eg giving participants the information they need to carry out the exercise safely
		4.5	Vary the pace and speed of exercise to ensure safety and effectiveness in the water	To suit participants Ensure participants are working together Ensure safe and effective pace, appropriate to the section of the class Apply modifications as appropriate
		4.6	Ensure participants exercise safely	Provide clear instructions so participants know how to carry out exercise safely Provide non-swimmers with adequate flotation devices Environmental issues eg available space, number of participants, simultaneous exercise sessions Make participants aware if they are carrying out exercise incorrectly, explain safety risks/risk of injury
		4.7	Keep to the timings for the session	For the session overall For individual exercise components Ensure participants benefit adequately from the exercise session
5	Be able to improve participants performance in water-based exercise	5.1	Adopt appropriate positions to observe all participants and respond to their needs	Appropriate to participant needs and the environment Use of appropriate instruction positions eg poolside teaching, water teaching, use of a variety of positions, move around the pool area to ensure all participants observed and their needs responded to, mirroring, demonstrating control of participants, attention to own welfare on the poolside Correct poor technique where required,

Learning outcomes		Assessment criteria		Unit amplification
		5.2	Check that participants can perform the exercises as planned	<p>Carry out regular checks</p> <p>Exercises appropriate to participant needs and ability eg non-swimmers</p> <p>Apply appropriate progressions and regressions</p> <p>Use appropriate teaching methods to correct and reinforce technique</p> <p>Build up exercises gradually</p>
		5.3	<p>Use appropriate teaching methods to correct and reinforce technique, including</p> <ul style="list-style-type: none"> <li>□ changing teaching positions</li> <li>□ asking questions</li> <li>□ verbal and visual communication</li> <li>□ mirroring</li> </ul>	<p>Changing teaching positions and methods eg moving around the pool area</p> <p>Asking questions</p> <p>Verbal and visual communication eg provide encouragement and support, mirroring</p> <p>Visual demonstrations to correct and reinforce technique eg reduce risk of participant injury, safety</p>
		5.4	Develop exercises gradually	In terms of eg complexity, intensity, speed
		5.5	Provide feedback and instructing points which are timely, clear and motivational	<p>Clear, motivational, timely</p> <p>Appropriate to participants' needs</p> <p>Provide encouragement and support</p> <p>Recognise different motivational factors</p> <p>Positive verbal communication and body language</p> <p>Give participants opportunities to asks questions, listen to participants</p>

Learning outcomes		Assessment criteria		Unit amplification
		5.6	Adapt exercises with suitable progressions and regressions according to participant needs	<p>Appropriate progressions and regressions eg number of exercises, order of exercise, speed, intensity, repetitions, duration</p> <p>To meet participants' needs eg fitness and skill levels, changing needs throughout the session</p> <p>To meet objectives of the exercise programme</p> <p>Adapting exercise for occasional special population clients eg young people aged 14-16 age, antenatal and postnatal women, older people (50 plus)</p> <p>Environmental factors eg available space, available equipment, number of participants</p>
6	Be able to bring a water-based exercise session to an end	6.1	Allow sufficient time to end the session according to participants' needs	<p>Appropriate to participant level of experience and fitness</p> <p>Appropriate to exercise session eg, keep to planned timings, safe and effective cool-down activities for participants, opportunity for participants to ask questions, provide feedback to participants on the session, provide information on future sessions</p>
		6.2	Use cool-down activities that are safe and effective for the participants	<p>Explain importance of cool-down eg avoid delayed onset of muscle soreness and ensure participant understanding</p> <p>Appropriate to participant needs and the environment</p> <p>Structure eg pulse lowering section, static stretching, developmental stretching</p>
		6.3	Give the participants an accurate summary of feedback on the session	<p>Accurate summary eg progress, strengths, areas for development, suggested additional/alternative exercise</p> <p>Provide encouragement and motivation, positive feedback</p>

Learning outcomes		Assessment criteria		Unit amplification
		6.4	Give the participants the opportunity to: <ul style="list-style-type: none"> <li><input type="checkbox"/> reflect on the session</li> <li><input type="checkbox"/> ask questions</li> <li><input type="checkbox"/> provide feedback</li> <li><input type="checkbox"/> identify further needs</li> </ul>	Reflect on the session eg on their progress, their experience, effectiveness of the instruction Ask questions eg about their performance, about alternative exercise Provide feedback eg on the effectiveness of the instruction, their experience Identify further needs eg future sessions, alternative activities
		6.5	Follow the correct procedures for checking and dealing with any equipment used	Check equipment eg functionality, damage, cleanliness Deal with equipment in relation to checks carried out Store and clean equipment correctly Report any faults
		6.6	Leave the environment in a condition acceptable for future use	Environment eg clean, safe, tidy, inform appropriate person about any health and safety issues
7	Be able to reflect on providing water-based exercise sessions	7.1	Review the outcomes of working with participants and their feedback	Review participant progress eg, offer fitness advice in response to changing needs of participants In relation to goals/objectives of the exercise session Give participants opportunity to ask questions Give participants opportunity to provide



Learning outcomes	Assessment criteria	Unit amplification
	7.2 Identify: <ul style="list-style-type: none"> <li>□ how well the exercises met participants' needs</li> <li>□ how effective and motivational the relationship with the participants was</li> <li>□ how well the instructing style matched the participants' needs</li> </ul>	<p>How well the exercises met participant needs eg effectiveness of planned activities, achievement of goal/objectives</p> <p>How effective and motivational the relationship with the participant was eg participant felt supported, encourage and motivated, clear and appropriate communication, mutual respect</p> <p>How well the instructing style matched participant needs eg use of appropriate demonstrations, clear, accurate explanations, motivation and support</p>
	7.3 Identify how to improve personal practice	<p>Identify strengths and areas for improvement</p> <p>Set SMART (specific, measurable, achievable, realistic, time-bound) targets</p> <p>Personal development plan</p> <p>Development opportunities eg specific training and courses</p> <p>Modify exercise programmes eg future planning to ensure adherence, changing activities to maintain interest and ensure fitness progression</p>
	7.4 Explain the value of reflective practice	<p>Learning from own experiences</p> <p>Important source of personal professional development and improvement</p> <p>Allows for continuous updating of skills and knowledge eg to plan and instruct more effective exercise sessions</p>

Learning outcomes		Assessment criteria		Unit amplification
8	Be able to support clients taking part in water-based exercise sessions	8.1	Present a positive image of self and organisation to clients	<p>Self-presentation eg personal hygiene, clean and smart uniform/dress</p> <p>Organisation eg knowledgeable staff, consistent approach taken by all staff, staff work together, clear commitment to providing effective customer service, create client confidence in organisation and its services</p>
		8.2	Establish an effective working relationship with clients	<p>Build client trust and confidence</p> <p>Clients feel valued and motivated</p> <p>Clients more likely to adhere to exercise and physical activity programmes</p> <p>Develop mutual trust and respect</p> <p>Requirements eg in line with good practice, ethical requirements, professional conduct</p>
		8.3	Communicate with clients in a way that makes them feel valued	<ul style="list-style-type: none"> <li>□ Verbal communication eg appropriate tone and pitch of voice, language appropriate to client, use of positive language , use of praise and encouragement, avoid use of slang/jargon, opportunities to discuss client needs</li> <li>□ Non-verbal communication eg positive body language, posture, expression, gestures, eye contact</li> <li>□ Listening eg asking appropriate questions, seeking client views on their performance</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		8.4	Use motivational styles appropriate to the client and the exercise format	<p>Appropriate to the clients eg setting clear, realistic goals/objectives, building client self-confidence, positive encouragement, praise, encourage positive thinking in clients, help clients develop and follow through their own motivational strategies</p> <p>Appropriate to the exercise format eg in relation to goals/objectives, in relation to planned sessions</p>

