

----- *acclimating new fish*

A new fish **MUST** have a brief period of introduction to the water in its new environment. Without this time to adjust to PH level, temperature & water quality, this fish may die instantly. Let the plastic bag your new fish is in float on the tanks surface for about fifteen minutes to equalize the temperature. Remove the bag & open it into a small plastic bucket & add a small amount (a cup or so) of tank water to the bucket. Continue adding water every 5-10 minutes until the bucket is about half tank water & half fish store water. Then net out the fish & let as much of the water drip off the net as possible. Release the fish to the tank. Do not dump the bag into your tank, you don't know what's in the water! Keep a close eye on the fish until your sure its swimming properly & appears to be behaving naturally. Pond fish also need acclimation time, not only aquarium fish.

Seek veterinary attention if your pet changes behavior or becomes inactive; this may indicate the pet has an illness.

As a pet owner, you are responsible for proper pet practices. Be prepared to take an ill pet to a Veterinarian & know which Veterinarian in your area can treat your pet.



----- *tank stands*

Water is heavy weighing 3.8 kg (8.3 pounds) per gallon (3.8 litres), so whatever you plan to place the tank on must be able to support a lot of weight. The placement of the aquarium is one of the choices that must be taken into consideration. There are different types of stands available some made of wood & some of wrought iron. Remember not to skip considering this as a full fish tank is very hard to move if you have to replace its' stand, or the cabinet or dresser underneath.

check-list ✓ ***Your Aquarium should include...***

- Tank (& stand) of appropriate size (glass or acrylic)
- Aeration (air pump & air stones or toys)
- Water Filtration System
- Water Heater (occasionally optional)
- Lighting (choose those that best show your fish)
- Tank Cover or Lid (some include light fixtures)
- Substrate (usually gravel or sand)
- Points of interest & hiding spots (live or plastic plants, rocks, roots or driftwood, 'bubble' toys, models or sculpture, coral & ceramic pieces)

Starter's guide for aquariums



A few basic steps for creating & maintaining an attractive & healthy environment for fish.

Learn all you can about the type of fish you are interested in to see if they are right for you & your lifestyle. Keeping fish is one of the world's most popular hobbies that dates back hundreds of years. With a little knowledge & understanding, you will have a better experience & healthier fish specimens.

----- *the tank*

The right aquarium, equipment, plants, decorations & accessories will create a complete closed environment in which fish can thrive. The most common method of deciding the size of one's first tank is to base the decision on finances. The larger a tank is, the more expensive it & the equipment needed for it, will be. However, larger tanks are easier to maintain than smaller ones. The toxic substances released by the Biological or Nitrogen cycle are more dispersed in a larger volume of water, which allows the water quality stay higher for longer periods of time. Beginner hobbyists, with a lack of experience, might benefit from a larger tank. A common misconception is; small fish = small tank. Not always true as smaller fish tend to be more active & require more swimming space. For the beginner, a standard rectangular 55 gallon (approximately 36" long by 20" wide & 20" tall) is a size is easy to care for & not too overwhelming.

The fish tank no longer needs to be a glass box if decor is an issue. Modern acrylic tanks come in a variety of shapes & sizes, complete with co-ordinating stands & tops. Some are built as complete systems that include lights, filters & heating. Every aquarium should have a cover or top. A cover reduces evaporation, provides a surface to place the lights & prevents the fish from jumping out. The most common cover (usually called a "Glass Canopy") is made up of glass with a hinge in the center & a plastic filler strip which can be cut to fit the filter & other accessories. Another very common top is the "Full Hood" which is a totally plastic top matching the trim of the tank.

----- *decor*

Research the natural habitats of the fish species you wish to keep & you will have an idea of the type of decor to put in your aquarium. Never use anything that will rust, that is water-soluble or corrosive, or biodegradable as part of your decor. You can always be creative with glass, ceramic or plastic. Wash or rinse rocks, pebbles, stones, clay or driftwood (your decorative pieces) before you use them.

filters



When creating a natural habitat of your fish, you will need to ensure that the water does not become toxic due to the accumulation of waste products. An effective filtration system is an essential element of the aquarium. Here's a list of the various filters that are available:

Under-gravel Filters: These are plastic-slotted plates placed at the bottom of the tank, under the substrate (gravel). For best results, these plates should cover the whole tank floor. Working in conjunction with the air pump, the filter pulls the floating waste, uneaten food, & decaying plants onto the gravel. The waste products accumulate in recesses in the gravel & are trapped in the plates, where they can be easily siphoned off by you during your regular care program.

