

## AEC STANDARD OPERATING PROCEDURES

<b>SOP No:</b>	13
<b>SOP</b>	Fish (for fish used in Aquaculture programs see separate SOP)
<b>Scientific Name:</b>	<i>Varies in relation to species kept – native or exotic, cold or tropical, fresh or marine.</i>
<b>Category:</b>	2 & 3
<b>Approval Level:</b>	Category 2: School Principal may delegate Category 3: School Principal may <b>NOT</b> delegate
<b>Authority:</b>	<b>Government Schools</b> – Department for Education and Childhood Development Animal Ethics Committee <b>Independent and Catholic Schools</b> - Non Government Schools Animal Ethics Committee (NGSAEC)
<b>Authority Approval Date:</b>	1 August 2010
<b>Last update</b>	22 January 2019
<b>Disclaimer:</b>	<i>This document may be updated at any time. You should check the web site regularly to ensure that you are meeting the most recent recommendations. If you note any concerns with the information provided (inadequate, incorrect) please contact the relevant AEC</i>
<b>Licensing Requirement:</b>	Not applicable
<b>Compliance Requirement:</b>	The keeping of this species for observation requires the approval of the School Principal. For Aquaculture programs approval is required from the Animal Ethics Committee (see separate SOP). It is recommended that this Standard Operating Procedure be followed as a minimum in the provision of appropriate care and housing for this species.

**General Information:** If the keeping of fish on the site is purely for observation, approval can be granted by the School Principal. If the purpose includes breeding, commercial aquaculture, measuring, weighing or scientific activity approval will be required by the AEC. (See Aquaculture Standard Operating Procedure).

Information on species can be found from aquarium outlets, literature, museums, fisheries departments, veterinarians and the web.

Fish belong to three categories jawless, bony and cartilaginous. Goldfish (*Carassius auratus*) are one of the most common species kept for observation purposes. They are colourful, peaceful, and have a long lifespan. The ancestors of this species originated in China and were of dull brown colouration. The Chinese have selectively bred them over the centuries to develop the different colour, scale and body shapes. The Comets, Shubunkins, Fantails, Veil tails, Telescope Moors, Bubble Eye and Celestials are only a few of the breeds of this single species available. Depending on breed, goldfish can attain a length of between 10 - 20cm, with a lifespan of 20 years.

When selecting fish they should;

- Be clear and bright, fins held erect
- Be alert and swim without undue effort
- Not be sinking or bobbing to the surface, have lumps, bumps, wounds or clamped fins.
- Not have a trail of excreta from their vent
- Not be 'sulking' in the corner.

If you have any doubts don't select them. If fish are donated, keep them separate until you can be assured they are fit and healthy. Adding them straight to the aquarium may infect other fish.

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### Physical Attributes:

- **Size (adult):** Varies with species and can vary in relation to the size of the aquarium, feeding levels and the number of fish present in the aquarium.
- **Weight (adult):** Varies with species from 2 – 250gms.
- **Life span:** Varies with species.
- **Sexual maturity:** Varies with species.
- **Gestation period:** Once an adult fish they can continue spawning.
- **Number of offspring:** Varies with species

### Behaviour:

- **Normal:** Varies with species. Research the species you intend to keep.
- **Socialisation:** Where different species are kept together or where fish of the same species are different sizes conflicts can occur. They can bully others.
- **Activity levels:** Varies with species.

