

# Material (Biogeochemical) Cycles

# Outline

Carbon Cycle

Nitrogen Cycle

Phosphorus Cycle

# Carbon Cycle

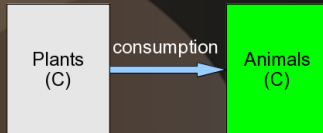
Carbon Cycle

Plants  
(C)

Animals  
(C)

# Carbon Cycle

Carbon Cycle



# Carbon Cycle

Carbon Cycle

Atmosphere (carbon dioxide)

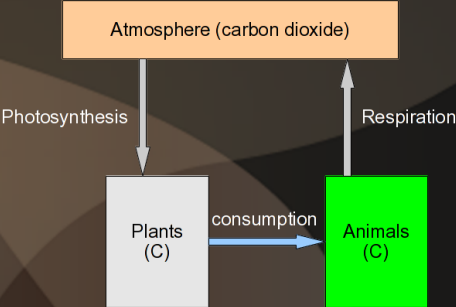
Plants  
(C)

consumption

Animals  
(C)

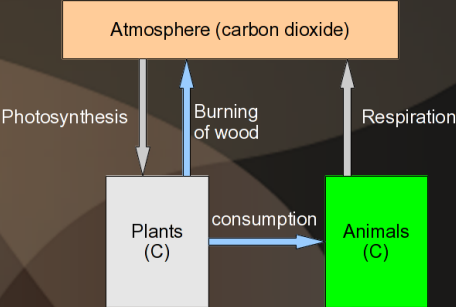
# Carbon Cycle

## Carbon Cycle



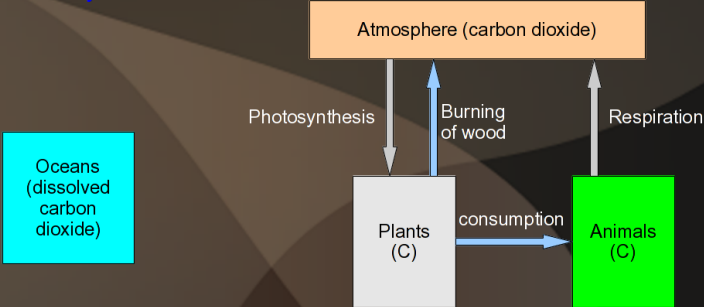
# Carbon Cycle

## Carbon Cycle



# Carbon Cycle

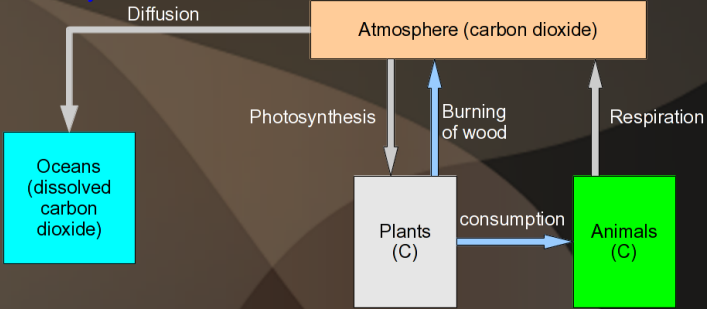
## Carbon Cycle





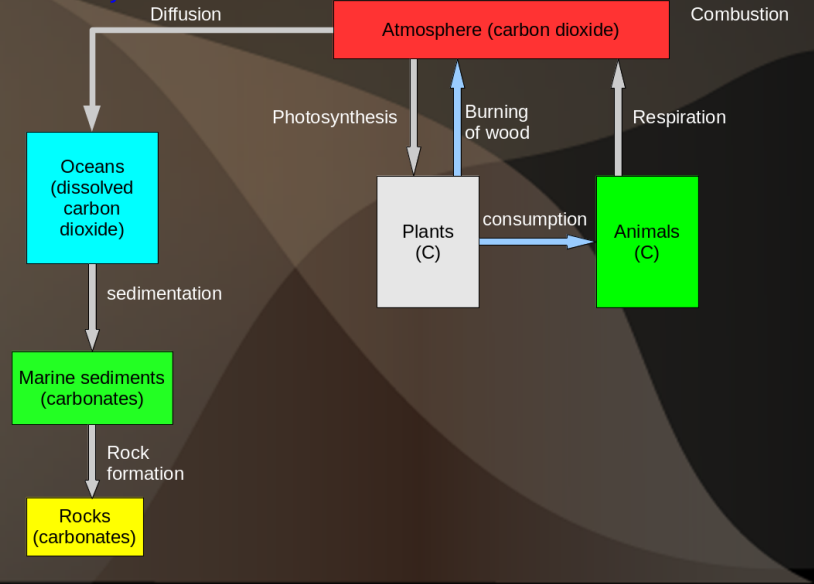
# Carbon Cycle

## Carbon Cycle



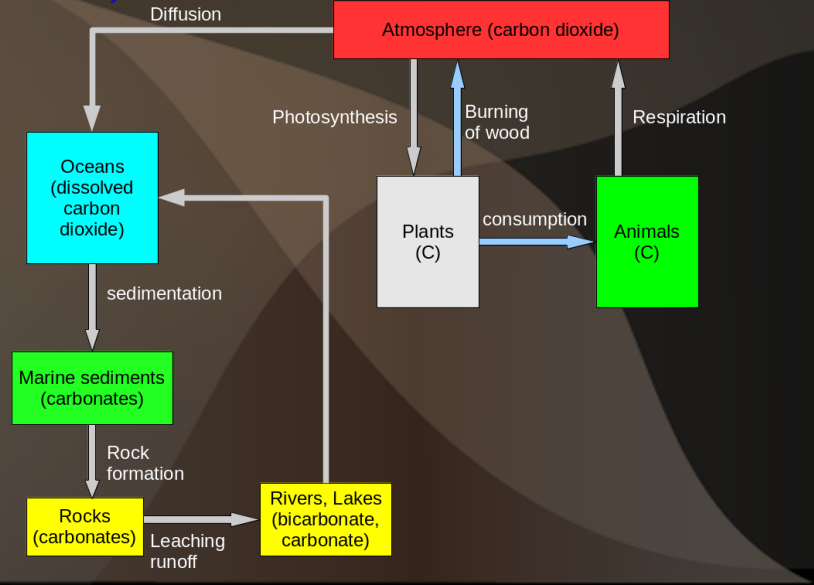