## Information for tutors

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### Delivery

This is a practical unit and needs to be delivered in a way that enables learners to demonstrate their ability to instruct water-based exercise safely and effectively. Learners need to demonstrate that they can:

- communicate effectively with participants, applying appropriate voice projection and using the tone and pitch of their voice effectively
- use the properties of water effectively within exercise sessions
- plan and instruct safe and effective water-based exercise sessions, including appropriate warm-up and cool-down activities, correct use of equipment, bringing the session to an end
- instruct and observe participants from a variety of positions, including correcting poor technique as necessary.

A useful opening would be small-group discussions, during which learners can exchange their experiences of water-based exercise, either as employees in the sector or as clients. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Tutor input will need to cover the theoretical aspect of the unit relating to the principles of water-based exercise.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom planning and instructing water-based exercise is a key part of their role, for example a personal trainer, where possible, and through the use of guest speakers and video/DVD training programmes.

Guest speakers, for example a health fitness instructor, will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of how they prepare themselves and clients for water-based exercise to music, how they ensure that the exercise sessions they instruct are safe and effective and the factors which are specific to the pool environment. This could include the importance of using a variety of teaching positions, of observing participants regularly to ensure their safety and of adapting exercises as necessary to take account of the changing needs of participants.

This could be supported by examples drawn from industry or through developed case studies which highlight safe and unsafe practice.

The importance of health and safety, for both clients and instructors, needs to be emphasised throughout the unit. Appropriate risk assessments must be carried out before learners undertake any practical activities.

Tutors need to ensure that there are appropriate and sufficient opportunities to observe learners instructing and supervising water-based exercise sessions and that the appropriate records are kept to evidence learner ability and achievement.

Learners should be encouraged to reflect positively on the outcomes of the exercise session and use participant feedback constructively when identifying how to improve their personal performance.

Learners can produce exemplar case studies, logbooks/diaries, witness testimonies and presentations that demonstrate their involvement in water- exercise sessions.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

Learners must show evidence that they have planned and instructed a group of participants in a water- based exercise session demonstrating specific considerations for the wet environment to include all of the following.

The safety and welfare of participants appropriate to the environment including:

- entry and exit to the water
- thermoregulation
- continued visual contact with participants
- use of electrical equipment
- methods/movements to maintain or regain balance of their participants in the water.

Through all phases of the exercise session to include:

- warm-up
- pulse raising
- dynamic stretching
- main CV workout using the aerobic curve
- pulse raiser
- main workout
- build down
- muscular conditioning
- cool-down and flexibility

Demonstrating the effective use of the properties of water to include:

- resistance
- buoyancy
- methods of increasing or lowering intensity related to the properties of water eg increased surface area, speed of movement.

Learners must show accurate demonstrations of movements and techniques appropriate to the water environment with particular attention to the speed of movements.

Learners must show that they can apply methods of voice projection and can effectively use the volume and pitch of their voice. Learners must show the use of communication skills appropriate to the environment.

Learners should be observed teaching from a variety of positions around the pool using mirroring, and demonstrating control of the participants whilst giving due attention to their own welfare on poolside.

Learners must show the ability to observe their clients/participants and correct poor technique where required, giving regular teaching points to meet individual needs.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Adams G M – *Exercise Physiology Laboratory Manual: Health and Human Performance* (McGraw Hill Higher Education, 2001) ISBN 9780072489125

Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193

Buckley J, Holmes J, and Mapp G – *Exercise on Prescription: Cardiovascular Activity for Health* (Butterworth-Heinemann, 1999) ISBN 9780750632881

Coulson M – *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness – Fitness Professionals* (A&C Black, 2007) ISBN 9780713682250

Dalglish J, Dollery S – *The Health and Fitness Handbook* (Longman, 2001) ISBN 9780582418790

Franks B D and Howley E T – *Fitness Leader's Handbook* (Human Kinetics Europe, 1998) ISBN 9780880116541

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

Lawrence D – *Exercise in Water: A Complete Guide to Planning and Instruction (Fitness Professionals)* A & C Black Publishers Ltd, 2008) ISBN 9781408101407

### Journals

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

*Journal of Physical Activity and Health*

### Websites

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

Human Kinetics

[www.humankinetics.com](http://www.humankinetics.com)

Sports Coach UK

[www.sportscoachuk.org](http://www.sportscoachuk.org)

# **Unit 11: Planning Health – related Exercise and Physical Activity for Children**

**Unit reference number:** A/600/9048

**Level:** 2

**Credit value:** 3

**Guided learning hours:** 23

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## **Unit aim**

This unit aims to develop knowledge and understanding of how to plan health-related exercise and physical activity for children. Learners will also develop the skills needed to identify appropriate programme objectives and to plan safe and effective health-related exercise and physical activity for children.

In this unit learners will follow the planning process involved in developing health-related exercise and physical activity for children. They will begin by exploring the methods used to collect information about children before any exercise or physical activity takes place and the importance of this. Learners will also look at how this information is used in the planning process, including how to identify session objectives and when deferral of exercise or referral of children may be necessary.

Learners will then focus on how to apply the principles and variables of fitness to activities to achieve health benefits and the required levels of physical activity for children.

Learners will have the opportunity to apply their knowledge and understanding. They will identify appropriate objectives for the exercise/physical activity programme and select appropriate exercises in order to plan safe and effective health-related exercise and physical activity for children within the specified age range.

## **Essential resources**

For this unit, centres need to provide learners with access to:

- examples of informed consent forms and to normative data for interpreting fitness test results
- computers, the internet and library facilities to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand how to collect relevant information to plan health related exercise/physical activity for children	1.1	Describe the process of screening as it applies to children	<ul style="list-style-type: none"> <li>□ How to record information relevant to screening children</li> <li>□ Collect information to use in setting goals and objectives</li> <li>□ Identify any contraindications to exercise</li> <li>□ Identify any risks from participating in exercise/physical activity</li> </ul>
		1.2	Explain the process of informed consent as it applies to children	<p>Fully aware of what the exercise session involves eg, purpose, physical and technical demands, aims and objectives, benefits of the exercise session, any potential risks</p> <p>Establishing child and parent/carer understanding, opportunity for child and parent/carer to consider information provided, opportunity for child and parent/carer to ask questions</p> <p>Obtain parent/carer signed consent documentation</p>
		1.3	Describe different methods to collect information: <ul style="list-style-type: none"> <li>□ questionnaire</li> <li>□ interview</li> <li>□ observation</li> </ul>	<p>Questionnaire eg PARQ, lifestyle</p> <p>Interview eg questioning, listening</p> <p>Observation eg participant carrying out set exercise</p>
		1.4	Describe how to determine which method/s of collecting information are appropriate according to the individual child	<p>Methods eg questionnaire, interview, observation</p> <ul style="list-style-type: none"> <li>□ Appropriate to participant eg needs , objectives, level of confidence</li> <li>□ Availability of resources eg time, equipment, facilities</li> </ul>



