

Model Assignment Assessment Material

OCR Level 1/2 Cambridge National Certificate in Science in the Workplace

Unit R077: The science of fitness and health

Please note:

This OCR model assignment is to be used to provide evidence for the unit identified above. Alternatively, centres may 'tailor' or modify the assignment within permitted parameters (see Information for Teachers). It is the centre's responsibility to ensure that any modifications made to this assignment allow learners to show that they can meet all of the learning outcomes and provide sufficient opportunity for learners to demonstrate achievement across the full range of marks.

INSTRUCTIONS TO TEACHERS

The OCR administrative codes associated with this unit are:

- Unit entry code R077
- Certification code J816

The accreditation numbers associated with this unit are:

- Unit reference number T/504/3043
- Qualification reference 600/7042/0

Duration: Approximately 20 hours

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Contents

	Page Number(s)
INFORMATION FOR LEARNERS	3
<p>Your tasks</p> <p>This section contains the tasks learners must complete before work can be submitted for assessment.</p>	4 - 5
INFORMATION FOR TEACHERS	7
<p>General Guidance on using this assignment</p> <p>This section provides general guidance to centre staff on the preparation and completion of the assignment.</p>	8 - 11
<p>Evidence summary</p> <p>This section provides a summary of the evidence it is expected the learner will produce for this assignment.</p>	12
<p>Apparatus and materials</p> <p>This section provides some guidance on the scientific apparatus and materials which centre staff will need to provide.</p>	13

Model Assignment: Information for learners

OCR Level 1/2 Cambridge National Certificate in Science in the Workplace

Unit R077: The science of fitness and health

Your Tasks

Read through all of the tasks carefully, so that you know what you will need to do to complete this assignment.

Task 1 - Analytical task: An advertising campaign to raise public awareness of individual health and fitness

In order to improve the health and fitness of the nation, public awareness of people's individual health and fitness needs to be raised.



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Produce an advertising campaign for the public.

Your aim is to raise awareness of the benefits of a healthy lifestyle and the negatives linked to an unhealthy lifestyle.

You should include information on the musculoskeletal, circulatory and respiratory systems. You should explain how the structure, function and control of each system is affected by health and fitness levels.

You should also highlight how lifestyle choices can risk the health and fitness of a person.

Task 2 - Practical procedures: A fitness programme for 11 to 19 year olds

One part of a healthy lifestyle is to exercise regularly.



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You should produce a fitness programme for a group of 11 to 19 year olds.

You need to measure its effectiveness in improving the health and fitness of those involved.

Task 3 - Research task: A report on a health and fitness organisation

Produce a report on how a local gym operates and the roles of the people within it.

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Information for Teachers

OCR Level 1/2 Cambridge National Certificate in Science in the Workplace

Unit R077: The science of fitness and health

Guidance on using this assignment

1 General

- 1.1 OCR assignments are available to download free of charge from our website:
www.ocr.org.uk
- 1.2 OCR assignments are intended to be used for summative assessment of learners. The OCR specification for this qualification gives more information on the arrangements for assessing internally assessed units.
- 1.3 This assignment has been designed to meet the full assessment requirements of the unit. Learners will need to take part in a planned learning programme that covers the underpinning knowledge, understanding and skills of the unit.
- 1.4 There are 3 assessment tasks:

Task 1 – Analytical task: An advertising campaign to raise public awareness of individual health and fitness

Task 2 – Practical procedures: A fitness programme for 11 to 19 year olds

Task 3 – Research task: A report on a health and fitness organisation

2 Before carrying out the assignment

- 2.1 When the skills, knowledge and understanding identified in the specification have been taught, learners should be provided with a copy of the *Information for learners* section of this assignment. Tasks may be presented to learners when they are judged to be ready to undertake them; they do not all need to be left until the end of the unit.
- 2.2 Learners will not need to carry out any preparations prior to undertaking the assessment tasks, such as collating resources to use in the assessment.
- 2.3 We have estimated that it will take approximately 20 hours to complete this assignment. This is the recommended time but centres can decide how the time can be allocated between each part or individual task in the assessment. Centres are also permitted to spread the overall assessment time across several sessions and therefore it is permissible for evidence to be produced over several sessions.
- 2.4 It is expected that before learners attempt the assignment tasks, they will have received general preparation in their lessons. The details of practical techniques, the development of skills associated with these techniques, and the methods and choice of equipment for the task should be covered when teaching the particular part(s) of the specification which the assignment relates to, and should be completed prior to undertaking the task.

From their learning for LO1, learners will know about the structure, function of the musculoskeletal system and how it is controlled. They will know the major bones in the body and how the joints produce movement by the interaction of connected muscles.

The forces and work done by these muscles can be calculated by measuring the weights they can lift or move.

From their learning in LO2, learners will know the structure and function of the circulatory system and how it is controlled. They will be able to ascertain the performance of a person's circulatory system by measuring heart rate and pulse rate, blood pressure etc.

From their learning in LO3, learners will know the structure and function of the respiratory system and how it is controlled. They will be able to assess the performance of a person's respiratory system by measuring lung volumes.

From their learning in LO4, learners will know about the consequences of health and fitness on the body, and that an unhealthy lifestyle can lead to possible health and fitness risks.

From their learning in LO5, learners will know the four basic fitness components and be able to create a fitness programme for a specified group.

From their learning in LO6, learners will be able monitor a person's fitness by collecting data during and after exercise.

From their learning in LO7 and LO8, learners may be able to see a career pathway within the sports or health and fitness industry.

2.5 Learners should be made aware of the health and safety issues associated with the practical tasks.

2.6 Learners should also be made aware of the marking criteria for each task.

3 When completing the assignment and producing evidence

3.1 Each learner must produce individual and authentic evidence for each task within the assignment, though when undertaking practical work, learners may work in groups, as specified for the tasks concerned.

