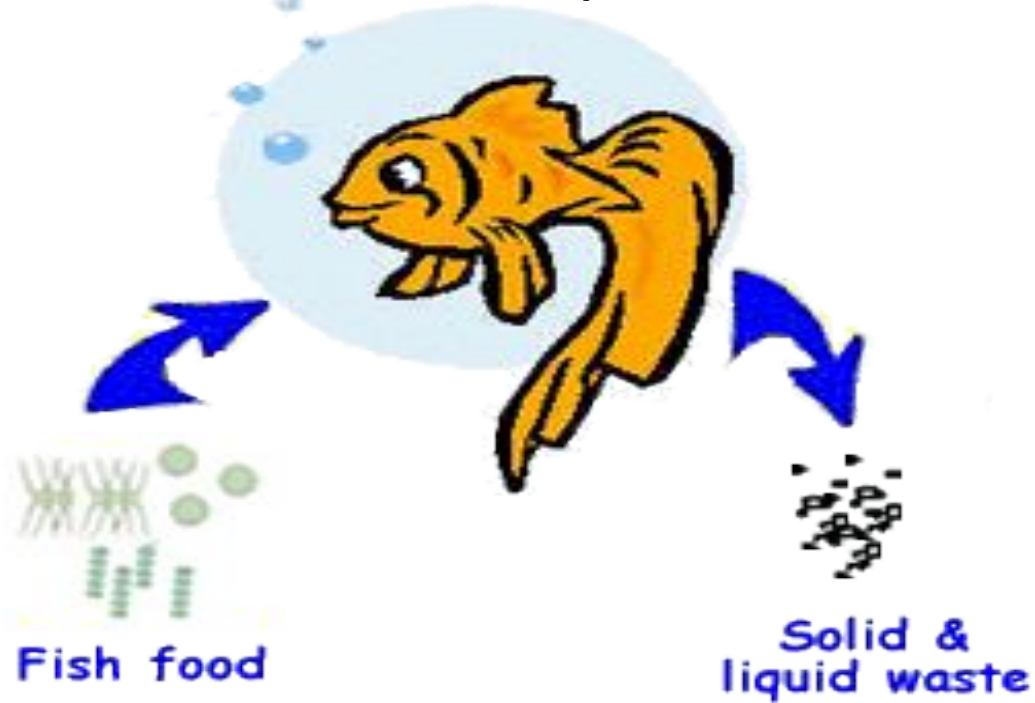


Importance of excretion (зәр шығару, **ВЫДЕЛЕНИЕ**)

