



National Unit specification

General information

Unit title: Animal Care: Establishing a Fresh Water Aquarium
(SCQF level 4)

Unit code: HA1L 44

Superclass: SP

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Unit purpose

The Unit is designed to enable the learner to develop the basic knowledge and practical skills associated with setting up and maintaining a fresh water aquarium and to be able to identify some of the more common freshwater species kept by beginner fish keepers. The Unit is suitable for learners with little or no prior experience in keeping aquarium fish and is intended for learners destined for careers in animal care or who wish to set up and maintain a simple home aquarium.

Learners who successfully complete this Unit may wish to progress to study *Animal Care: Ornamental Fish Care* at SCQF level 5, either in isolation or as part of the National Certificate in Animal Care.

Outcomes

On successful completion of the Unit the learner will be able to:

- 1 Explain important tasks in establishing and maintaining a household aquarium.
- 2 Identify commonly kept cold and tropical fresh water aquarium fish and signs of aquarium problems.
- 3 Carry out routine aquarium maintenance checks and procedures.

Credit points and level

1 National Unit credit at SCQF level 4: (6 SCQF credit points at SCQF level 4)

National Unit specification: General information (cont)

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Recommended entry to the Unit

There are no specific entry requirements for this Unit. Entry is at the discretion of the centre.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this Unit specification.

Achievement of this unit gives automatic certification of the following Core Skills component:

Complete Core Skill	None
Core Skill component	Critical Thinking at SCQF level 4 Planning and Organising at SCQF level 4

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Equality and inclusion

This Unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

National Unit specification: Statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Outcome 1

Explain important tasks in establishing and maintaining a household aquarium.

Performance Criteria

- (a) Explanation of the minimum provisions prior to introduction of fish to an aquarium is correct.
- (b) Explanation of important checks prior to introduction of fish to an aquarium is correct.
- (c) Explanation of on-going maintenance checks is correct.

Outcome 2

Identify commonly kept cold and tropical fresh water aquarium fish and signs of aquarium problems.

Performance Criteria

- (a) Identification of fish species is correct.
- (b) Identification of signs of common problems within an aquarium are correct.

Outcome 3

Carry out routine aquarium maintenance checks and procedures.

Performance Criteria

- (a) Performance of routine maintenance checks is correct.
- (b) Performance of remedial procedures is correct.

National Unit specification: Statement of standards (cont)

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Evidence Requirements for this Unit

Evidence is required to demonstrate that learners have achieved all Outcomes and Performance Criteria.

Written and/or recorded oral evidence is required to demonstrate that learners have met the requirements of Outcomes 1 and 2. Evidence for completion of Outcome 3 should be assessed by observation of practical skills. Evidence will be produced at appropriate points throughout the Unit.

Outcome 1

Learners should produce evidence that they can explain:

- (a) At least three minimum provisions when setting up a new aquarium.
- (b) At least five basic checks which must be carried out before the introduction of fish to a new aquarium.
- (c) At least five on-going regular maintenance checks which must be carried out on an established aquarium.

Outcome 2

A closed-book assessment in which the learners should provide evidence that they can identify:

- (a) At least seven species of fresh-water aquarium fish from a selection of both cold and tropical species.

Learners should also produce evidence that they can identify:

- (b) At least three signs of common problems in an aquarium, either with the aquarium or resident fish.

Outcome 3

Learners should demonstrate that they can:

- (a) Carry out at least three routine maintenance checks on a cold water or tropical fresh water aquarium.
- (b) Carry out at least one remedial procedure upon discovery of a problem or as part of routine maintenance in a cold or tropical fresh water aquarium.



National Unit Support Notes

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Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit can be delivered as a free-standing Unit or as a Unit within the SCQF level 4 award in Animal Care.

This Unit is designed to give learners a basic understanding of establishing a fresh-water aquarium and common issues and when keeping aquarium fish.

On completion of this Unit, the learner will be able to identify a range of common fresh-water aquarium fish species, they will be able to confidently identify and perform a variety of maintenance checks and tasks on both a new and established fresh-water aquarium.

Learners who complete this Unit as part of an Introductory Animal Care course may wish to consider progression to National Certificate in Animal Care at SCQF level 5.

