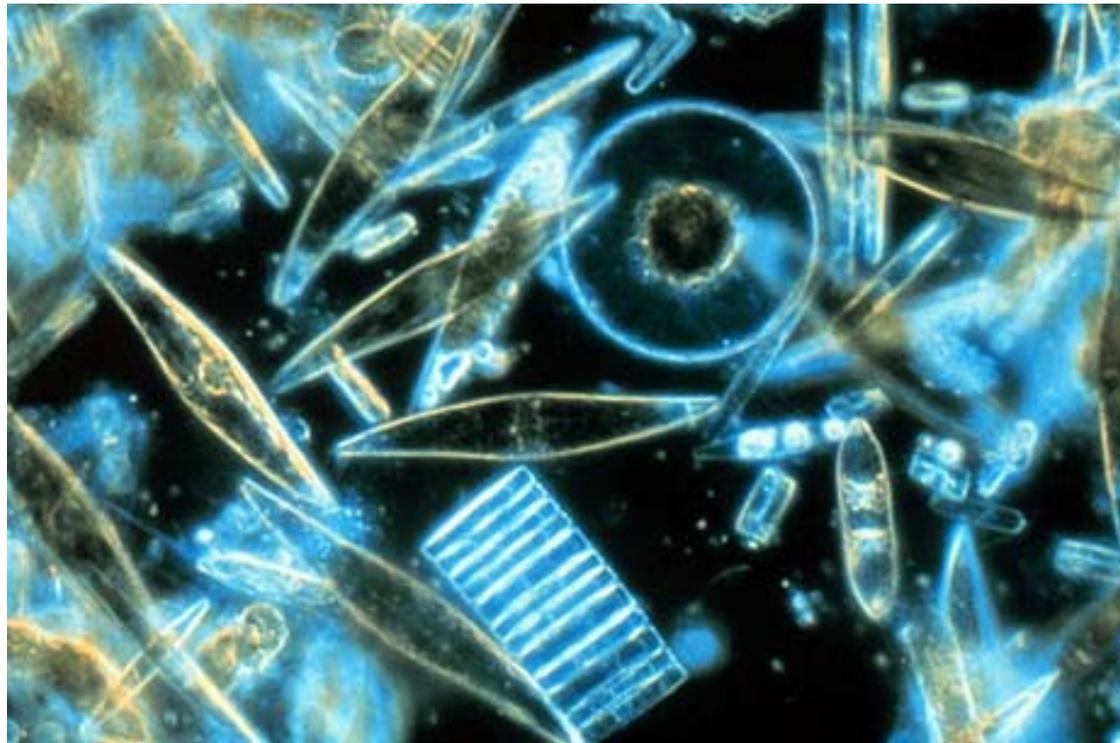


“Bad Suisun” Phenomenon

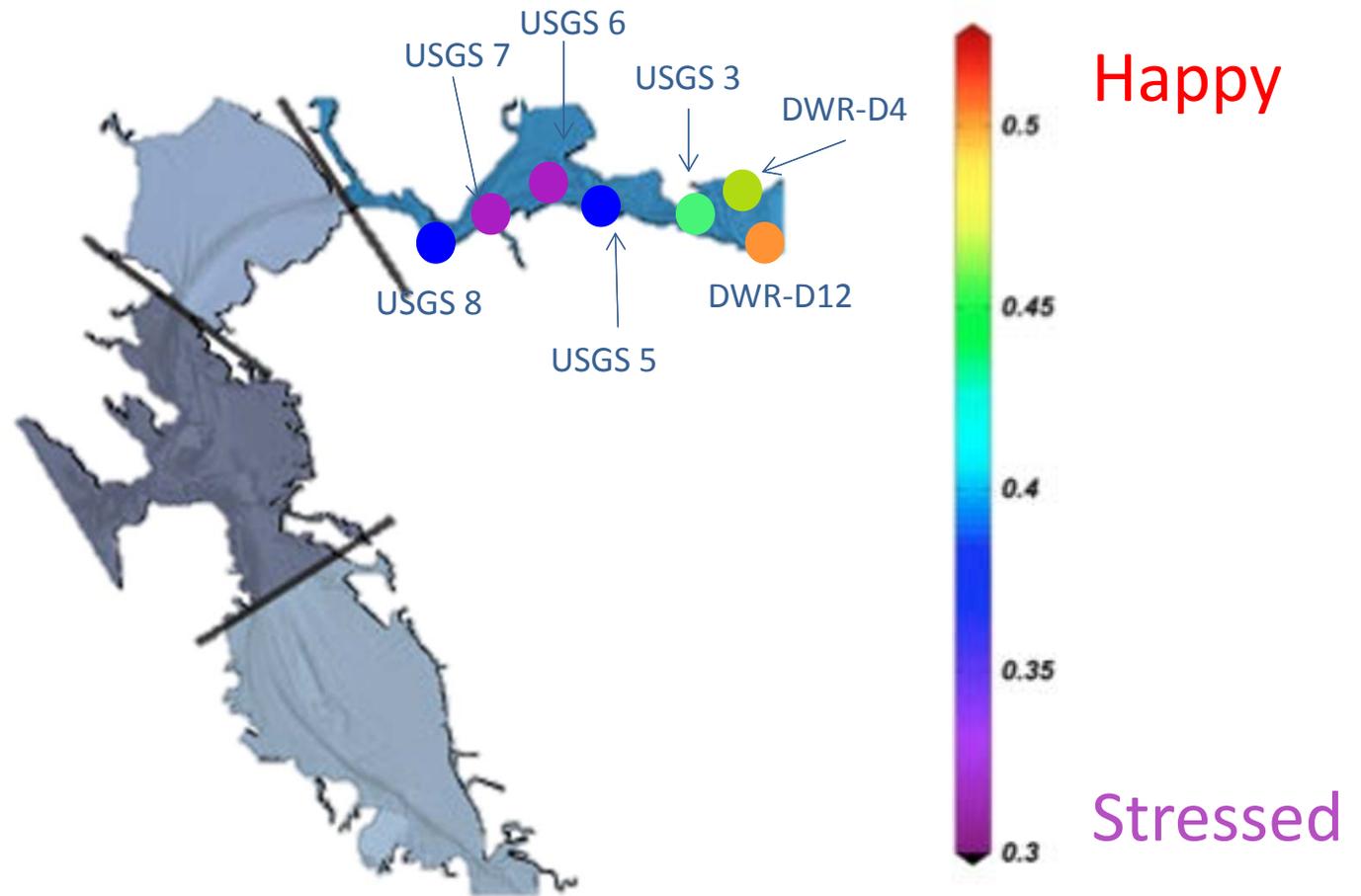
experiments to determine the root cause of algal stress and low growth rates in Suisun Bay