# Carbon Cycle

## Carbon Cycle



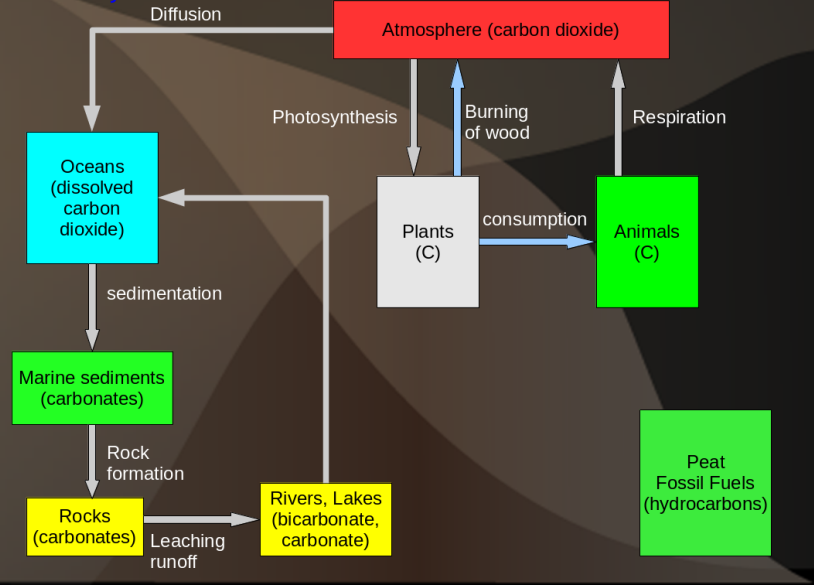
# Carbon Cycle

## Carbon Cycle



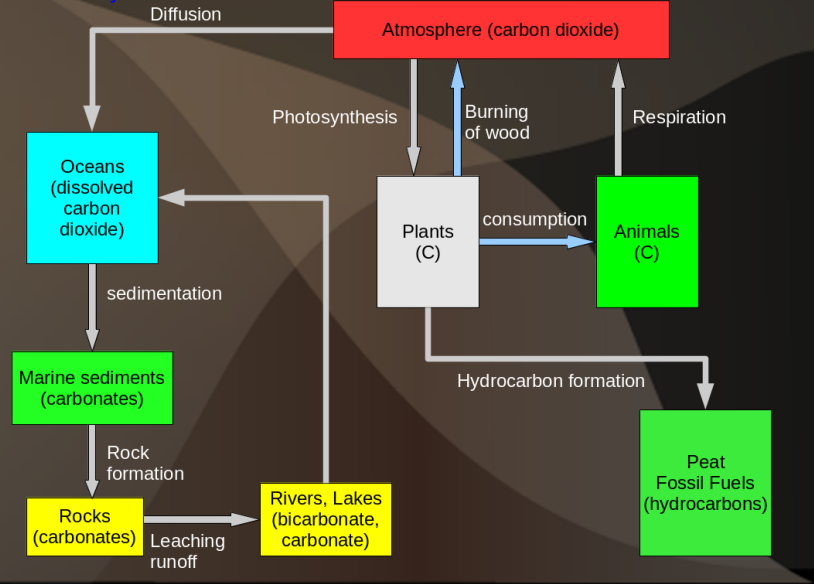
# Carbon Cycle

## Carbon Cycle



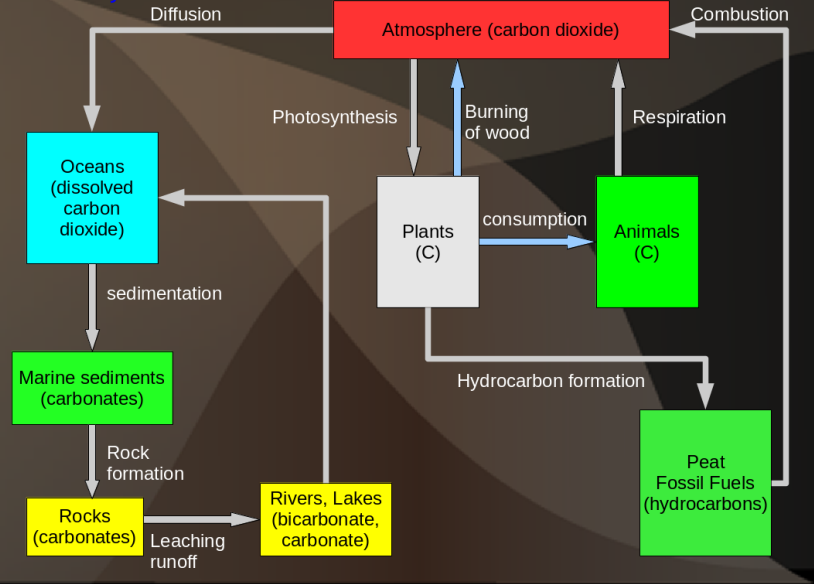
# Carbon Cycle

## Carbon Cycle



# Carbon Cycle

## Carbon Cycle



# Nitrogen Cycle

Nitrogen Cycle

Atmosphere  
(gaseous nitrogen)

