A Fish Aquarium

Plural = aquaria
Supplies

Aquarium
Supplies

Aquarium → Lake
Supplies

Aquarium ➔ Lake

Filter
Supplies

Aquarium ➔ Lake

Filter ➔ Plants
Supplies

Aquarium → Lake

Filter → Plants

Rocks
Supplies

Aquarium → Lake
Filter → Plants
Rocks → Substrate
Water
Supplies

Aquarium → Lake

Filter → Plants

Rocks → Substrate

Water → Environment

Food
Supplies

Aquarium → Lake

Filter → Plants

Rocks → Substrate

Water → Environment

Food → Food
Filter ➔ Plants

- **Aeration**
  - CO₂ and O₂

- **Waste removal**
  - Captures solids

- **Water movement**
  - Exercise
Rocks ➔ Substrate
Rocks ➞ Substrate

Hiding

Foraging

Nesting or Egg laying

D. Huggins, KBS ©
Water

- Temperature
- Nitrogen
- pH
- Oxygen
Temperature

32  65  70  75  100

Fahrenheit

Fish

Cold

Hot
Nitrogen Cycle

Oxygen

parts per million

0 8 9 10 14
### Freshwater Comparison Chart

#### Nitrate (NO₃⁻) ppm (mg/L) - Freshwater
- 0: Safe
- 20: Caution
- 40: Stress
- 80: Danger
- 160: Very Hard
- 200: Hard

#### Nitrite (NO₂⁻) ppm (mg/L) - Freshwater
- 0: Safe
- .5: Caution
- 1.0: Stress
- 3.0: Danger
- 5.0: Very Hard
- 10.0: Hard

#### Total Hardness (GH) ppm - Freshwater
- 0: Very Soft
- 25: Soft
- 75: Hard
- 150: Very Hard
- 300: Hard

#### Total Alkalinity (KH) ppm - Freshwater
- 0: Low
- 40: Moderate
- 80: Ideal
- 120: Ideal
- 180: Ideal
- 300: Ideal

#### pH - Freshwater
- 6.2: Acidic
- 6.6: Neutral
- 7.2: Alkaline
- 7.8: Alkaline
- 8.4: Alkaline

The chart visually represents the range of safe to unsafe levels for various water quality parameters using color codes and numerical values.
Food
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