APPLIED
marine
SCIENCES

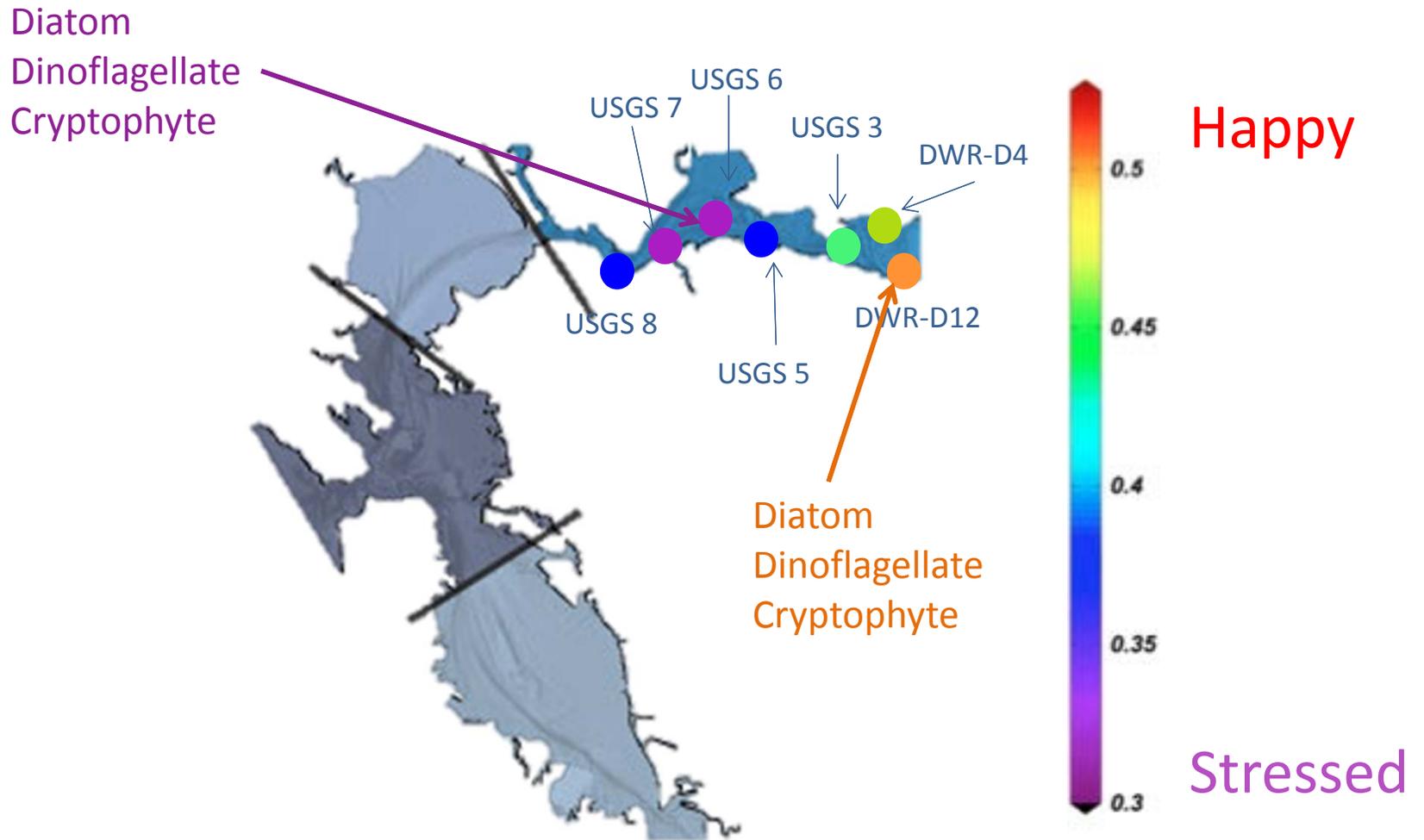


“Suisun Misery Spot”



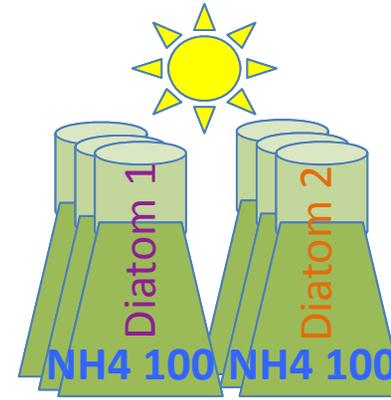
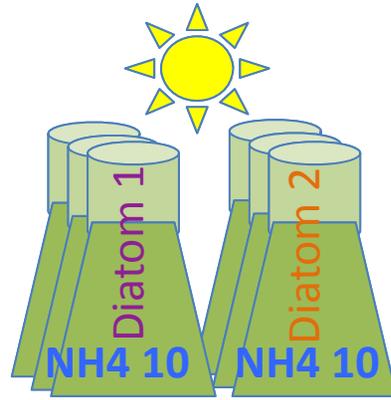
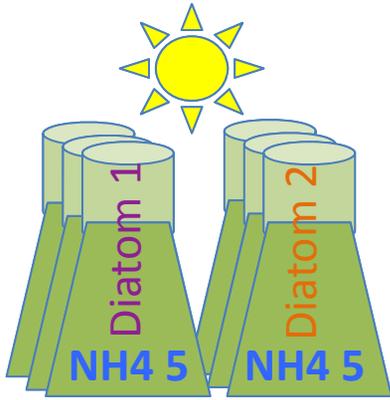
1. Are phytoplankton in the Suisun Misery Spot (SMS) less tolerant to NH_4^+ than algae living outside it?
2. Do phytoplankton in the SMS grow slower on NH_4^+ than they do on NO_3^- ?
1. How does light interact with nutrients to promote growth in phytoplankton?