# Nitrogen Cycle

## Nitrogen Cycle

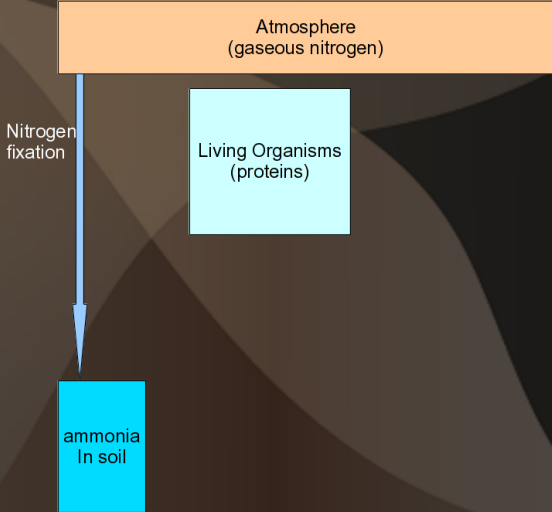
Atmosphere  
(gaseous nitrogen)

Living Organisms  
(proteins)



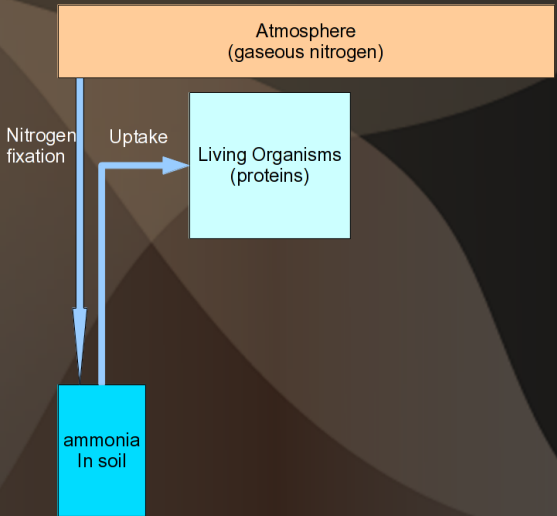
# Nitrogen Cycle

## Nitrogen Cycle



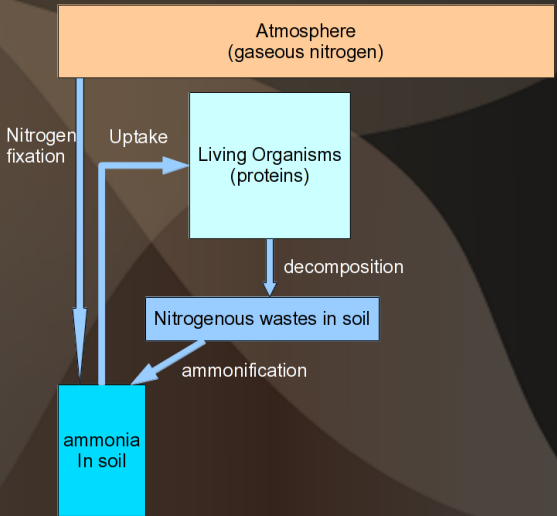
# Nitrogen Cycle

## Nitrogen Cycle



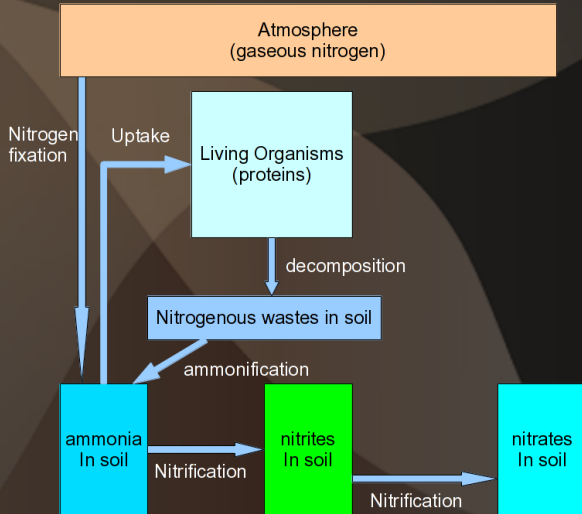
# Nitrogen Cycle

## Nitrogen Cycle



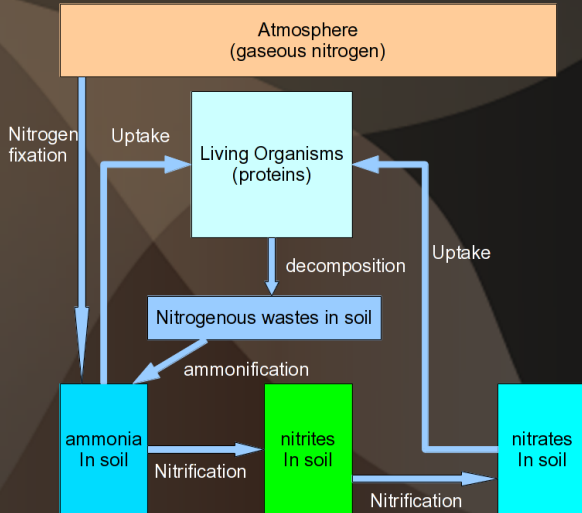
