

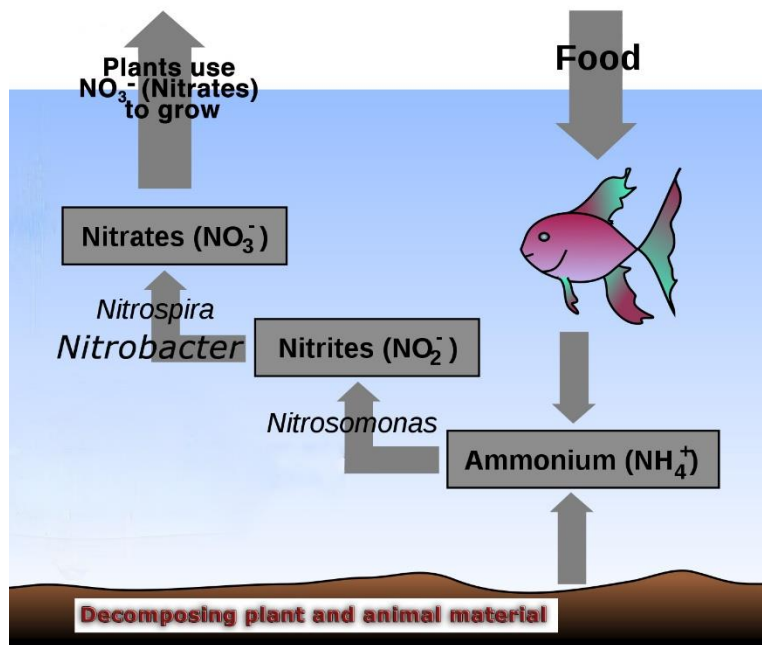
Where are the fish?

We are waiting to put fish into this aquarium.

Why?

When an aquarium is first set up, especially one using real soils and fertilizers to grow living plants, the ammonia levels are dangerously high for fish. In a mature system bacteria convert ammonia from fish waste and soils to Nitrites, then to Nitrates. At each step in this ammonia cycle (actually called the nitrogen cycle) the product is less toxic. So high concentrations of ammonia are the most dangerous to fish, while nitrates are relatively harmless. All of these are important as plant fertilizers.

Ammonia to Nitrites to Nitrates



Helpful bacteria must be given time to grow in an aquarium. These bacteria are essential for changing ammonia to nitrites and nitrites to nitrates to make the water safe for fish and plants to live together. We are waiting for these healthy bacteria to grow in this tank before adding fish. This process is called **Cycling an Aquarium** because it gives time for this nitrogen cycle to start.

Growing plants in a fish tank requires the right balance of many things including ammonia, nitrites, nitrates, oxygen and carbon dioxide. We are regularly testing for these indicators to know when to add additional residents. It can take weeks.