3.2 Centre staff may give support and guidance to learners. This support and guidance should focus on checking that learners understand what is expected of them and giving general feedback that enables the learner to take the initiative in making improvements, rather than detailing what amendments should be made. However, where more specific support is provided so that learners are able to make progress with the task or to ensure safety, this must be reflected in the marks awarded. It is not acceptable for teachers/deliverers to provide answers or to work through answers in detail.

- 3.3 For the practical procedures, teachers are responsible for ensuring appropriate health and safety procedures and all appropriate steps taken to reduce risks are carried out, including a risk assessment for the task, prior to learners attempting the practical work. It is the centre's responsibility to ensure the safety of all learners involved in any investigation.

The work of individual learners may be informed by working with others but each must provide an individual response. Learners should be made aware of the time allowed for carrying out this part of the task. Learners' access to resources is determined by those available to the centre.

- 3.4 Task 1 covers LO1, LO2, LO3 and LO4. Learners will produce illustrations of the three body systems (musculoskeletal, circulatory, respiratory) giving explanations of their functions and produce analyses as to how these systems are affected by health and fitness. Learners describe human health risks and the effects of an unhealthy lifestyle. They will then judge the element of risk associated with an unhealthy lifestyle using quantitative data where possible.

Task 1 is expected to take 7 hours.

- 3.5 Task 2 covers LO5 and LO6. Learners will produce a fitness programme for a group of 11 to 19 year olds (this age range has been selected so learners can carry out fitness measurements in school). The fitness programme is then monitored. Learners produce an explanation of how the components of fitness affect the health of their specified group.

Task 2 is expected to take 6 hours

- 3.6 Task 3 covers LO7 and LO8, will produce a description of the purpose and structure of an organisation in the health and fitness sector and the careers roles within a gym. Research should be carried out independently, if guidance is given then this should be reflected in the learner's marks. The use of guest speakers or shadowing professionals is a possibility. This task could be combined with work experience but it is not an essential part of the requirements for this unit.

Task 3 is expected to take 7 hours

- 3.7 We have specified what evidence the learner is expected to produce, but it is important to note that if it is possible to generate the evidence in a variety of formats, then the learner is free to use the format that is most appropriate for them. Centres must advise learners as to the most appropriate format of evidence. Format must not be confused with the content or the type of datafile to be produced. Guidance on suitable formats of the evidence is provided in the section *Evidence Summary*.

4 Presentation of work for marking and moderation

- 4.1 Centres wishing to produce digital evidence in the form of an e-portfolio should refer to the appendix in the specification on guidance for the production of electronic assessment.

- 4.2 Centres may wish to discourage learners from excessive use of plastic wallets for presentation of their evidence as this may hinder the assessment process. Instead centres may wish to encourage learners to present their work so that it is easily accessible, e.g. spiral bound, stapled booklet, treasury tag.

5 Scope of permitted model assignment modification

The model assignment is very self-contained in its present form. The set of tasks form a coherent whole addressing all the learning outcomes and allowing access to the full range of marks.

You **must not** change the following:

- the learning outcomes
- the marking criteria
- the requirements for supervision and authentication as described in the specification (section 'The internally assessed units').

Permitted changes:

The model assignment can be modified in terms of the areas described below at the permission of OCR but centres must be sure that learners still have the opportunity to cover all of the learning outcomes and to access the full range of marks:

- The learner's assignment, which can be contextualised or amended to suit local needs.
- To allow for differences in the materials, equipment and facilities at different centres.

OCR has ensured that in the language used and the tasks and scenario provided we have avoided discrimination, bias and stereotyping and support equality and diversity. In the development of qualifications and assessments we use the guidance given in the Ofqual publication *Fair access by design*, notably this includes:

- using language and layout in assessment materials that does not present barriers to learners
- using stimulus and source materials in assessment materials (where appropriate) that do not present barriers to learners.

If centres wish to adapt the model assignment we strongly advise that staff responsible for modifying the model assignment and quality assuring it refer to the publication *Fair access by design*.

If modifications are made to the model assignment, whether to just the scenario or to both the scenario and individual tasks, it is up to the centre to ensure that all learning outcomes can be met and that learners can access the full range of marks.

Evidence summary

When completing this assignment it may be possible to generate evidence for completing a task in a variety of formats. This list is not exhaustive.

Task	What do learners need to produce (evidence)
Task 1	Evidence is likely to be in a variety of forms to meet the requirements of presenting a range of different types of evidence, including graphical presentations of quantitative information, pictures etc. and could include the use of ICT, posters, videos.
Task 2	Evidence is likely to be in a variety of forms to present a fitness programme. Witness statements of the learner's ability to carry out tests. Written record of the measurements taken and calculations necessary to derive the outcomes necessary.
Task 3	Evidence could be in a number of forms, such as a PowerPoint presentation, a short video, an article or a leaflet.

Apparatus and materials

Measuring musculoskeletal system

- Ruler
- Tape measure
- Range of weights (100g to “body building” size)
- Stop watch

Measuring circulatory system

- Stop watch
- Blood pressure monitor
- Bench (or stairs)
- Running area so the circulatory system can be stressed

Measuring respiratory system

- Resources for measuring conditions (such as different lung volumes, e.g. tidal volume, vital capacity).

Measuring fitness programme

The apparatus needed will depend upon the fitness equipment available to learners (such as treadmills, static bikes, rowing machines etc) but learners may require:

- Tape measure
- Stop-clock
- Stretch and measure block
- Skinfold callipers
- Weighing scales
- Blood pressure monitor