Learning outcomes		Assessment criteria		Unit amplification
2	Be able to collect relevant information to plan safe and effective exercise/physical activity for children	2.1	Collect the information needed to plan exercise/physical activity sessions for children	<ul style="list-style-type: none"> <li>□ Information (emergency contact details, parent/carer details, personal goals, lifestyle, medical history, physical activity history, physical activity likes and dislikes, barriers to participation)</li> <li>□ Information sources (child, parents/carers, school)</li> </ul>
		2.2	Make sure the information is accurate and up-to-date	<ul style="list-style-type: none"> <li>□ Confirm with child and parent/carer as appropriate</li> <li>□ Amend if necessary</li> </ul>
		2.3	Give examples of how participant information affect the planning of exercise/physical activity for children	<ul style="list-style-type: none"> <li>□ Planning eg used to determine goals and objectives, type, duration and intensity of exercise</li> <li>□ Identify modifications eg to warm-up and cool-down sessions, to main activities, to meet individual needs, identify alternative exercise</li> </ul>
		2.4	Make sure there is informed parental/carer consent for the exercise/physical activity sessions	<ul style="list-style-type: none"> <li>□ Appropriate parent/carer to complete and sign consent documentation prior to any exercise/physical activity</li> </ul>
		2.5	Maintain confidentiality of information	<ul style="list-style-type: none"> <li>□ Follow organisational policies and procedures</li> <li>□ Legal requirements eg only share information on a need to know basis</li> <li>□ Secure storage of information (paper based, computer based)</li> </ul>
3	Understand how to use information to plan health related exercise/physical activity for children	3.1	Describe the factors, based on screening, which may affect safe exercise/physical activity participation for children	<ul style="list-style-type: none"> <li>□ Medical history/condition eg medication</li> <li>□ Stage of maturation</li> <li>□ Injury, exercise history, current fitness level</li> <li>□ Age-related needs</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		3.2	Give example of how information affects the planning of health related exercise/physical activity sessions for children	<p>Planning eg used to determine goals and objectives, type, duration and intensity of exercise</p> <p>Identify modifications eg to warm-up and cool-down sessions, to main activities, to meet individual needs, identify alternative exercise</p>
		3.3	Identify the reasons for temporary deferral of exercise in children	<ul style="list-style-type: none"> <li>□ Reasons eg minor illness or injury, inappropriate clothing, referral to another professional, appropriate parental/care consent not obtained</li> </ul>
		3.4	Explain the reasons for referring children to other professionals	Comply with legal requirements eg outside level of competence or authority
		3.5	Describe the process of referring children to other professionals	<p>Contraindications to exercise</p> <p>Medical conditions eg cardiac, pulmonary or metabolic disease, arthritis, osteoporosis</p> <p>Professionals eg GP, special populations instructors, physiotherapists</p>
4	Understand how to plan safe and effective exercise/physical activity for children	4.1	Identify the key stages in planning and preparing exercise/physical activity for children	<ul style="list-style-type: none"> <li>□ Follow related guidelines for instructing exercise and physical activity for children</li> <li>□ Meet participant objectives eg address barriers to participation, build self-confidence, appropriate exercise components</li> <li>□ Ensure appropriate pre-activity screening takes place, ensure appropriate consent is obtained, carry out appropriate risk assessments</li> <li>□ Take account of specific needs eg dyspraxia, growth -related injuries, exercise appropriate for obese children</li> <li>□ Apply principles and variables of training eg FITT principles, overload, specificity, progression, individual differences, variation, reversibility</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		4.2	Outline how to identify objectives for sessions based on collected information	<ul style="list-style-type: none"> <li><input type="checkbox"/> promote and enhance activity levels</li> <li><input type="checkbox"/> improve social skills</li> <li><input type="checkbox"/> promote personal development</li> <li><input type="checkbox"/> improve skills and techniques</li> <li><input type="checkbox"/> provide opportunities for fun and enjoyment</li> </ul>
		4.3	Describe how the use of music can enhance exercise/physical activity sessions for children	<ul style="list-style-type: none"> <li><input type="checkbox"/> Motivate children</li> <li><input type="checkbox"/> Enhance children's experience</li> <li><input type="checkbox"/> Make sessions fun and interesting</li> </ul>
		4.4	Describe how to apply the principles and variables of fitness to a range of activities to achieve health benefits and required levels of physical activity in children	<ul style="list-style-type: none"> <li><input type="checkbox"/> In terms of overall health and fitness – physical, emotional, mental, daily exercise, nutrition, social interaction, general wellbeing</li> <li><input type="checkbox"/> In terms of physical fitness – cardiovascular, muscular fitness (strength, endurance), flexibility, motor skills</li> <li><input type="checkbox"/> Guidelines on the amount of exercise /physical activity to achieve health benefits, and meet required levels of physical</li> </ul>
		4.5	Identify exercises/physical activities that are safe and appropriate for children of all ages, and include possible alternatives	<ul style="list-style-type: none"> <li><input type="checkbox"/> Exercise/physical activity that engages children</li> <li><input type="checkbox"/> Make sessions fun and interesting eg use of games, group activities, role play</li> <li><input type="checkbox"/> Considerations eg implications of stage of growth and development</li> <li><input type="checkbox"/> Preventative measures to avoid growth-related injuries, appropriateness of equipment for use by children</li> <li><input type="checkbox"/> Alternatives to potentially harmful physical activities</li> <li><input type="checkbox"/> Appropriate for specific age groups</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		4.6	Outline the importance and application of warm-up and cool-down when designing exercise/physical activity for children	<ul style="list-style-type: none"> <li>□ Safe and effective warm-up and cool-down activities for children eg correct duration and intensity, keep children interested and motivated, appropriate to specific age group</li> <li>□ Modifications- to meet participant needs, to meet needs of the physical environment</li> <li>□ Warm-up eg pulse raising, stretching, mobility, prepare body for exercise, reduce risk of injury</li> <li>□ Cool-down eg stretching, recovery time, reduce risk of injury</li> </ul>
5	Be able to plan safe and effective exercise/physical activity for children	5.1	Identify objectives that are appropriate to: <ul style="list-style-type: none"> <li>□ the needs and potential of children</li> <li>□ accepted good practice in the industry</li> <li>□ the learner’s own level of competence</li> <li>□ the aims of the session</li> </ul>	<ul style="list-style-type: none"> <li>□ Objectives eg promote and enhance activity levels, improve social skills, promote personal development, improve skills and techniques, provide opportunities for fun and enjoyment</li> <li>□ Ensure children’s understanding, use appropriate communication and interpersonal skills</li> </ul>
		5.2	Plan exercise/physical activity that will help children to achieve the planned objectives	<ul style="list-style-type: none"> <li>□ Apply current national guidelines covering the health, safety and welfare of children during exercise/physical activity</li> <li>□ Include parents/carers</li> <li>□ Health and environmental factors which affect group/individual working space</li> <li>□ Identify hazards and assess associated risks eg to participants, the planned activities, simultaneous activities</li> <li>□ Carry out appropriate risk assessment, plan how to control risks</li> </ul>