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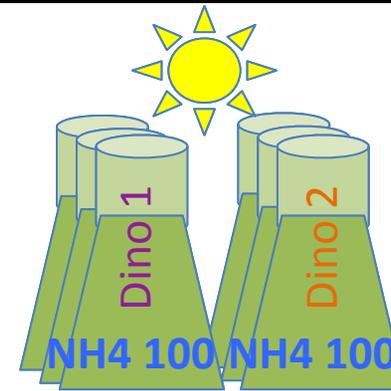
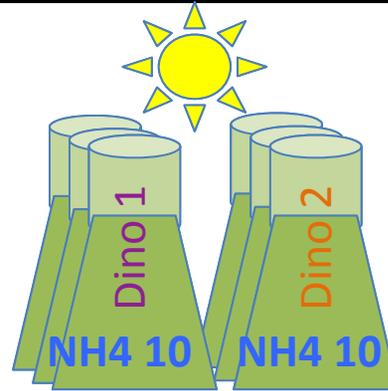
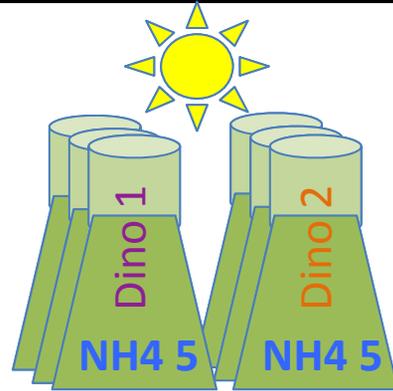


1

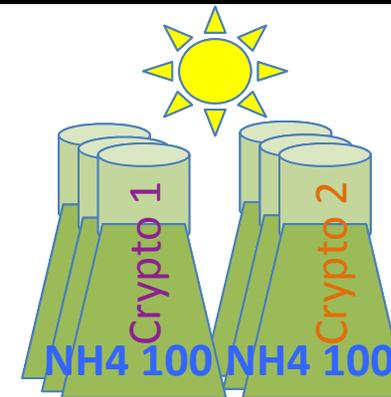
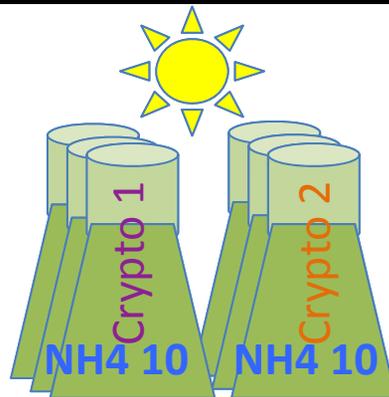
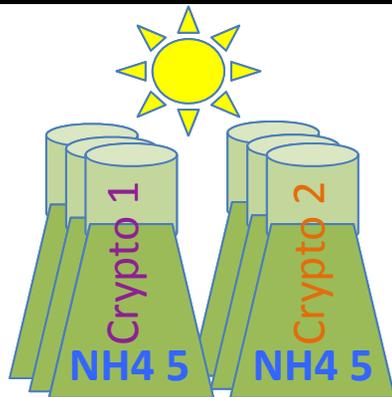
DIATOMS