### Environment:

- **Space:** You will need a large aquarium that provides sufficient area for the species and number of fish being kept. Set up your aquarium with aerator, filters, pondweed, plants, smooth pebbles (up to 7cm) and a rock/item for hiding beneath. You should attempt to replicate a natural environment. As a guide a 1.5cm fish needs 4.5lts water.
- **Movement:** Requirements vary with species; some are slow movers others swim about rapidly. Fish should have ample room to swim around. Where there are more fish in the aquarium more space is needed.
- **Water:** Water environments should be stabilised before fish are added. Tap water should be allowed to stand for 2-7 days before adding plants and fish to allow the chlorine to evaporate. Use commercial preparations to keep the pH level between 6.5 and 8.0. Saltwater tanks require prior experience and knowledge to maintain.
- **Temperature:** When an indoor aquarium is used the water should be kept at room temperature and should not be exposed to direct sunlight, which will increase the growth of algae. Temperature range should be between 20-25oC. Tropical aquariums will require more heated controlled temperature ranges – check with the aquarium outlet.
- **Filtration:** Essential for providing the correct environment for the health of the fish. Mechanical filtration systems are the easiest to use.
- **Lighting:** No artificial lighting is required unless there are plants. Avoid direct sunlight on the tank as the water heats up and algae grow. Lights are required for tropical tanks. Lights must be set to a timer. Lights should not be frequently switched on and off as this can upset the fish. Lights can be set to a timer. Plants require light for up to 12 hours so set timers to provide this.
- **Covering:** Where the fish are at risk from young children or where the water is closer than 10cm to the top of the aquarium a glass or mesh covering over the aquarium should be provided. A solid cover will assist with ensuring dust and toxins do not enter the aquarium however do not cover the tank if no filter is in place and working. DO NOT spray chemicals near the aquarium.
- **Shelter:** The aquarium should provide an area for refuge from lights, action and other fish. This can be created with plants and rocky overhangs.

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- **Cleaning:** It is recommended that conditioned water of the same temperature be used to replace approx 25% of the water each week. Cleaning of the aquarium should occur every term. To clean the whole tank remove the fish and place them in a covered container with 25% of their tank water and 75% fresh. Clean the sides of the glass and clean the gravel and items. Do not use chemicals. Rinse the tank carefully and fill again with conditioned water. Refill the tank and allow it to stand for half a day before returning the fish.

### Feeding:

- **Diet:** Manufactured fish foods – flakes and granules, can be fed to tropical or temperate fish.
- **Daily requirements:** Only feed food quantities that can be eaten within a few minutes otherwise overfeeding and soiling of the water can occur. Feed once a day.
- **Supplementary feeding:** Some fish may need frozen food mixtures, shrimp and larvae. Do not feed these unless directions are received from a reputable source (vet, aquarium outlet).
- **Equipment:** N/A.

### Breeding:

- **Mating:** Fish are sexually mature when adults.
- **Pregnancy:** Females expel eggs that are fertilised. There is no parental care. Be aware some fish may eat their eggs and young. Use a separate breeding tank.
- **Fate planning:** Breeding stock must be re homed. All species must NEVER be released into the environment or water ways.

### Handling:

- **Human:** Fish should not be handled or kept out of the water. This damages their skin and exposes them to increased risk of bacterial or fungal infections.
- **Equipment:** An aquarium net should be used for capturing or moving fish.
- **Transporting:** Fish should be transported in watertight clear plastic bags, half water and half air. Transport quickly and do not leave unattended or allow the fish to heat.
- **Children:** Should not handle fish. Observation only. Ensure children do not knock on the tanks.

### Hygiene:

The wastewater from tank cleaning must not be discarded into the stormwater drains or septic tank systems. It can be placed on gardens or it must be treated with 1:5 ratio of bleach to water and be poured into the toilet.

Thoroughly wash hands with soap and running water for at least 10-15 seconds after working or handling any animals. Dry hands with clean paper, cloth towel or air dryer. Turn off the tap with the paper towel if possible.

### Signs of illness:

- **Indicators:** loss of appetite, listing, skin lesions, floating upside down, poor swimming balance, spots, ulcers or growths, failure to thrive.

### Treatments:

Assistance from a veterinarian should be sought for confirmation of conditions and treatment options.

### Euthanasia:

When an illness or injury is such that recovery is unlikely then the animal must be euthanased by a veterinarian. Any death must be

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reported to the Animal Ethics Committee using the appropriate form (see section relating to ADVERSE EVENTS). Forms are available on the relevant websites – see contact details below.

**Disposal/fate planning:** When no longer required fish must be re homed. They must NEVER be released into the environment and waterways. Bodies must be disposed of correctly in accordance with local council regulations. Sick or dead fish MUST NOT be flushed down the toilet.

**Holiday and weekend care:** As fish require specific conditions they would not cope well with being rostered to family carers. They need to be checked daily and fed regularly over weekends and holiday periods.

**Approved activities:** Observation

**Resources:**

**Websites:** [www.agriculture.gov.au](http://www.agriculture.gov.au)