Learning outcomes		Assessment criteria		Unit amplification
		5.3	Structure the session so that children will be motivated to adhere to exercise/physical activity	<ul style="list-style-type: none"> <li>□ Provide solutions to help build children's confidence</li> <li>□ Provide encouragement, praise, reassurance, and mental stimulation, provide clear demonstrations</li> <li>□ Meet needs of individual children eg objectives, different motivational factors</li> <li>□ Make sessions fun and interesting eg use of games, groups activities, paired activities, role play, avoid repetitive activity</li> <li>□ Set goals (personal, realistic, achievable)</li> <li>□ Record achievement and progress, reward systems</li> </ul>
		5.4	Plan realistic timings for sessions	<p>To meet participant needs</p> <ul style="list-style-type: none"> <li>□ Appropriate to the objectives of the exercise programme, include all components and exercises</li> </ul>
		5.5	Identify ground rules for behaviour that will minimise risks to children	<ul style="list-style-type: none"> <li>□ Follow organisational policy (ensure all relevant people are aware, policy available to parents/carers)</li> <li>□ Explain rules to children and ensure consistent application of rules,</li> <li>□ Create a positive, encouraging environment, model positive behaviour</li> </ul>
		5.6	Record plans in an appropriate format	<p>Follow organisational procedures, comply with industry standards</p> <ul style="list-style-type: none"> <li>□ Record details of all exercises and activities eg warm-up, cool-down</li> </ul>

## Information for tutors

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### Delivery

This unit should be delivered in a way that develops knowledge and understanding of planning health-related exercise and physical activity for children. Learners need to know and understand:

- the methods used to collect information, including the principles of screening children prior to exercise
- how to use information about children to plan exercise and physical activity
- how to plan safe and effective exercise and physical activity to meet the objectives of the session, motivate children and promote adherence.

A useful opening would be small-group discussions during which learners can exchange their experiences of health-related exercise and physical activity for children, either as employees in the sector or from their previous experiences as children themselves. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Learners should be encouraged to engage with employers and, where possible, other employees to gain knowledge and understanding of the importance of planning exercise and physical activity for children correctly to meet the needs of individual children, based on the information gathered from children.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom planning and instructing health-related exercise and physical activity for children is a key part of their role, where possible, and through the use of guest speakers and video/DVD training programmes.

For example, a presentation by a health fitness instructor will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of the methods they use to collect information about children and how they use this information to plan safe and effective health-related exercise and physical activity with a range of children. They could also talk about the importance of identifying appropriate objectives for the sessions and of ensuring that all exercise and physical activity sessions are safe and effective. This should be supported by examples drawn from industry or through developed case studies that highlight:

- the importance of collecting the correct information and what could happen if this is not carried out
- how information collected about children affects planning exercise and physical activity, including temporary deferral of exercise and referring children to other professionals
- safe and effective exercises and physical activities that are, how to apply the principles and variable of fitness and the importance of warm-up and cool-down when designing exercise and physical activities for children.

To meet the practical aspect of the unit, in terms of identifying objectives and selecting exercises to plan health-related exercise and physical activity for children, learners could either use documentation from their place of work or the tutor could supply learners with standard templates.

This unit could be delivered through distance learning. However, this will involve additional, and different, considerations, such as planning, and other measures to ensure learners can gain the required knowledge and understanding.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

Learners must show evidence that they have planned and instructed a group of children (aged 5-15) in a health-related exercise/physical activity session following appropriate procedures (for example collecting appropriate information according to the individual child, registering children's attendance, monitoring that children take part in the session in a safe manner).

The session must include:

- a safe and effective warm-up
- a range of physical activities that are safe and appropriate for children (for example that take account of the implications of growth and development during the various stages of child development and preventative measures to avoid growth-related injuries)
- cool-down activities that are safe and effective for children.

A variety of assessment methods could be used. Learners could produce written reports or give verbal presentations, supported by witness testimony. Other alternatives could be logbooks or workbooks completed in the workplace or during visits.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

Adams G M – *Exercise Physiology Laboratory Manual: Health and Human Performance* (McGraw Hill Higher Education, 2001) ISBN 9780072489125

Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193

Buckley J, Holmes and J, Mapp G – *Exercise on Prescription: Cardiovascular Activity for Health* (Butterworth-Heinemann, 1999) ISBN 9780750632881

Coulson M – *Teaching Exercise to Children: A Complete Guide to Theory and Practice* (A & C Black Publishers Ltd, 2010) ISBN 9781408115633

Coulson M – *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness – Fitness Professionals* (A&C Black, 2007) ISBN 9780713682250

Dalgleish J and Dollery S – *The Health and Fitness Handbook* (Longman, 2001)  
ISBN 9780582418790

Franks B D and Howley E T – *Fitness Leader's Handbook* (Human Kinetics Europe,  
1998) ISBN 9780880116541

Gervis M and Brierley J – *Effective Coaching for Children* (The Crowood Press, 1999)  
ISBN 9781861261373

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics  
Europe, 2003) ISBN 9780736042109

Malina R and Bouchard C and Bar-Or O – *Growth, Maturation and Physical Activity*  
(Human Kinetics, 2004) ISBN 9780880118828

Rowland T – *Children's Exercise Physiology* (Human Kinetics, 2004)  
ISBN 9780736051446

## **Journals**

*The British Journal of Teaching Physical Education*

*Exercise and Sport Sciences Reviews*

*International Journal of Sports Science and Coaching*

*Journal of Physical Activity and Health*

## **Websites**

Association for Physical Education

[www.afpe.org.uk](http://www.afpe.org.uk)

British Association of Sport and Exercise Sciences

[www.bases.org.uk](http://www.bases.org.uk)

Human Kinetics

[www.humankinetics.com](http://www.humankinetics.com)

NSPCC

[www.nspcc.org.uk](http://www.nspcc.org.uk)

Sports Coach UK

[www.sportscoachuk.org](http://www.sportscoachuk.org)



# **Unit 12: Instructing Health Related Exercise and Physical Activity to Children**

**Unit reference number: T/600/9050**

**Level: 2**

**Credit value: 6**

**Guided learning hours: 36**

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## **Unit aim**

The aim of this unit is to develop understanding of and skills in instructing health-related exercise and physical activity to children in the age range 5-15 inclusive.

In this unit learners will develop their knowledge and understanding of providing health-related exercises and physical activities for children and have the opportunity to put this into practice by instructing health-related exercises and physical activities for children.

Initially, learners will look at the principles of health-related exercises and physical activities for children including safe and effective alignment of exercise, how to identify different methods of adapting health-related exercises and physical activities for children and the principles of motivating children to adhere to exercise.

Learners will carry out the necessary preparation of themselves, the environment, the equipment and participants, for example explaining the purpose, benefits and demands of the exercise, checking children's level of fitness, physical condition etc. and establishing clear ground rules for the exercise session.

Ensuring that children participate in exercise and physical activity safely is a key part of an instructor's role. In this unit learners will use appropriate motivational styles, respond to children's needs and adapt exercises as necessary. Learners will bring the exercise session to an end safely and effectively, including using safe and effective cool-down activities and providing motivational feedback.