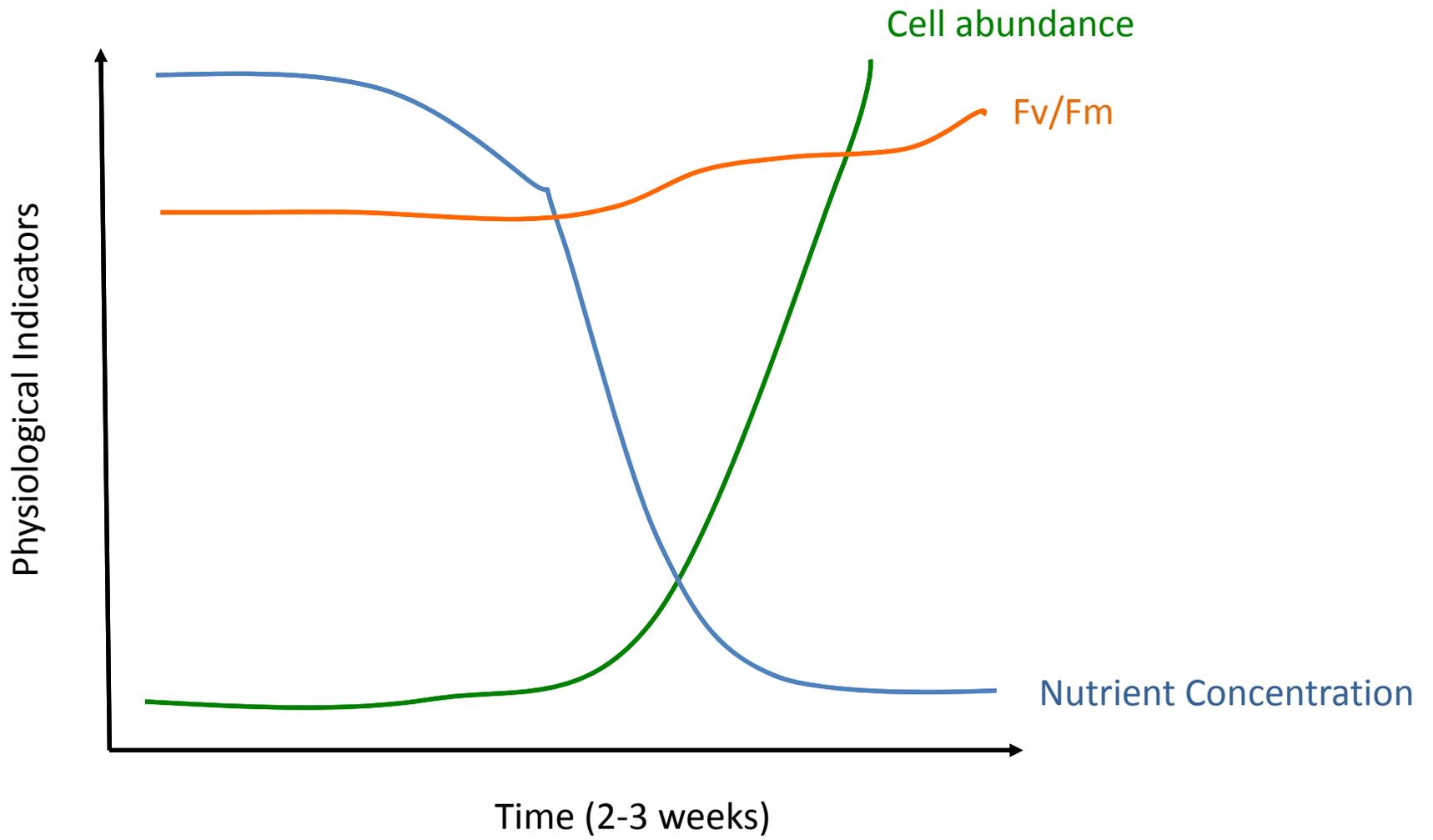
DINOFLAGELLATES



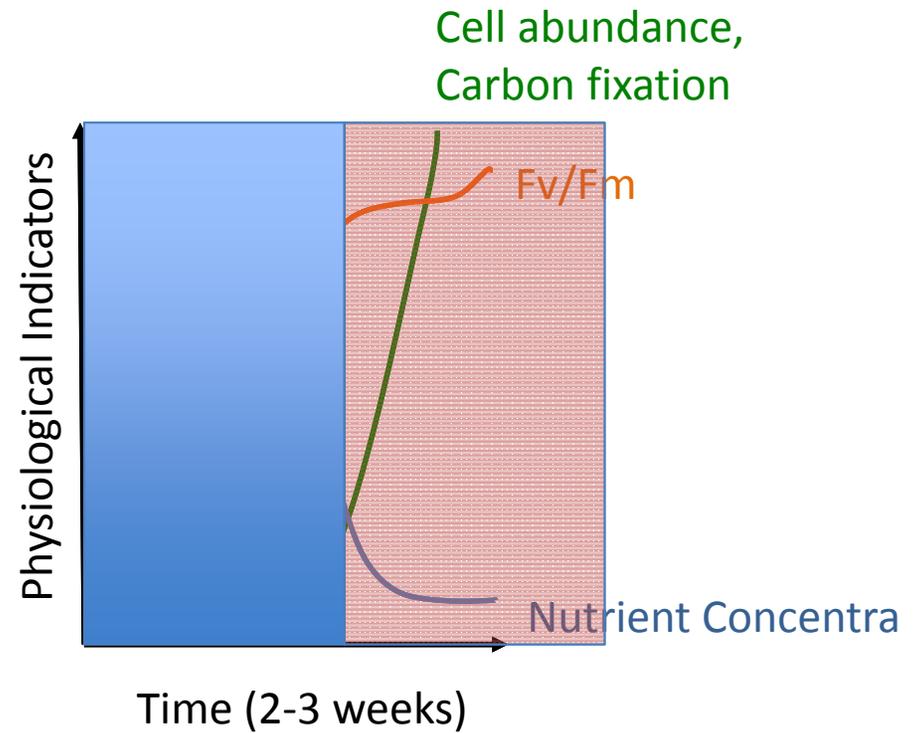