Box Filters: These are plastic boxes that are put in the corner of the tank. They absorb & retain the fine waste products that float in the water, along with the harmful nitrates and ammonia by-products. They also require the assistance of the air pump. This filter uses activated carbon & glass wool (or peat moss) to serve as biological filters. Box filters are easier to pull out for cleaning.

Power Filters: These are usually external filters attached to the back of the tank. It sucks water from the tank, passes the water through a sponge (or glass wool & activated carbon), then pumps the filtered water back into the tank. The sponge needs to be cleaned regularly.

A Box or Power filter in combination with an under gravel system is the most common set-up. Mechanical filtration (or physical or particulate filtration) is provided by pushing the water through some form of filter media that acts as a strainer. This strainer will catch free-floating particles that cannot pass through the openings in the media. The media can be a sponge, filter floss, a dense mass of air bubbles (only in salt water), special filter pads, or even aquarium gravel. You want a pump that will move the entire tank volume through your filter at least twice an hour. If your water is not moving this quickly, it is not being exposed to the carbon often enough & will not have chemicals removed sufficiently. Chemical filtration is provided by carbon or chemical resins that extract toxins from the water. Activated filter carbon will remove chemicals from the water until the carbon becomes saturated. It is very important that activated filter carbon in your filtration system be changed often.

Overpopulated tanks increase the load on your chemical filter, as well as any other filtration you have. Insufficient water changes will allow for buildups of chemicals in the water which will increase the burden on your chemical filtration. Changing 15-20% of the tanks water weekly is recommended.

heaters

The right water temperature is essential for the overall health of your fish. Most varieties of aquarium fish come from tropical regions with water temperatures of up to 80 degrees Fahrenheit. You need to know about your fish community's temperature requirements. Using heating elements, you can ensure that the proper ranges are maintained in your tank. Submersible heating rods of various lengths, together with programmable thermostats, make it easy to control tank heating. Large or rapid swings in temperature can kill healthy, vibrant fish.

lighting



You don't want the tank in an area that receives a lot of direct sunlight, you will be forever battling algae (green water) & also the temperature swings could hurt your fish. Ideally, the tank should be in the darkest spot of the room with artificial light specially included for the tank. Good lighting will help keep the water clean & can also help to display your fish optimally. Lighting choice can make the colours & patterns on your fish stand out better also, by selecting a certain colour spectrums to reflect your fish. There are many types of artificial lights to choose from including;

Fluorescent: This is the most widely used aquarium lighting. They come in all lengths, wattages & can be made to any color spectrum from the Red to the Blue-White. These bulbs can be used on Freshwater plant tanks to Salt water Mini-Reef set ups. The fixtures for these bulbs are as diverse as the bulbs. There is the simple one bulb fixture, the multiple bulb type, where you can mix & match different color bulbs for that custom look.

Full spectrum or Daylight bulbs: These bulbs try to closely imitate the look of natural sunlight. They provide a wide spectrum of Red, Yellow, Blue & Green light. These type bulbs are a good choice for use in most aquarium applications. These bulbs are also used at the same time with the Actinic bulbs used in Salt water setups. Full spectrum & Daylight bulbs offer a natural appearance & provide a good source of light for Freshwater plants.

Actinic bulbs: Actinic bulbs provide their spectrum in the range required for the the Photosynthetic process & health of Marine corals & Invertebrates, & to a lesser extent freshwater plants. Actinic bulbs should not be used alone, but in conjunction with other full spectrum bulbs. Actinic bulbs are heavy in the blue spectrum & can give everything a bluish tint.

Metal-Halide: Metal-Halides are the ultimate in aquarium lighting (& price). They are the best lights for Freshwater plant tanks as well as Saltwater mini-Reefs. These bulbs produce a very bright, high quality light. They come in the most varied of color temperatures ranging from 4000o to 20000o Kelvin & the Actinic 03 needed by Reef tanks. Metal Halide fixtures are designed to either hang above the fish tank or be mounted in special tops, in order to disperse the light & the amount of heat radiated to the aquarium. Although the ultimate in lighting, due to their high cost & special safety requirements, they are not recommend for a beginner's tank set-up.

aeration

Fish "breathe" oxygen from the water, & water absorbs oxygen from the air. Aeration (the generation of tiny air bubbles in the water) supplements the tank's water surface area for the exchange of gases with the atmosphere. The bubbles also create a disturbance in the water surface, promoting the absorption of oxygen & dissolution of carbon dioxide. Furthermore, the rising bubbles help to balance the water temperature. The bubbles also create the motion of water flow that fish seem to enjoy. Choose aerators that suit your tank size (& your taste). Various models of air pumps or air stones are available. Tubing, connectors, & accessories make installation easy. There is a wide variety of 'bubble making' devices available, in creative & entertaining shapes.

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