The final part of the unit focuses on reviewing the outcomes of the exercise session, including feedback from children and parents/carers. Learners will have the opportunity to reflect on their practice and identify how to improve their personal practice.

## Essential resources

For this unit, centres need to provide learners with access to:

- the appropriate fitness equipment and an appropriate area carry out the practical activities required by this unit
- computers, the internet and library facilities to enable them to carry out research as required.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Understand the principles of instructing health related exercise/physical activity to children	1.1	Identify the safe and effective alignment for a range of health related exercises/physical activities for children	Range of basic exercises/physical activities Safe and appropriate for children Safe and effective alignment of exercise positions eg standing, sitting, range of motion, neutral spine alignment, joint alignment
		1.2	Identify different methods of adapting health related exercise/physical activity to the needs of children	Appropriate to the needs of the children To meet objectives of the exercise programme Appropriate progression and regression eg number of exercises, order of exercise, speed, intensity, repetitions, duration
		1.3	Describe how to develop children's co-ordination by building exercises/movements up gradually	Build exercises and movements up gradually eg complexity, speed
		1.4	Describe the principles of group behaviour management when working with children in the age range 5-15	Working with children in the age range 5-15 eg maintain fun and motivation Appropriate to the group Explain purpose of the induction including positive communication, establish eye contact, professional self-image Ensure children's understanding Set ground rules for conduct within the exercise environment Establish effective relationships with parent/carers

Learning outcomes		Assessment criteria		Unit amplification
2	Understand the principles of motivating children to adhere to exercise/physical activity	2.1	Explain why children need to take personal responsibility for their own fitness and motivation	For example sense of autonomy, recognise health benefits of exercise/physical activity Opportunities to make decisions eg related to their own health and fitness goals, about their activity preferences
		2.2	Identify the typical barriers to exercise/physical activity that children experience	Physical and psychological Other obligations eg homework Personal/individual barriers eg lack of interest, do not enjoy exercise, body consciousness, lack of self-confidence Lack of parental/carers support eg encouragement, transportation to physical activity Resource barriers eg lack of access to facilities, lack of equipment, cost
		2.3	Describe strategies that can help children overcome these barriers	Ensure children feel listened to and taken seriously Explore alternative ways of accessing exercise/physical activity Ensure time to ask questions
		2.4	Explain how incentives and rewards, appropriate to a range of children, can be used to strengthen motivation and adherence	Appropriate to a range of children To strengthen motivation and adherence Incentives and positive reinforcements eg praise and encouragement, set achievable goals/objectives, certificates Reward effort and achievement-eg those who complete a programme or show increased fitness levels as well as those who achieve desirable levels of fitness

Learning outcomes		Assessment criteria		Unit amplification
		2.5	Explain how children's exercise/physical activity preferences can be used to strengthen motivation and adherence	Appropriate to the age group eg games, races, vary activities Strengthen motivation and adherence Success-orientated activities (if children feel successful they repeat activities)
		2.6	Describe how to assist children to develop their own strategy for motivation and adherence appropriate to their age	For motivation and adherence eg the exercise/activities they enjoy Develop children's confidence and self-esteem Children understand benefits of taking part in exercise/activities
3	Be able to prepare children for exercise/ physical activity	3.1	Help children feel welcome and at ease in the exercise environment	Professional behaviour eg dress, punctuality, adopt approachable manner eg encourage children to ask questions, to express concerns, give children full and accurate information; promote a safe, supportive, non-threatening environment
		3.2	Provide sufficient and appropriate resources for the session	Appropriate to the age group Appropriate for the number of children Appropriate for the planned exercise session Equipment appropriate for use by children
		3.3	Follow the correct procedures for registering children's attendance	Use appropriate documentation Ensure all children included Collect relevant information eg details of sessions attended, child's name and address, emergency contact details
		3.4	Check children's level of experience, ability and physical/medical condition	Parents/carer sign appropriate consent documentation Ask parents/carers if children have any illnesses or injuries Advise children/parents/cares of any reasons for non- participation in the exercise session Special needs that children may have

Learning outcomes		Assessment criteria		Unit amplification
		3.5	Confirm or revise plans in the light of new information	To meet child's needs, realistic so goals achieved Check children's understanding, opportunity for children to ask questions
		3.6	Explain the purpose and value of the exercises/physical activities, including the warm-up and cool-down	Cardiovascular fitness eg raise rate, reduce risk of heart disease Muscular fitness develop muscles and muscle strength, improve bone density Flexibility eg reduce risk of injury, improve posture Motor skills eg improve, balance, agility, coordination, reaction time Warm-up structure eg mobility, pulse raising, static stretching, purpose eg prepare body for exercise, enhance flexibility, minimise discomfort, prevent injury Cool-down – structure eg pulse lowering, static stretching, developmental stretching, purpose eg enhance flexibility, minimise discomfort, prevent injury, avoid delayed onset of muscle soreness, provide recovery time
		3.7	Explain the agreed exercises/physical activities, including physical and technical demands	Purpose of exercise, Component parts Appropriateness to children Check children's understanding, opportunity for children to ask questions
		3.8	Provide clear information to children about the ground rules for behaviour and the reasons for these	Clear information eg reasons for ground rules, health and safety issues; check children's understanding, opportunity for children to ask questions

Learning outcomes		Assessment criteria		Unit amplification
		3.9	Advise children, parents and carers of the facility's emergency procedures	Location of emergency equipment eg first aid kit, telephone, fire extinguishers Fire eg evacuation route, fire exits, assembly point
4	Be able to instruct exercise/physical activity to children	4.1	Check that children are appropriately dressed for exercise/physical activity	Correct clothing and footwear Remove potentially unsafe jewellery Dress appropriate for the environment and exercise session
		4.2	Develop and maintain an atmosphere of fun and enjoyment	Environment seen as safe, supportive, exciting and interactive Develop positive attitude towards activities Use exercise/activities to create a fun and enjoyable atmosphere
		4.3	Prepare children for the session using safe and effective warm-ups	Explain importance of warm-up Ensure children's understanding, Appropriate to children's needs, maintain interest Structure eg mobility, pulse raising, stretching
		4.4	Give explanations and demonstrations that are technically correct and appropriate to the needs and level of experience of children	Safe and effective alignment of exercise positions Demonstrations eg lifting and passing techniques, movements and techniques, appropriate speed of movements, appropriate to the exercise environment, Technically correct verbal explanations eg to reinforce or correct technique
		4.5	Communicate with children in a way that: <ul style="list-style-type: none"> <li><input type="checkbox"/> is appropriate to their needs</li> <li><input type="checkbox"/> is fun</li> <li><input type="checkbox"/> motivates them to take part</li> </ul>	Appropriate to the environment Appropriate to exercise session

