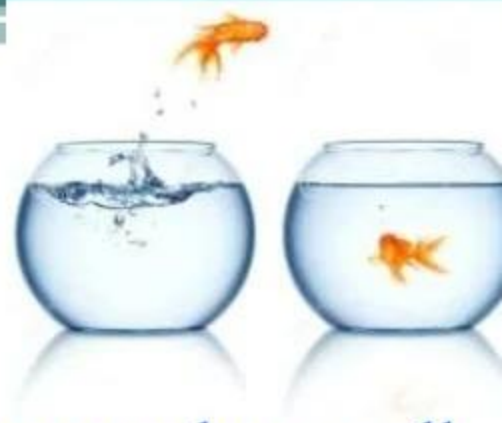


AQUARIUM ACCESSORIES



INTRODUCTION



- ✓ All the aquatic life in an aquarium is its software whereas all the accessories is its hardware parts.
- ✓ Which are used to maintain the water quality and all the aquatic life in an aquarium.
- ✓ Various accessories are installed in an aquarium as hardware such as Filter, Heater, Light, Pump, Airstone, Plants, Thermometer, etc.

DIFFERENT ACCESSORIES

- ✓ Filters
- ✓ Heaters
- ✓ Aerators
- ✓ Aquarium gravels
- ✓ Aquarium plants
- ✓ Air line accessories
- ✓ Hand net
- ✓ Scraper



illustrations of.com #1115980

FILTERS

- Filters play an essential role in performing mechanical, biological and chemical functions in aquarium.
- ✓ Promote the nitrogen cycle by providing a medium for bacteria growth.
- ✓ Remove debris and waste from the water.

Filters are of three types:-

- ✓ Mechanical filter
- ✓ Chemical filter and
- ✓ Biological filter

Biological filter are again broadly divided into 3 types:-

a) UG filter b) Foam filter c) Power filter

1. Mechanical filtration

- ✓ During mechanical filtration, solids are trapped by filter.
- ✓ The common filter media used are filter floss, plastic foam and gravel /sand.
- ✓ Popular mechanical filter are-

2. Chemical filtration

- ✓ In this process the used media can alter the chemical composition of the water. Chemical media also trap solids mechanically.
- For example-
- ✓ The alteration of pH using lime rich material,

3. Biological filtration

✓ Biological filtration involves enhancing natural populations of the bacteria which operate the nitrogen cycle.

✓ Biological filtration takes place in any mechanical or chemical filtration system.