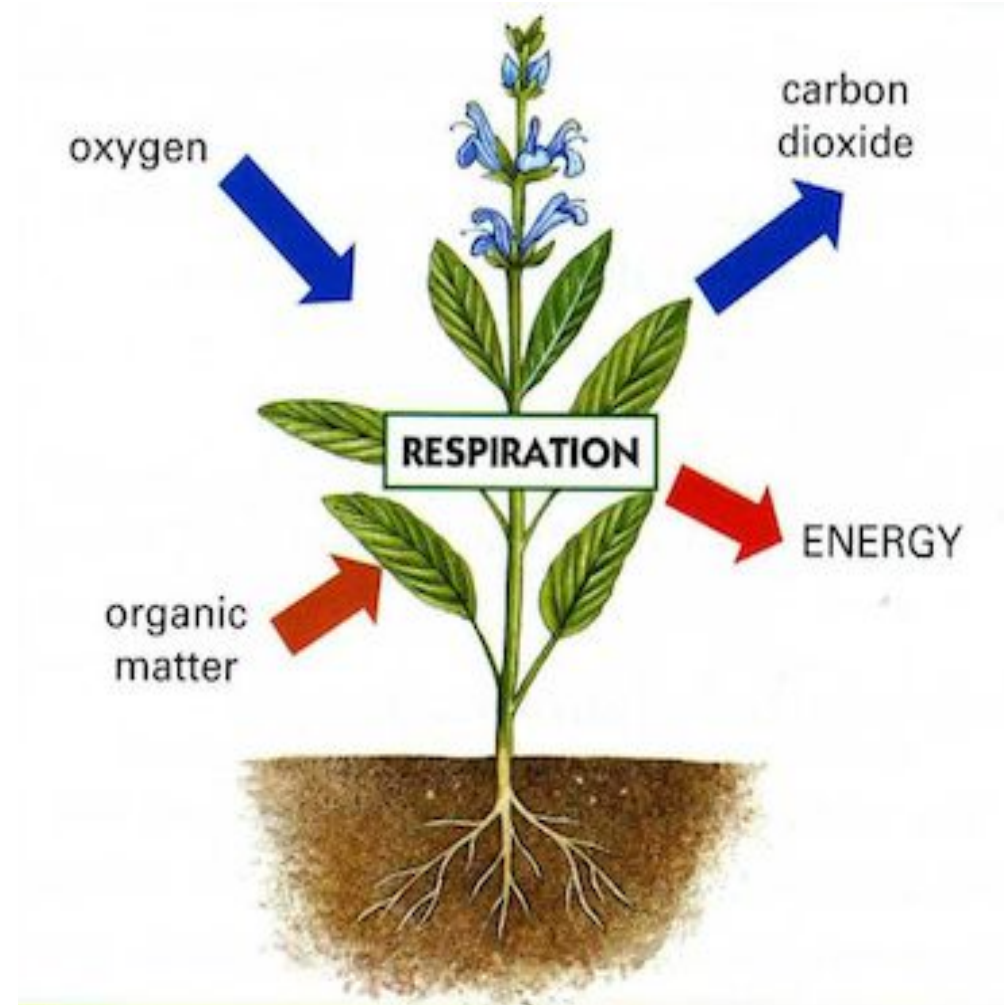
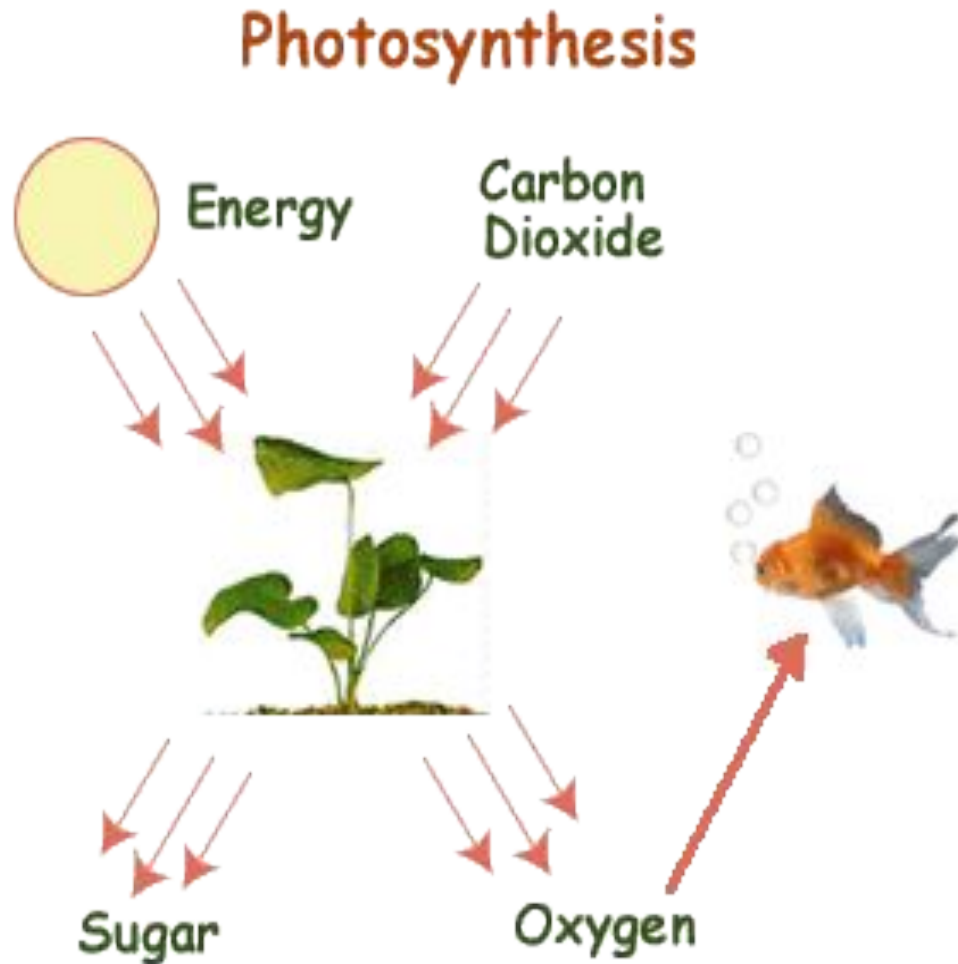
- **Excretion** is a process of removing waste products from organism
- Excretion helps to keep constant internal balance (**Homeostasis**)



Excretion in plants

- **Waste in plants:**
- Oxygen (O₂)
- Carbon Dioxide (CO₂)
- Organic salts (тұз, соль)
- Gums (шайыр, смола)
- Resin (шайыр, смола)
- Latex (өсімдік сүтшырыны, млечный сок)