Learning outcomes		Assessment criteria		Unit amplification
		4.6	Monitor that children take part in the session in a safe manner	Children carry out exercises in a safe and effective manner eg safe use of equipment  Adapt exercises as necessary eg suitable progressions and regressions, respond appropriately to signs of discomfort or injury  Types of monitoring eg rate of perceived exertion (RPE), talk test, target heart rate zones
		4.7	Keep to the planned timings for the session	For the session overall  For individual exercise components  Ensure children benefit adequately from the exercise session
		4.8	Use appropriate volume, pitch and voice projection according to the exercise/physical activity	Appropriate methods of voice projection  Effective use of volume and pitch of voice
		4.9	Provide cueing to enable children to work to the structure and phrase of the music, where relevant	Verbal and visual  Motivate children, maintain their interest
5	Be able to support children to take part in exercise/physical activity	5.1	Present a positive image of self and organisation to children	Self eg personal hygiene, model positive behaviour, follow appropriate industry standards and codes of ethics  Organisation eg knowledgeable and approachable staff, children feel comfortable in the environment, children's confidence in organisation and its services



Learning outcomes		Assessment criteria		Unit amplification
		5.2	Establish an effective working relationship with children	<p>Build children's confidence</p> <p>Children more likely to adhere to exercise and physical activity programmes</p> <p>Work to overcome barriers to participation</p> <p>Work with parents/carers etc</p> <p>Requirements eg in line with good practice, ethical requirements, professional conduct</p> <p>Model positive exercise behaviour</p>
		5.3	Communicate with children in a way that makes them feel valued	<p>Verbal communication eg appropriate tone and pitch of voice, language appropriate to the children, use of positive language , use of praise and encouragement, avoid use of slang/jargon</p> <p>Non-verbal communication eg posture, expression, gestures, eye contact, positive body language</p> <p>Listening eg asking appropriate questions, seeking children's views on their performance</p>
		5.4	Use motivational styles appropriate to children and the exercise/physical activity format	<p>Appropriate to the children eg setting clear, realistic goals/objectives, building children's self-confidence, positive encouragement, praise, encourage positive thinking in children, help children develop and follow through their own motivational strategies, attention and motivation as appropriate to children's needs</p> <p>Appropriate to the exercise/physical activity eg in relation to goals/objective, in relation to planned sessions;</p>
		5.5	Give the children attention and motivation as appropriate to their needs	

Learning outcomes	Assessment criteria	Unit amplification
	5.6 Provide appropriate progressions and regressions	For example number of exercises, order of exercise, speed, intensity, repetitions, duration To meet children's needs To meet objectives of the exercise programme
	5.7 Use appropriate methods to correct and reinforce technique, including: <ul style="list-style-type: none"> <li>□ changing positions</li> <li>□ asking questions</li> <li>□ making adaptations/offering alternatives</li> <li>□ using verbal communications</li> <li>□ using visual communications</li> </ul>	Changing teaching positions eg move around the room Asking questions eg to check children's understanding Make adaptations, offer alternatives Verbal and visual communications Correct techniques as appropriate Provide encouragement and constructive feedback
	5.8 Build exercises/physical activities gradually as appropriate for children	In terms of eg complexity, speed
	5.9 Manage children's behaviour throughout the session	Establish ground rules for conduct within the exercise environment Establish children's understanding Ensure all children observed throughout the session eg identify when children have stopped participating, identify when children are distracted Adapt exercise session if children become bored or demotivated
	5.10 Provide guidance and feedback which is timely, clear and helps children achieve the objectives	Appropriate to children's needs Provide encouragement and motivation eg positive verbal and non-verbal communication, active listening

Learning outcomes		Assessment criteria		Unit amplification
		5.11	Adapt the exercises/physical activities to the changing needs of children during the session	<p>Appropriate progressions and regressions eg number of exercises, order of exercise, speed, intensity, repetitions, duration</p> <p>To meet children's needs, ensure interest maintained</p> <p>To meet objectives of the exercise programme</p>
6	Be able to bring an exercise/physical activity session to an end	6.1	Allow sufficient time to end the session	<p>Appropriate to children's level of experience and fitness</p> <p>Keep to planned timings,</p> <p>Safe and effective cool-down activities for children</p> <p>Opportunity for children to ask questions, provide feedback to children on the session</p>
		6.2	End the session using cool-down activities that are safe and effective for children	<p>Explain importance of cool-down eg avoid delayed onset of muscle soreness</p> <p>Ensure children's understanding</p> <p>Appropriate to the children and the environment</p> <p>Structure eg pulse lowering section, static stretching, developmental stretching</p>
		6.3	Provide motivational feedback on the session to children	Feedback eg progress, strengths, suggested additional/alternative exercise, provide encouragement, motivation and positive praise
		6.4	Provide children with the opportunity to: <ul style="list-style-type: none"> <li><input type="checkbox"/> think about the session</li> <li><input type="checkbox"/> ask questions</li> <li><input type="checkbox"/> provide feedback</li> </ul>	<p>Think about the session eg on their progress, their experience, effectiveness of the instruction;</p> <p>Ask questions eg about their performance, about alternative exercise</p> <p>Provide feedback eg on the effectiveness of the instruction, their experience</p>

Learning outcomes		Assessment criteria		Unit amplification
		6.5	Follow the correct procedures for checking and dealing with any equipment used	Check equipment eg functionality, damage, cleanliness Deal with equipment in relation to checks carried out Store and clean equipment correctly Report any faults
		6.6	Leave the environment in a condition acceptable for future use	Environment eg clean, safe, tidy, inform appropriate person about any health and safety issues
7	Be able to reflect on providing health related exercise/physical activity for children	7.1	Review the outcomes of working with children, their feedback and feedback from other adults/carers	Review children's progress, offer fitness advice in response to changing needs of children; Achieved goals/objectives Children's opportunity to ask questions
		7.2	Identify: <ul style="list-style-type: none"> <li>□ how well the exercises/physical activities met children's needs</li> <li>□ how effective and motivational the relationship with the children was</li> <li>□ how well the instructing style matched children's needs</li> </ul>	How well the exercises/physical activities met children's needs eg effectiveness of planned activities, achievement of goal/objectives How effective and motivational the relationship with the children was eg children felt supported, encourage and motivated, clear and appropriate communication, mutual respect How well the instructing style matched children's needs eg use of appropriate demonstrations, clear, accurate explanations, motivation and support

Learning outcomes		Assessment criteria		Unit amplification
		7.3	Identify how to improve personal practice	<ul style="list-style-type: none"> <li>□ Identify strengths and areas for improvement</li> <li>□ Set SMART (specific, measurable, achievable, realistic, time-bound) targets</li> <li>□ Personal development plan</li> <li>□ Development opportunities eg specific training and courses; modify exercise programmes eg future planning to ensure adherence, changing activities to maintain interest and ensure fitness progression</li> </ul>
		7.4	Explain the value of reflective practice	<p>Learning from own experiences</p> <p>Important source of personal professional development and improvement</p> <p>Allows for continuous updating of skills and knowledge</p>

## Information for tutors

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### Delivery

This is a practical unit and needs to be delivered in a way that enables learners to demonstrate their ability to instruct health-related exercise and physical activity to children safely and effectively. Learners need to demonstrate that they can:

- communicate effectively with children in ways that are fun and motivate children to participate, applying appropriate voice projection, tone and pitch
- structure the exercise session to develop a fun atmosphere and to motivate children to participate throughout
- plan and instruct safe and effective exercise/physical activity sessions for children, including appropriate warm-up and cool-down activities, bringing the session to an end
- monitor, support and motivate children to ensure they are participating safely and effectively.