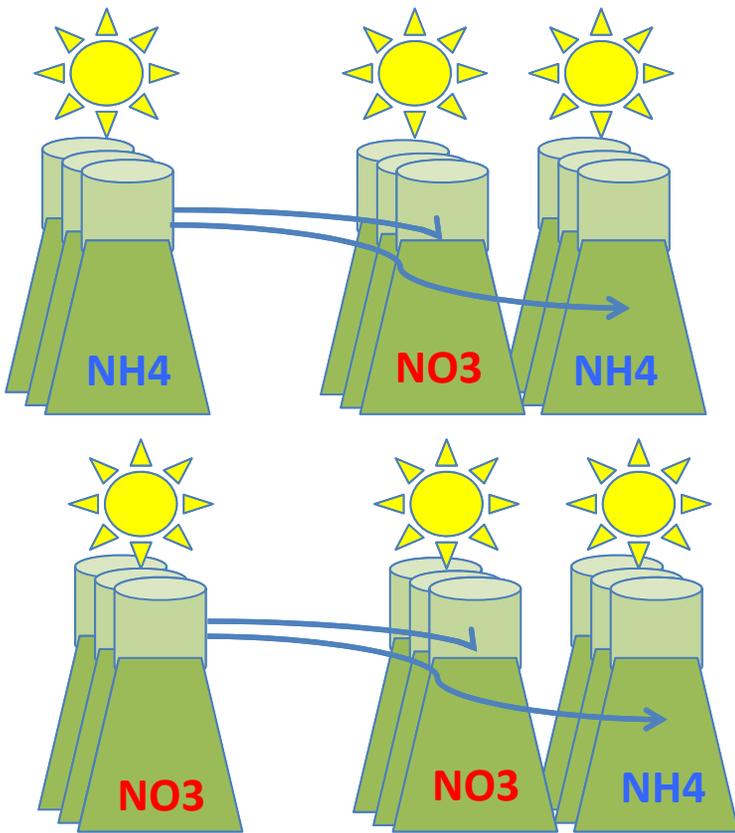
CRYPTOPHYTES



Increasing Ammonium concentration (5-100 $\mu\text{moles NH}_4^+ \text{L}^{-1}$)



