You are to design the class structure for a model of red blood cells (RBC) and the transfer of ions between the RBC and their surrounding medium. The cell has pumps on its surface that move different molecules in and out (to maintain healthy behaviour). For example, it has sodium pumps that move sodium (Na) into and out of the cell. Both the cell and medium are characterised by the concentrations of the different molecules (Sodium (Na), Potassium (K), Protons, etc), as well as other properties like pH (how acidic it is). The flux of a pump is dependent on the concentrations at its two ends. Given some initial conditions of the different molecules and properties, the model proceeds in an iterative way by:

1. Computing the flux of all pumps.
2. Stepping forward a small amount of time.
3. Updating the concentrations based on the flux of the pumps.
4. Return to 1.

Sketch out the classes and interfaces that you would use to implement this model.