A useful opening would be through small-group discussions, during which learners can exchange their experiences of health-related exercise and physical activity for children, either as employees in the sector or from their previous experiences as children themselves. Tutors can take feedback on a flipchart or board to share the discussions of individual groups.

Tutor input will need to cover the theoretical aspect of the unit relating to the principles of instructing exercise and physical activity to children and of motivating children to adhere to exercise/physical activity.

Knowledge of issues gained through engaging with employers and employees, rather than through a purely theoretical context, is key. This should be made possible by learners working with others for whom planning and instructing exercise and physical activity for children is a key part of their role, where possible, and through the use of guest speakers and video/DVD training programmes.

Guest speakers, for example a health fitness instructor, will support delivery, as well as adding vocational relevance and currency. The visiting speaker could deliver a summary of how they prepare children for exercise and physical activity and how they ensure that the exercise sessions they instruct are safe and effective. This could include the importance of supporting children to take part in exercise and physical activity, including using appropriate communication methods and motivational styles to correct and reinforce techniques.

This could be supported by examples drawn from industry or through developed case studies which highlight safe and unsafe practice.

The importance of health and safety, for both children and instructors, needs to be emphasised throughout delivery of this unit. Appropriate risk assessments must be carried out before learners undertake any practical activities.

Tutors need to ensure that there are appropriate and sufficient opportunities to observe learners instructing and supervising exercise/physical activity sessions for children and that the appropriate records are kept to evidence learner ability and achievement.

Learners should be encouraged to reflect positively on the outcomes of the exercise session and use feedback constructively when identifying how to improve their personal performance.

Learners can produce exemplar case studies, logbooks/diaries, witness testimonies and presentations that demonstrate their involvement in exercise/physical activity sessions with children.

## Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

Learners must show evidence that they have planned and instructed a group of children (aged 5-15) in a health related exercise/physical activity session following appropriate procedures (eg collecting appropriate information according to the individual child, registering children's attendance, monitoring that children take part in the session in a safe manner).

The session must include:

- a safe and effective warm-up
- a range of physical activities that are safe and appropriate for children (eg that take account of the implications of growth and development during the various stages of child development and preventative measures to avoid growth-related injuries)
- cool-down activities that are safe and effective for children.

Learners must demonstrate effective group behaviour management.

Learners must give explanations appropriate to the needs and experience of children. They should show demonstrations of exercises/movements that are technically correct to enable children to develop co-ordination by building exercises/movements up gradually.

Learners must show examples of how to adapt the exercises/physical activities to the changing needs of children during the session.

Learners must show the ability to observe their clients/participants and correct poor technique where required, giving regular teaching points to meet individual needs.

Learners must show that they can apply methods of voice projection and can effectively use the volume and pitch of their voice according to the exercise/physical activity.

Learners must show the use of communication skills and appropriate incentives and rewards that are:

- appropriate to the needs of children
- fun
- motivating.

Assessment tasks and activities should enable learners to produce valid, sufficient and reliable evidence that relates directly to the assessment criteria. Centres are encouraged to emphasise the practical application of the assessment criteria.

## Indicative resource materials

### Books

- Adams G M – *Exercise Physiology Laboratory Manual: Health and Human Performance* (McGraw Hill Higher Education, 2001) ISBN 9780072489125
- Allen M B – *Sports Exercise and Fitness: A Guide to Reference and Information Sources* (Libraries Unlimited Inc, 2005) ISBN 9781563088193
- Buckley J, Holmes J, Mapp G – *Exercise on Prescription: Cardiovascular Activity for Health* (Butterworth-Heinemann, 1999) ISBN 9780750632881
- Coulson M – *Teaching Exercise to Children: A Complete Guide to Theory and Practice* (A & C Black Publishers Ltd, 2010) ISBN 9781408115633
- Coulson M – *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness – Fitness Professionals* (A&C Black, 2007) ISBN 9780713682250
- Dalgleish J, Dollery S – *The Health and Fitness Handbook* (Longman, 2001) ISBN 9780582418790
- Franks B D and Howley E T – *Fitness Leader's Handbook* (Human Kinetics Europe, 1998) ISBN 9780880116541
- Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109
- Malina R, Bouchard C, Oded Bar O – *Growth, Maturation and Physical Activity* (Human Kinetics, 2004) ISBN 9780880118828
- Rowland T – *Children's Exercise Physiology* (Human Kinetics, 2004) ISBN 9780736051446

### Journals

- Exercise and Sport Sciences Reviews*
- International Journal of Sports Science and Coaching*
- Journal of Physical Activity and Health*

### Websites

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|--|--|
| British Association of Sport and Exercise Sciences | <a href="http://www.bases.org.uk">www.bases.org.uk</a>           |
| Human Kinetics                                     | <a href="http://www.humankinetics.com">www.humankinetics.com</a> |
| Sports Coach UK                                    | <a href="http://www.sportscoachuk.org">www.sportscoachuk.org</a> |



## 12 Further information and useful publications

To get in touch with us visit our 'Contact us' pages:

- Edexcel, BTEC and Pearson Work Based Learning contact details: [qualifications.pearson.com/en/support/contact-us.html](http://qualifications.pearson.com/en/support/contact-us.html)
- books, software and online resources for UK schools and colleges: [www.pearsonschoolsandfecolleges.co.uk](http://www.pearsonschoolsandfecolleges.co.uk)

Key publications:

- *Adjustments for candidates with disabilities and learning difficulties, Access and Arrangements and Reasonable Adjustments, General and Vocational qualifications* (Joint Council for Qualifications (JCQ))
- *Supplementary guidance for reasonable adjustments and special consideration in vocational internally assessed units* (Pearson)
- *General and Vocational qualifications, Suspected Malpractice in Examination and Assessments: Policies and Procedures* (JCQ)
- *Equality Policy* (Pearson)
- *Recognition of Prior Learning Policy and Process* (Pearson)
- *UK Information Manual* (Pearson)
- *BTEC UK Quality Assurance Centre Handbook*

All of these publications are available on our website.

Publications on the quality assurance of BTEC qualifications are also available on our website.

Our publications catalogue lists all the material available to support our qualifications. To access the catalogue and order publications, please visit our website.

### **Additional resources**

If you need further learning and teaching materials to support planning and delivery for your learners, there is a wide range of BTEC resources available.

Any publisher can seek endorsement for their resources and, if they are successful, we will list their BTEC resources on our website.



## 13 Professional development and training

Pearson supports UK and international customers with training related to BTEC qualifications. This support is available through a choice of training options offered on our website.

The support we offer focuses on a range of issues, such as:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing learner-centred learning and teaching approaches
- building in effective and efficient quality assurance systems.

The national programme of training we offer is on our website. You can request centre-based training through the website or you can contact one of our advisers in the Training from Pearson UK team via Customer Services to discuss your training needs.

### **BTEC training and support for the lifetime of the qualifications**

**Training and networks:** our training programme ranges from free introductory events through sector-specific opportunities to detailed training on all aspects of delivery, assignments and assessment. We also host some regional network events to allow you to share your experiences, ideas and best practice with other BTEC colleagues in your region.

**Regional support:** our team of Curriculum Development Managers and Curriculum Support Consultants, based around the country, are responsible for providing advice and support in centres. They can help you with planning and curriculum developments.

