

# GUIDE TO SETTING UP A FRESHWATER AQUARIUM

## MAINTENANCE

Your aquarium will require regular maintenance, but most tasks are relatively quick and straightforward:

- regularly monitor water quality to prevent harmful levels of ammonia and nitrite.
- regularly monitor the temperature of the water.
- partial water changes are required regularly to remove excess nitrate – we recommend up to 25% of the tank capacity every week. Ensure the new water is the same temperature as the aquarium water before adding.
- never use your mouth to siphon water from an aquarium.
- cover open cuts on your hands before putting them in aquarium water and wash your hands immediately after.
- check filter for clogging and waste build up. Never rinse it under a tap as this will wash away or kill the beneficial bacteria. Instead, rinse the filter in some waste tank-water during a routine water change.

The Pet Charity's Guide to testing water quality care sheet covers maintenance in more detail.

## PET CODE OF PRACTICE

Never release a pet (companion animal) into the wild. It is illegal and for most species this will lead to an untimely and possibly lingering death, as they are not native to this country. Any animals or plants that do survive might be harmful to the environment. This includes the need to properly dispose of soiled substrate, so that eggs and live food can't escape into the wild.

## SHOPPING LIST

Freshwater aquaria can be used to keep either coldwater species such as goldfish, or tropical species such as guppies. The type of setup that you choose will determine what equipment you need to purchase.

As a general checklist, a freshwater aquarium should include:

- glass or acrylic aquarium with secure lid
- stand, if required
- suitable substrate
- filtration
- air pump, in case of filter failure
- lighting
- siphon cleaning device
- ornaments
- plants
- heater – tropical setups only
- water conditioner/dechlorinator
- thermometer
- water testing kits
- food

A water testing kit should be considered a necessary part of your equipment. Without it you cannot maintain good water quality.

Many retailers offer free water-testing services and provide advice on how to test your aquarium water at home.

## THE FIVE ANIMAL WELFARE NEEDS

The Animal Welfare Act 2006 means all pet owners have a legal duty of care to their pets. Anyone who is cruel to an animal or is found not to be providing the five animal welfare needs, as listed below, can be fined and sent to prison.

- 1 Environment:** pets should be given the correct housing according to its size, this includes shelter, space to exercise and a secure, comfortable place to rest.
- 2 Diet:** pets should be offered the correct type and volume of food to cover all their nutritional needs alongside access to clean, fresh water.
- 3 Behaviour:** all pets should be allowed to exhibit normal behaviour patterns and should be provided with the facilities to do so.
- 4 Company:** some animals require the company of their own kind, whilst others should be kept on their own.
- 5 Health:** all animals should be protected from pain, suffering, injury and disease, and given veterinary treatment if they become sick or injured.



This leaflet is produced by The Pet Charity, a national charity which promotes the joy and benefits of pet ownership.

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These organisations support the aims of The Pet Charity to promote the welfare and responsible keeping of pet animals.

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*For joy, health & companionship*



Keeping a coldwater or tropical aquarium is a very enjoyable and rewarding hobby, for both adults and children.



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## THE PET CHARITY GUIDE TO SETTING UP A FRESHWATER AQUARIUM

As a general rule it is advisable to buy the largest aquarium possible within your budget, and it should be able to accommodate your chosen fish once they are fully grown. Otherwise, you must be prepared to buy a larger setup as your fish grow.

Aquarium sizes range from nano tanks (minimum 10L) through to large capacity custom-built aquariums. As larger aquariums contain more water, they will be less susceptible to variations in pH and temperature than smaller aquariums.

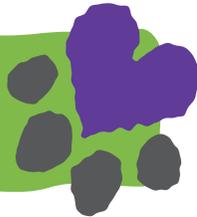
### POSITIONING YOUR AQUARIUM

Once your set up is ready, position your aquarium so that it is:

- out of direct sunlight/away from sources of heat/draughts
- on a flat level surface or stand, which can comfortably take the weight of the full tank
- away from loud noises, vibrations and sudden movements

### DID YOU KNOW?

A new aquarium filter needs to mature in order allow beneficial bacteria, known as nitrifiers, to grow.



