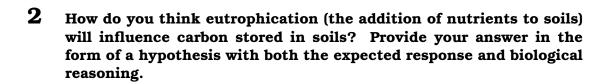
Name:

## Mini-Quiz 4

BIOL 4301/6301 September 28, 2023

Draw three figures to illustrate how (1) temperature, (2) litter C/N ratio, and (3) soil microbial biomass influence litter decomposition. Next to each figure indicate why you expect the trend you illustrated.



How do you think elevated atmospheric CO2 will influence carbon stored in soils? Provide your answer in the form of a hypothesis with both the expected response and biological reasoning.

4 How do you think increasing temperature will influence carbon stored in soils? Provide your answer in the form of a hypothesis with both the expected response and biological reasoning.

From the NEP equation (NEP = GPP - (Rplant + Rhet)), reductions in heterotrophic respiration would seem to be a way to increase NEP and thus, reduce atmospheric CO2. What feedback may preclude this from working? Provide your answer with text and a systems diagram.