To get in touch with our dedicated support teams please visit our website.

### **Your Pearson support team**

Whether you want to talk to a sector specialist, browse online or submit your query for an individual response, there's someone in our Pearson support team to help you whenever – and however – you need:

- **Subject Advisors:** find out more about our subject advisor team – immediate, reliable support from a fellow subject expert
- **Ask the Expert:** submit your question online to our Ask the Expert online service and we will make sure your query is handled by a subject specialist.

Please visit our website at [qualifications.pearson.com/en/support/contact-us.html](http://qualifications.pearson.com/en/support/contact-us.html)



## Annexe A

### Progression opportunities

These are examples of progression opportunities to other Pearson qualifications within the Health and Fitness sector.

Level	General qualifications (GCSEs, GCEs)	BTEC Firsts/Nationals/Higher Nationals	BTEC Specialist/Professional qualifications	NVQ/competence-based qualifications
8				
7				
6				
5		Pearson BTEC Level 5 HND Diploma in Sport and Exercise Sciences Pearson BTEC Level 5 HND Diploma in Sport (Coaching and Sports Development) Pearson BTEC Level 5 HND Diploma in Sport (Leisure Management)		

Level	General qualifications (GCSEs, GCEs)	BTEC Firsts/Nationals/Higher Nationals	BTEC Specialist/Professional qualifications	NVQ/competence-based qualifications
4		<p>Pearson BTEC Level 4 HNC Diploma in Sport (Health, Fitness and Exercise)</p> <p>Pearson BTEC Level 4 HNC Diploma in Sport (Coaching and Sports Development)</p> <p>Pearson BTEC Level 4 HNC Diploma in Sport (Leisure Management)</p>		
3	<p>Advanced Subsidiary GCEs Physical Education and Leisure Studies</p> <p>Advanced GCEs Physical Education and Leisure Studies</p>	<p>Pearson BTEC Level 3 Certificate in Sport</p> <p>Pearson BTEC Level 3 Subsidiary Diploma in Sport</p> <p>Pearson BTEC Level 3 Diploma in Sport</p> <p>Pearson BTEC Level 3 Extended Diploma in Sport</p>	<p>Pearson BTEC Level 3 Tech Cert in Personal Training</p> <p>Pearson BTEC Level 3 Tech Cert in Leisure Operations</p>	<p>Edexcel Level 3 NVQ in Outdoor Programmes</p> <p>NVQs in Sports Development, Leisure Management, Achieving Excellence in Sports Performance, and Spectator Safety</p>
2	GCSE Physical Education (full and short course)	<p>Pearson BTEC Level 2 Certificate in Sport</p> <p>Pearson BTEC Level 2 Extended Certificate in Sport</p> <p>Pearson BTEC Level 2 Diploma in Sport</p>	<p>Pearson BTEC Level 2 Tech Cert in Leisure Operations</p> <p>BTEC Level 2 Subsidiary Certificate and Certificate in Sailing and Watersports</p>	<p>NVQs in Coaching, Teaching and Instructing, Activity Leadership, Instructing Exercise and Fitness, Operational Services, and Spectator Safety</p>

Level	General qualifications (GCSEs, GCEs)	BTEC Firsts/Nationals/Higher Nationals	BTEC Specialist/Professional qualifications	NVQ/competence-based qualifications
1		BTEC Introductory Certificate and Diploma in Sport and Leisure	BTEC Award/Certificate/Diploma in Sport and Active Leisure	NVQ in Sport, Recreation and Allied Occupations
Entry	Entry Level Certificate in Physical Education	Entry level Certificate in Skills for Working Life (Sport and Recreation) Entry level BTEC Award in Sport and Active Leisure		

## Annexe B

### Mapping with National Occupational Standards

The grid below maps the knowledge covered in the Pearson BTEC Level 2 Specialist qualifications in Fitness Instructing against the underpinning knowledge of the National Occupational Standards in Instructing Exercise and Fitness. Centres can use this mapping when planning holistic delivery and assessment activities.

#### KEY

✓ indicates partial coverage of knowledge in the NOS unit

A blank space indicates no coverage of the knowledge

BTEC Specialist units		NOS										
		A355	C22	C316	D451	D452	D453	D454	D455	D456	D457	D458
1	Health, safety and welfare in a fitness environment		4									
2	Principles of exercise, fitness and health		4									
3	Know how to support clients who take part in exercise and physical activity			4								
4	Anatomy and Physiology for Exercise										4	
5	Planning gym-based exercise	4			4							
6	Instructing gym-based exercise	4			4	4						
7	Planning group exercise to music sessions						4					
8	Instructing group exercise to music						4	4				
9	Planning water-based exercise								4			



BTEC Specialist units		NOS										
		A355	C22	C316	D451	D452	D453	D454	D455	D456	D457	D458
<b>10</b>	Instructing water-based exercise								4	4		
<b>11</b>	Planning health related exercise and physical activity for children										4	
<b>12</b>	Instructing health related exercise and physical activity to children											4

## Annexe C

### Mapping to Level 1 Functional Skills

Level 1	Unit Number												
	1	2	3	4	5	6	7	8	9	10	11	12	
<b>English – Speaking, Listening and Communication</b>													
Take full part in formal and informal discussions and exchanges that include unfamiliar subjects						4		4		4			4
<b>English – Reading</b>													
Read and understand a range of straightforward texts	4	4	4	4	4	4	4	4	4	4			
<b>English – Writing</b>													
Write a range of texts to communicate information, ideas and opinions, using formats and styles suitable for their purpose and audience	4	4	4	4	4	4	4	4	4	4	4	4	4

Level 1	Unit Number												
	1	2	3	4	5	6	7	8	9	10	11	12	
<b>Mathematics – representing</b>													
Understand practical problems in familiar and unfamiliar contexts and situations, some of which are non-routine													
Identify and obtain necessary information to tackle the problem			4										
Select mathematics in an organised way to find solutions			4										
<b>Mathematics – analysing</b>													
Apply mathematics in an organised way to find solutions to straightforward practical problems for different purposes													
Use appropriate checking procedures at each stage													

Level 1	Unit Number											
Mathematics – interpreting	1	2	3	4	5	6	7	8	9	10	11	12
Interpret and communicate solutions to practical problems, drawing simple conclusions and giving explanations			4									

Level 1	Unit Number											
ICT – using ICT	1	2	3	4	5	6	7	8	9	10	11	12
Identify the ICT requirements of a straightforward task												
Interact with and use ICT systems to meet requirements of a straightforward task in a familiar context												
Manage information storage												
Follow and demonstrate understanding of the need for safety and security practices												
ICT – finding and selecting information												
Use search techniques to locate and select relevant information												
Select information from a variety of ICT sources for a straightforward task												
ICT – developing, presenting and communicating information												
Enter, develop and refine information using appropriate software to meet the requirements of straightforward tasks												
Use appropriate software to meet requirements of straightforward data-handling task												
Use communications software to meet requirements of a straightforward task												

Level 1	Unit Number											
ICT – developing, presenting and communicating information ( <i>continued</i> )	1	2	3	4	5	6	7	8	9	10	11	12
Combine information within a publication for a familiar audience and purpose												
Evaluate own use of ICT tools												

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