Important things to remember
Always buy...
test kits and regularly check the water for ammonia, nitrite, nitrate and pH. This will allow you to make sure the water in your aquarium is not causing welfare problems for your fish.

Establish a routine...
for testing the water in your aquarium. Record your results to enable you to highlight fluctuations quickly. Also check the temperature of the water.

Maintain...
the water in the aquarium within the accepted parameters highlighted in this leaflet. You may need to do regular water changes to achieve this.

Always wash your hands...
making sure to rinse off all soap residues, before putting them into your aquarium. Wash your hands again afterwards and certainly before eating, drinking or smoking.

Never siphon by mouth...
A fish tank can harbour bacteria which can be harmful if swallowed. Buy a specially designed aquarium gravel cleaner which can be started without the need to place the siphon in your mouth.

Important things to control
Never release your aquarium animals or plants into the wild
Never release an animal or plant bought for a home aquarium into the wild. It is illegal and for most fish species this will lead to an untimely and possibly lingering death because they are not native to this country. Any animals or plants that do survive might be harmful to the environment.

Checklist
Before purchase make sure that:
1. You have the appropriate equipment and position for the aquarium.
2. You have researched all the species you are interested in and your final choices are all compatible.
3. You are familiar with how to transport and release your fish.
4. You are aware of the daily, weekly and monthly maintenance your aquarium will require.
5. You are prepared to look after your fish properly for the duration of their life.

Equipment
1. Glass or plastic aquarium
2. Gravel cleaner
3. Water testing kit
4. Tap water conditioner
5. Gravel
6. Filter
7. Food
8. Heater & thermometer

Before purchase make sure:
1. Water parameters are as advised in this leaflet.
2. The aquarium in which the fish is to be housed is large enough for the adult of the species.
3. If adding to an existing set up ensure the fish are compatible.
**Introduction**

Killifish, or ‘killies’, are a diverse group of generally small, colourful fish. Their name is believed to be derived from the Dutch for ‘pool’ or ‘puddle’. Owing to the temporary nature of their habitat, some species have evolved interesting reproductive strategies to ensure the survival of the species.

Most species originate from Africa, although some can be found in other parts of the world, including Asia and North & South America.

**Water requirements**

These fish all require very good water quality. The guide below is a guideline as they can be acclimatised to other water types:

- **Temperature**: 20 to 26°C
- **pH**: 6.0 to 7.0
- **Ammonia**: 0mg/l (0.02mg/l may be tolerated for short periods)
- **Nitrite**: 0mg/l (0.2mg/l may be tolerated for short periods)
- **Hardness**: Soft to medium (0 to 6°DH)

**Biology**

The majority of killifish species can be grouped into the *Nothobranchius* or *Aphyosemion* genus (The latter has been recently revised and species are now distributed across 3 separate genera).

*Nothobranchius* (sometimes called ‘nothos’ for short) are recognisable by being deeper in the body and generally squatter appearance, reaching no larger than 6cms. These fish normally come from seasonal pools and as such, have a shorter life expectancy. In captivity, and depending on the species, these fish can live for 1 to 2 years. These species bury their drought-resistant eggs within the mud of their drying habitats. When the rains return, the pools refill stimulating the eggs to hatch.

*Aphyosemion* species are relatively elongated, but similarly sized to the nothos. These fish are not from seasonal habitats, so their life expectancy is generally longer. Instead of laying eggs in mud, these fish lay hard, sticky eggs among vegetation.

Other species sometimes seen include the clown killi, also originating from Africa, reaching no larger than 4cms, and the striped or Golden Wonder panchax (*Aplocheilus lineatus*) which can grow up to 10 cms.

**Aquarium requirements**

Aquarium size is largely dependent on the species being kept. Most of the average sized killies (*Nothobranchius* and *Aphyosemion*) will do well in aquaria of approximately 30 litres, depending on the number being kept. The larger species like panchax, are more active, so may appreciate a volume of 90 litres or more.

The Aphyosemions are notorious jumpers so a tight-fitting hood is essential, paying particular attention to any gaps at the corners and where cables or pipework might enter or leave the aquarium. The aquarium will need to be filtered and heated. Most species enjoy the cover provided by vegetation so aquarium lighting is highly recommended for good plant growth. Plants such as Java moss make ideal natural spawning areas for the *Aphyosemion* species. The lighting will also help to emphasise the colours of these fish.

As most of these species prefer soft, acidic water, a reverse osmosis unit may help you achieve this if you live in a hard water area. Alternatively, there are a number of proprietary products that can be used to help soften water, such as peat and ion-exchange resins.

**Maintenance**

At least once every two weeks a partial water change of 25 to 30% is strongly recommended (a siphon device is also useful to remove waste from the gravel). The water should be tested regularly to ensure pollutants such as ammonia and nitrates do not build up. Ensure you either allow the replacement water to stand or aerate it to remove any chlorine present. Ideally treat all replacement water with tap water conditioner before adding to the aquarium.

Filters should be checked for clogging and blockages. If the filter needs cleaning, then do not run it under the tap as any chlorine present may kill the beneficial bacterial population that has established in the media. Instead, it can be rinsed in the tank water which is removed during a partial water change as this reduces the amount of bacteria which are lost.

Good husbandry is essential as these fish can be stressed by even the smallest amounts of ammonia and nitrite. Test the water to monitor the ammonia, nitrite and nitrate levels every week, especially during initial set-up and after adding extra fish.

**Feeding**

Most of these fish are omnivorous and will accept most aquarium foods from flake to small pellets. This fish also enjoy frozen and live foods which can also be useful to help bring them into breeding condition. These fish should be fed 1 to 2 times a day, allowing them to eat as much as they can within a few minutes. All uneaten food should be removed from the aquarium to reduce waste build-up.

**Potential problems**

A water quality problem will affect fish behaviour and can be shown by clamped fins, reduced feeding, erratic swimming and gasping at the surface. Immediately test the water if any of these symptoms are shown. If in doubt ask your retailer for advice.

**Compatibility**

On the whole, these species are generally even-tempered. They can nip the fins of some fish, especially those with long flowing fins such as guppies or Siamese fighters. Most other smaller species, such as the tetras, peaceful barbs and smaller catfish should make fine companions.

Often, these species can be found in species-only aquaria. In a small, heavily planted aquarium, the bright colours of these small fish can make wonderful display aquaria.

Take care when keeping more than one type of killfish. The females of different species within the same genus are almost identical in coloration. Killifish hybridise quite readily, which may result in losing the beauty of the parental species.

**Breeding**

Most species breed quite readily. The substrate spawners (nothos) require a small pot filled with peat with a narrow opening. Once conditioned, the male will drive the female into the peat where they will lay eggs. Once spawning is complete, the peat and eggs should be removed, the water gently wrung out and then they can be stored for months before being rehydrated.

The *Aphyosemion* can be encouraged to spawn in spawning mops. Again, the male will drive the females into the mop where hard, adhesive eggs will be laid. These can then be picked off by hand and transferred to a separate aquarium for hatching if desired.