Oxygen and carbon dioxide



Organic salts



Gums and resin



Latex



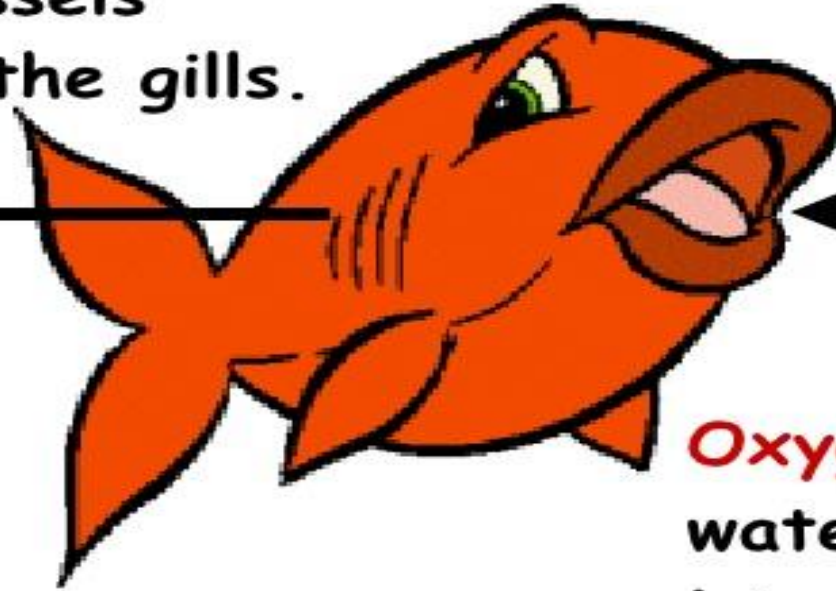
Excretion in animals

- **Waste in animals:**
- Carbon dioxide (CO₂)
- Urea (мочевина)
- Uric acid (мочевая кислота)
- Water
- Excess (артық, лишний) salt
- Excess bile (өт, желчь)

Carbon dioxide (CO₂)

Carbon dioxide is removed from blood vessels through the gills.

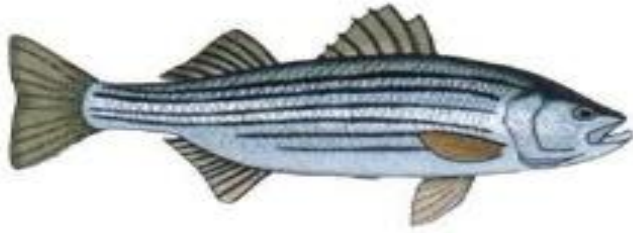
FISH



Oxygen in the water absorbed into blood vessels through the gills

Urea and uric acid

Fig. 44-9a



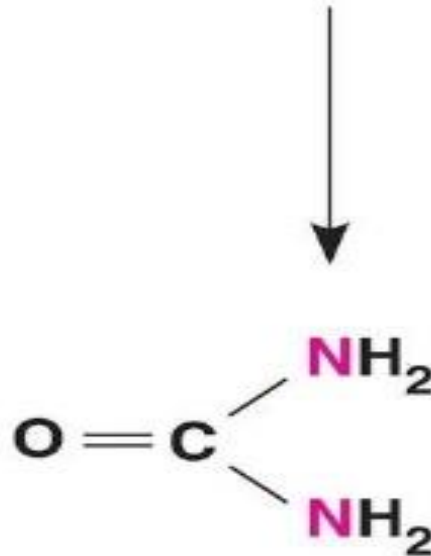
Most aquatic animals, including most bony fishes



Ammonia



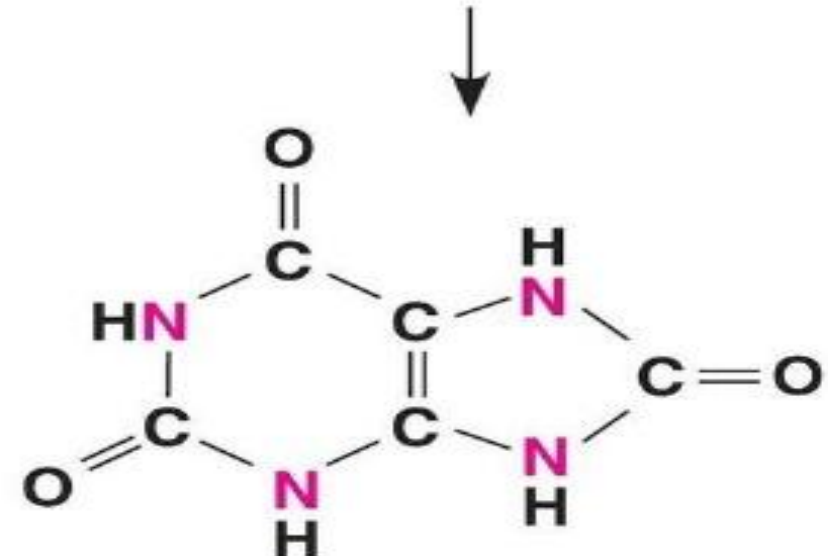
Mammals, most amphibians, sharks, some bony fishes



Urea



Many reptiles (including birds), insects, land snails



Uric acid

Water and salts



Bile