### MATURING YOUR AQUARIUM FILTER

Once your aquarium has been filled and the water has been dechlorinated, switch on your equipment. It is advisable to leave the aquarium for between 24 – 48 hours to settle. This ensures that the correct temperature is reached (if it is a tropical set up) and that the equipment is working correctly.

Your aquarium filter then needs to 'mature'. Waste products from your fish and any leftover uneaten food contribute to ammonia (NH<sub>3</sub>) levels, which together with nitrites (NO<sub>2</sub>-), are highly toxic to fish. However, there are bacteria, known as nitrifiers, which can quickly break down ammonia and nitrite to the far less toxic nitrates (NO<sub>3</sub>-). These beneficial bacteria will not be present in a new aquarium filter so the process of maturing your filter involves growing a population of these bacteria in the filter media. There are two common methods of doing this: 'fish-in' and 'fish-less' cycling.

- **Fish-in method** involves adding a small number of hardy fish such as guppies and mollies to the aquarium. This method should be used with great care, and under guidance from your retailer, to safeguard the welfare of your fish.
- **Fish-less method** involves adding a calculated dose of ammonia to your aquarium over several weeks. You will need to use an online ammonia calculator to work out how much needs to be added each day. There are also proprietary bacterial cultures available, which can help to kick-start your filter maturing.

Whichever method you use, ammonia and nitrite levels should initially successively rise and then fall, while level of nitrate – the end product of filtration – will usually continue to rise. If you have added fish, it is important that the levels of these waste products do not rise above the guidelines in the table below:

Coldwater and tropical freshwater home aquaria	
Ammonia NH <sub>3</sub>	Zero mg per litre
Nitrite NO <sub>2</sub> -	Zero mg per litre
Nitrate NO <sub>3</sub> -	Not to exceed 20mg per litre above normal tap water levels

Partial water changes will be required once or twice weekly, and 10 – 25% of the tank capacity is recommended. Test the water regularly to monitor any changes and take action as necessary. Once the levels of ammonia and nitrite have dropped to and remain at zero continually, your aquarium filter is mature and stocking can gradually continue.

Each time you add more fish or increase feeding, your filter will need to undergo another mini-maturation process. This increases the beneficial bacteria in the filter to deal with the extra waste being produced.

### ADDING YOUR FISH

Seek advice from your retailer in choosing the type of aquarium you would like to keep and the fish species you are interested in. Some species must be kept in shoals, whilst others are territorial and may be aggressive. They may also need different water types, flow rates and temperature ranges.

Increase the number of fish in your aquarium slowly to allow the beneficial bacteria to increase with them. Doing it too quickly can result in 'new tank syndrome', caused by a lack of nitrifying bacteria. This leads to unhealthy levels of ammonia and nitrite, and your fish may die.

Healthy fish have clear bright eyes, undamaged fins, intact scales, no ulcerations or bumps, appropriate swimming and steady breathing. Do not purchase a seemingly healthy fish if sickly fish are present in the same tank. Fish diseases can be carried without showing any clinical signs. Ask your retailer for advice.

### STOCKING LEVELS

Aim to create a suitable environment for your chosen fish. Decorations and plants take up space but are recommended additions – live plants help to remove nitrate and ornaments provide a safe retreat for less boisterous, reclusive fish.

Always ask your retailer for advice on stocking densities for your chosen aquarium.

### TRANSPORTING AND RELEASING YOUR FISH

Always check new fish will be compatible with the fish and setup you currently have. Your retailer will usually sell fish in a plastic bag so get them home as quickly as possible. They are easily stressed by bright lights, extreme temperatures, noise and movement so take care during transportation. Switch off your aquarium lights and carefully remove the bag from its outer wrappings.

There are two ways to introduce your fish to their new home:

- **Floating bag** – float the bag in your tank water for up to 30 minutes to ensure the bag temperature is the same as the aquarium. Slowly introduce small amounts of aquarium water into the bag.
- **Drip acclimatisation** – kits are available which drip-feed water from your aquarium into a container containing your new fish in their transport water, until the container water conditions are the same as your tank water.

It can take 1 – 3 hours to complete depending on which method you use, particularly for more specialised species such as Discus. Once complete, carefully release the fish into your aquarium

Monitor your new fish closely for the first week, paying particular attention to water quality. If in doubt, contact your retailer for advice.