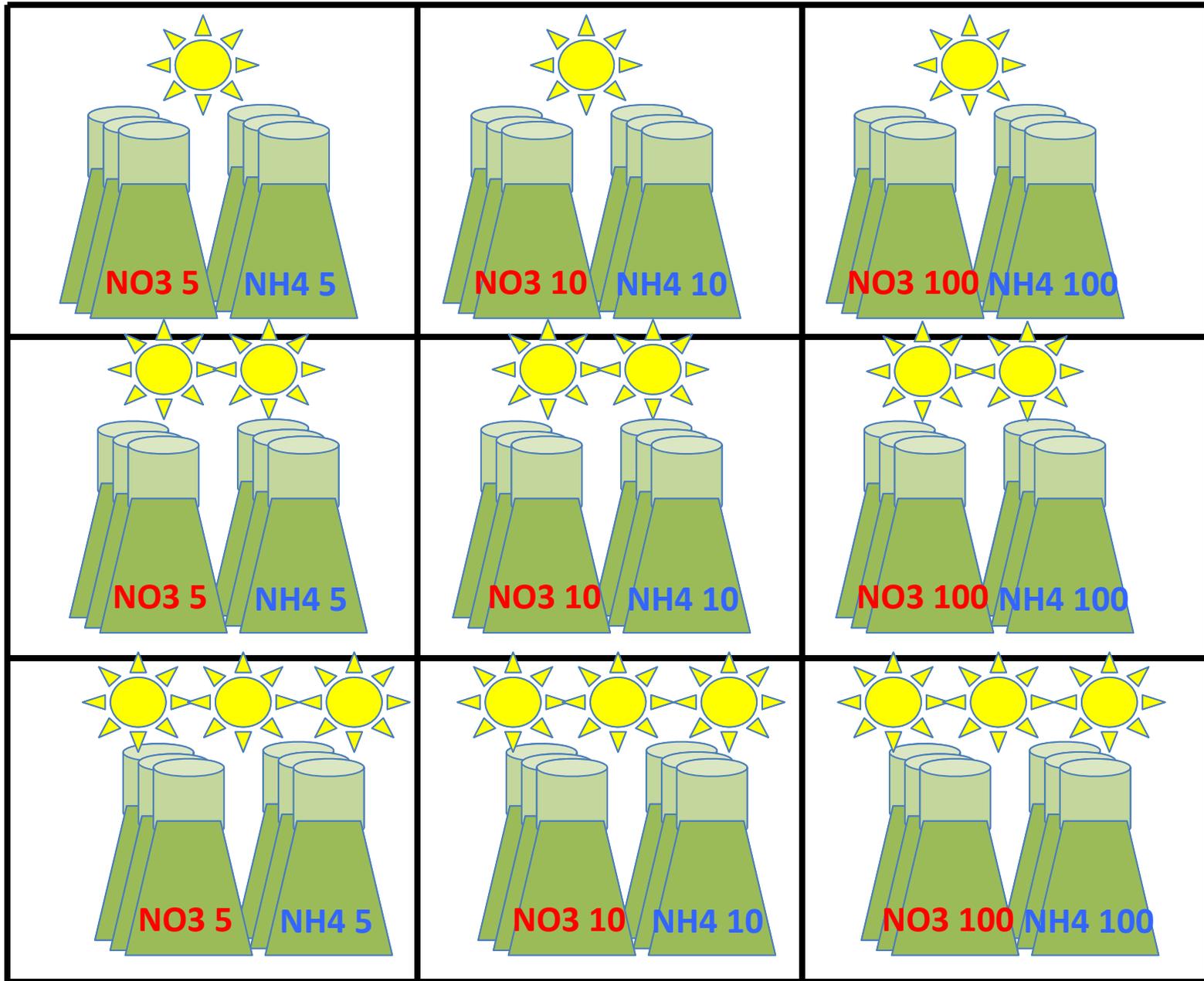
2. Do phytoplankton in the SMS grow slower on NH_4^+ than they do on NO_3^- ? And, do they grow faster when switching N source from NH_4^+ to NO_3^- ?



3. How does light interact with nutrients to promote growth in phytoplankton?

Compare effect of changing nutrient source to effect of changing irradiance level on growth

Increasing Irradiance (10-500 $\mu\text{moles m}^{-2} \text{s}^{-1}$)



Increasing nutrient concentration (5-100 $\mu\text{moles N L}^{-1}$)