

Population shrinks

Population grows

Large bacteria  
eat smaller bacteria

Mussels eat  
large bacteria

N-fixation and  
metabolic  
waste

Respiration



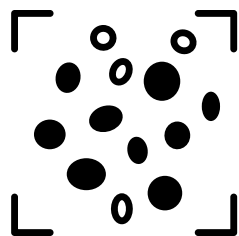
Concentration  
increases



Concentration  
declines

Release  
organic matter

Bacteria  
eat DOM



Population grows

Oxygen fuels  
bacterial growth

Population shrinks

Large bacteria  
eat smaller bacteria

Bacteria  
eat DOM

Concentration  
increases

$O_2$

Photosynthesis

Concentration  
increases

$NH_4^+$

Metabolic  
Waste

Uptake for  
production

$NO_3^-$

Concentration  
decreases

Release  
organic matter