# Nitrogen Cycle

## Nitrogen Cycle



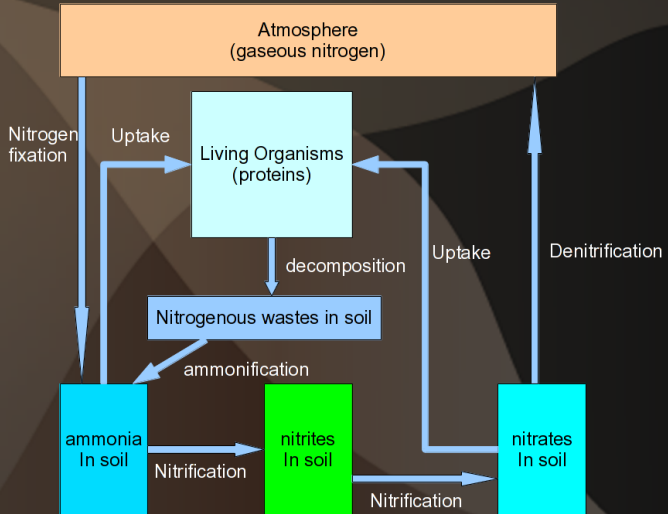
# Nitrogen Cycle

## Nitrogen Cycle



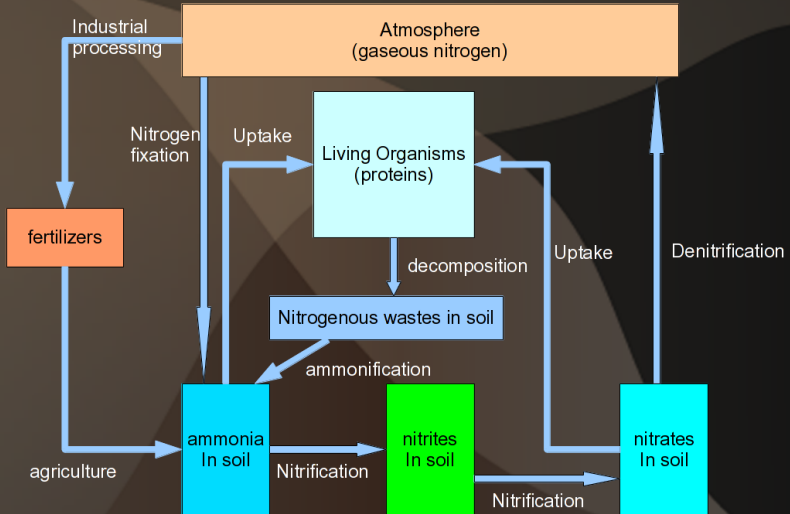
# Nitrogen Cycle

## Nitrogen Cycle



# Nitrogen Cycle

## Nitrogen Cycle



# Phosphorus Cycle

Phosphorus Cycle

Rocks



# Phosphorus Cycle

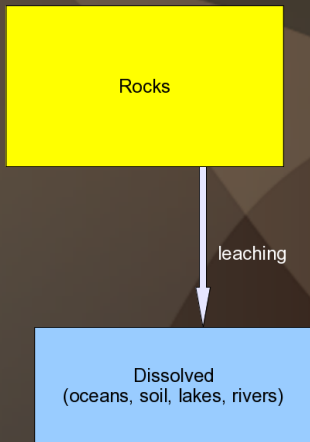
## Phosphorus Cycle

Rocks

