**Warm-up Activity**: Working with 2 – 3 students sitting near you, discuss your answers to the “Lesson 1 Flipped Learning Assignment”. Record the significant findings and conclusions from your conversation in the space below. Be prepared to share with the class.

**Discussion Prompt #1**: What are the key concepts from the course that are referenced in the pre-class videos and readings? Brainstorm with 2 – 3 students near you. Describe these concepts in the space below.

**Discussion Prompt #2**: Review the figure below that shows some of the processes related to the nitrogen cycle on a scale of global change.



*Source: Understanding Global Change. University of California Museum of Paleontology. Available at* [*https://ugc.berkeley.edu/background-content/nitrogen/*](https://ugc.berkeley.edu/background-content/nitrogen/)

Where is nitrogen stored and where is it available for organisms to use?

How do humans add nitrogen to the nitrogen cycle?

What is the pathway for the addition of nitrogen into freshwater systems? What likely happens to nitrogen in freshwater systems?

Modify the figure so that it includes the role of Pacific salmon in the nitrogen cycle and any other associated interactions.

**Concept Mapping Activity**: Thus far, this activity has clarified how salmon contribute to the flow of energy and nutrients into freshwater streams and the surrounding terrestrial ecosystems. The assigned videos and readings completed before class discussed how salmon interact with other organisms in the ecosystem. Working in groups of 2 – 3, your assignment is to illustrate these interactions and describe them through the construction of a concept map. Each group will turn in this concept map at the end of class for a grade. Use all available notes and resources to assist you.

**Adult Pacific Salmon in Ocean**