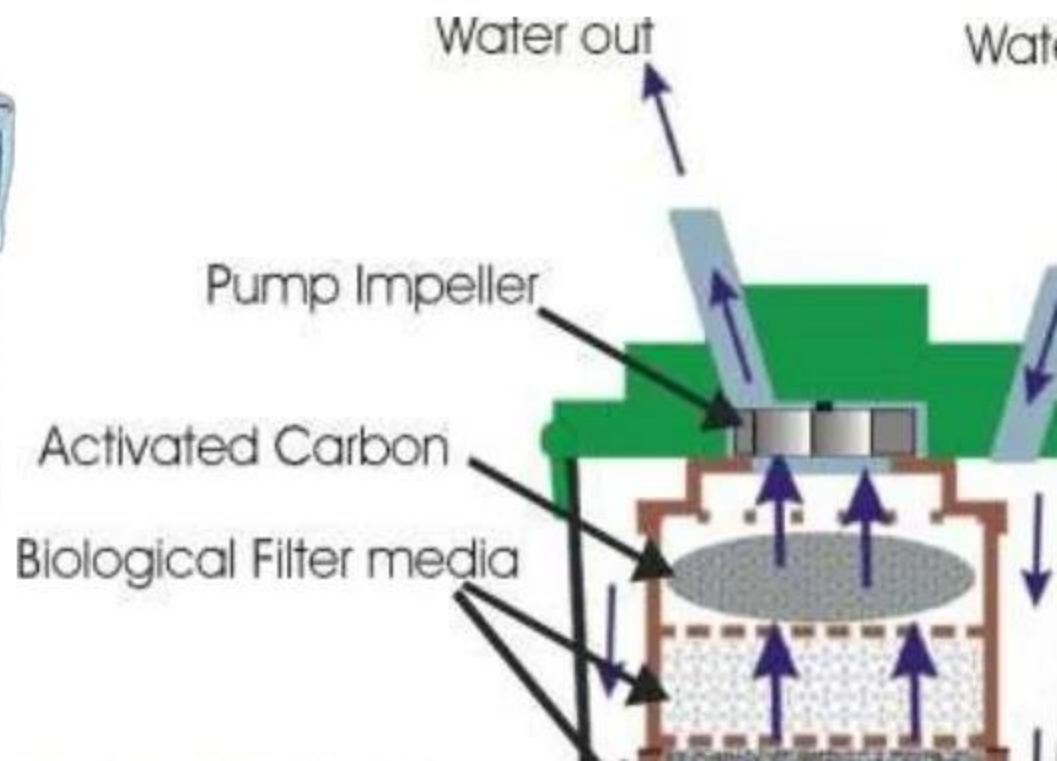
Under-gravel filter





Sponge filters







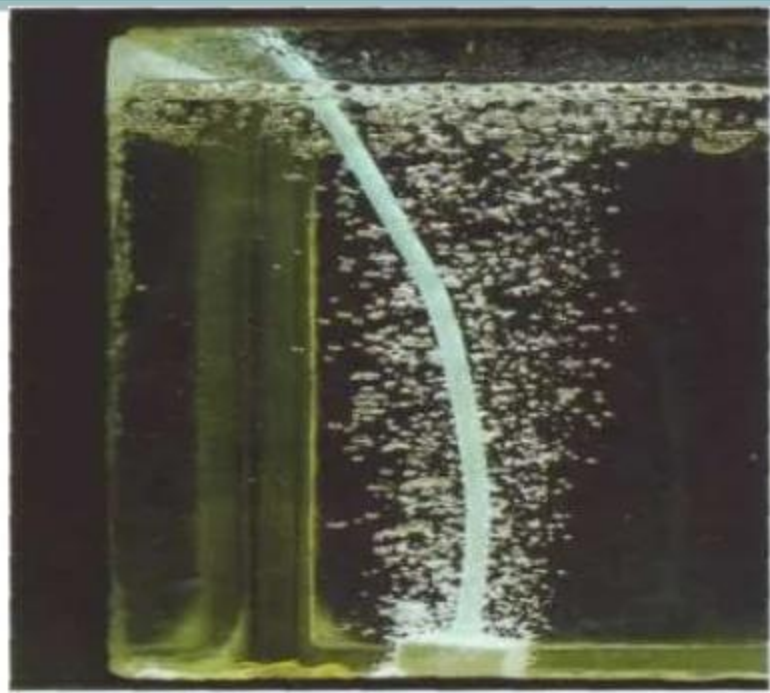
HEATERS

- ✓ Tropical fishes and plants in a temperate climate inevitably involve artificially heating in water in the aquarium.
- ✓ Heating is most commonly done by using immersion heaters with adjustable thermostat.



AERATORS

- ✓ Oxygen requirement of an aquarium is closely related with water temperature and increased temperature results in increased metabolic rate and hence oxygen requirement.
- ✓ Aeration serve to circulate oxygen around the aquarium and also required for the running of filtration systems, toys, etc.



✓ The aerator forces a stream of air bubbles into the water



Lighting arrangement

- ✓ Proper illumination is important for healthy functioning of an aquarium.
- ✓ Providing visual display of ornamental fishes to their best affect.
- ✓ It also stimulates growth of the fishes and plants.
- ✓ As a thumb rule, 40 watts of tungsten light or 10 watts of fluorescent light is required for each gallon of water.



gravels

- ✓ It can act as a substrate for the growth of live aquarium plants,
- ✓ It can also be used as a filter media for biological filter,
- ✓ It will enhance the beauty of aquarium

XWarm



Plastic plants

- ✓ Plastic plants have advantage over the natural plants as fish can not eat them,
- ✓ These plants are more durable and do not need regular illumination.



Other accessories



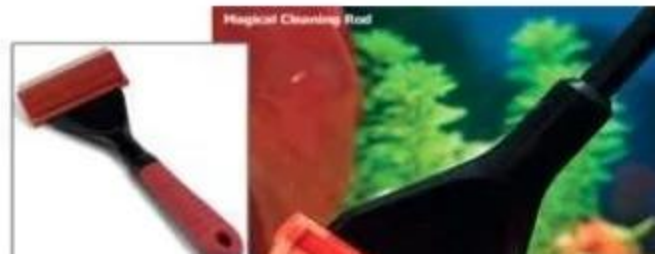
Air stone



Hose pipe



Connector





Worm feeder



Other Decorative



THANK YOU