Guidance on approaches to delivery of this Unit

For both purposes of demonstration and completion of the practical tasks, it should be possible for learners to have access to equipment appropriate necessary for set up and maintenance of a fresh-water aquarium. Such equipment may include:

- ◆ One or more fish tanks of appropriate sizes
- ◆ One or more appropriate fish tank filters of different varieties
- ◆ Air pump and air stone
- ◆ Thermostatically controlled aquarium heater
- ◆ Appropriate substrate materials
- ◆ Water testing kit (capable of detecting: pH, chlorine, nitrate, nitrite, ammonium)
- ◆ Dechlorination kit
- ◆ Bacterial starter kit
- ◆ Aquarium Furniture
- ◆ Aquarium thermometer

National Unit Support Notes (cont)

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Outcome 1

This could be delivered as a research project or through use of co-operative learning tasks making use of materials and information relating to each of the key areas of aquarium set-up and maintenance. Areas to be covered could include:

- (a) Provision of filter (comprising biological, mechanical and chemical media), aeration, appropriate substrate, thermometer, (thermostatically controlled heater for tropical tanks), dechlorinated water, water test kit, lighting, bacterial starter.
- (b) Chlorine levels, ammonia, nitrite, nitrate, pH, temperature, equipment function.
- (c) Chlorine, ammonia, nitrite, nitrate, pH, temperature, equipment function, fish health, water clarity, water level, algal growth, hygiene, fish numbers, feeding, (plant feed if necessary), scraping of glass (eg with an algae pad), vacuuming substrate, water change, filter maintenance/washing.

Depending on the chosen methods of assessment, it may be appropriate to deliver part b) of Outcome 2 along with Outcome 1.

Outcome 2

Part (a) could involve the use of photographs, books, flash cards, posters or websites to identify fish species but could equally make use of live specimens where appropriate and available. Co-operative learning tasks or research tasks could encourage working with others.

Part (b) could be delivered along with Outcome 1 depending on the chosen methods of assessment and could include:

- ◆ Algal bloom
- ◆ Fin rot
- ◆ Swim bladder infection
- ◆ Whitespot
- ◆ Dropsy
- ◆ Poor water quality

Outcome 3

This Outcome could be delivered in a practical environment with access to the equipment outlined earlier. Skills and knowledge could be gained through lectures, classroom activities and co-operative learning tasks where the learner is given the opportunity to handle and assemble equipment and to use one or more type of commercially available test kits. It may be appropriate to give the learner an opportunity to compare results from different commercial kits such as wet vs dry kits.

National Unit Support Notes (cont)

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Learners should be able to carry out simple remedial procedures upon discovery of a problem in an aquarium. Such procedures could include:

- ◆ Dechlorination
- ◆ Restoration of water level
- ◆ Cleaning of substrate using a vacuum siphon
- ◆ Water change (eg routine or upon discovery of high nitrate levels)
- ◆ pH balancing

The development of appropriate practical skills for setting up and maintaining an aquarium is a key aim of this Unit and this element should be taken into account when developing resources for the Unit.

Guidance on approaches to assessment of this Unit

There are opportunities to use diverse assessment for this Outcome according to the requirements of the centre. Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Outcome 1 and Section (b) of Outcome 2 could be combined into a research project backed-up with class-work and including the potential for co-operative learning activities. Learners could demonstrate evidence through the use of closed-book assessments but there may be opportunities, alternatively, to present evidence through use of simple academic posters, a short project booklet/report or a presentation in the form of an electronic slide show presentation, a live presentation or a video. Other methods of assessment may also be appropriate.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

There may be opportunities to develop the Core Skills of *Communication* and *Problem Solving* at SCQF level 4.

This unit has the Critical Thinking and Planning and Organising component of Problem Solving embedded in it. This means that when learners achieve the Unit, their Core Skills profile will also be updated to show they have achieved Critical Thinking at SCQF level 4 and Planning and Organising at SCQF level 4.

History of changes to Unit

Version	Description of change	Date

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General information for learners

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This section will help you decide whether this is the Unit for you by explaining what the Unit is about, what you should know or be able to do before you start, what you will need to do during the Unit and opportunities for further learning and employment.

This Unit is aimed at providing you with a sound understanding of the basic processes as well as the practical skills involved in setting up and maintaining a freshwater aquarium for either tropical or cold water fish.

On completion of this Unit you will understand about the basic tasks when establishing a tank from new such as setting up a filter, heating, substrate (gravel), lighting and water quality.

You will develop skills to carry out essential routine maintenance duties required to ensure the well-being of fish within the aquarium.

You will learn to identify some of the common cold-water and tropical species kept in household aquariums.

You will develop the practical skills necessary to carry out these routine procedures.

To achieve this Unit you will be required to show your understanding of the topics covered in Outcomes 1 and 2 and then to demonstrate your practical skills for Outcome 3.

In addition to the knowledge and skills detailed above, you may also have an opportunity to develop the Core Skills of *Communication* and *Problem Solving*.

This Unit could be suitable for you if you are interested in pursuing a career in the Animal Care sector, or simply wanting to set up a home aquarium.

This unit has the Critical Thinking and Planning and Organising component of Problem Solving embedded in it. This means that when you achieve the Unit, your Core Skills profile will also be updated to show you have achieved Critical Thinking at SCQF level 4 and Planning and Organising at SCQF level 4.