Dissolved  
(oceans, soil, lakes, rivers)

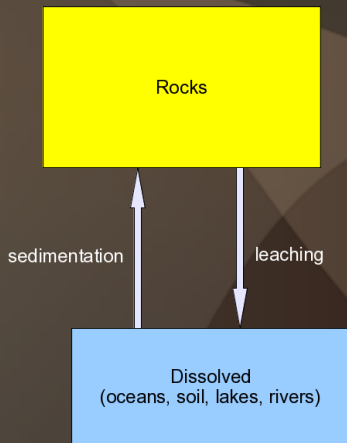
# Phosphorus Cycle

## Phosphorus Cycle



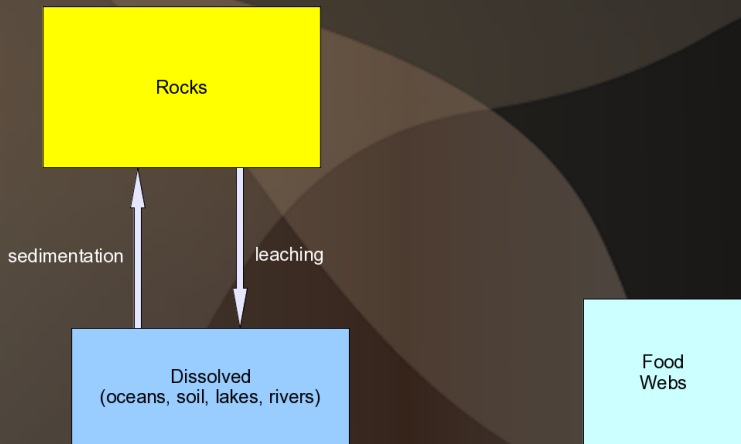
# Phosphorus Cycle

## Phosphorus Cycle



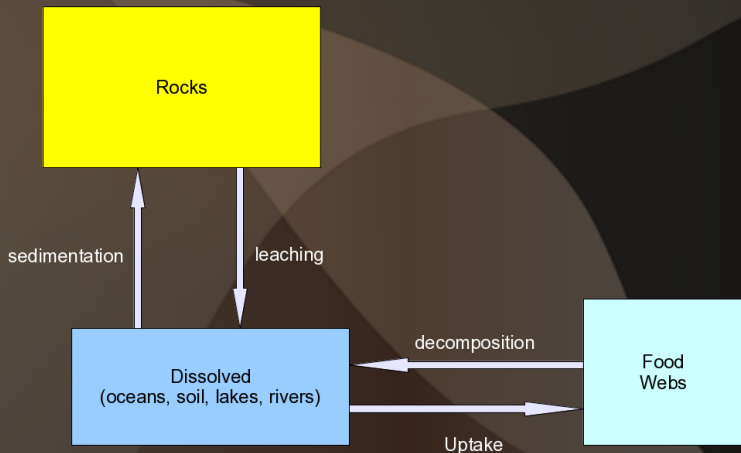
# Phosphorus Cycle

## Phosphorus Cycle



# Phosphorus Cycle

## Phosphorus Cycle



# Phosphorus Cycle

## Phosphorus Cycle

