

Names: _____

Over the semester, we have discussed several general concepts and how they apply in different ways. Let's review:

Describe at least 10 different uses of gradients .

Describe at least 7 different ways as you can in which Surface-to-Volume Ratios play a role in biological systems.

A mutation changes the shape of a protein so that it no longer functions. Describe at least 16 specific effects that mutations might have on at biological processes (e.g. if the ATP synthase in a thylakoid were unable to change shape (1) ATP would not be manufactured during the light dependent reactions, (2) the concentration of hydrogen ions inside the thylakoid membrane would be very high)

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Describe at least 10 processes in which ATP is involved and describe what would happen if it were not available

Membranes are very important to cells and organisms. Describe their role (or the role of their components) in at least 10 different processes.