Category:	Needs Improvement	Approaching Requirement	Meets Requirement	Above Requirement	Exceeds Requirement
Cell Model					
3D model	Missing more than one of the requirements.	Does not have 10 phospholipids or is missing. **OR** Is missing one of the channels. **OR** Does not have the correct 3 molecules.	Shows at least 10 phospholipids in a bilayer formation **AND** Shows an active channel (primary or secondary) **AND** Show a passive Channel (Aquaporin) **AND** Shows at least 3 types of molecules: 1)uses passive channel 2) uses active channel 3) uses diffusion	**Meets requirement plus** **AND** Shows active channels in *an open and closed position.* **AND** Provides an easy way to visually identify the different parts of the model.	**Above Requirement plus** Molecules provide clear concentration difference. **AND** Creates a complex mosaic rather than a flat layer.
Voice Over:					
Form of bilayer	Does not talk about the bilayer form or provides incorrect information.	Does not explain what it is made of **OR** What their properties are.	Explains the make-up of the bilayer. **AND** what the property of each part is.	**Meets requirement plus** Uses vocabulary from class to do so. **AND** Uses synonyms in explanation.	**Above requirement, plus** Provides an analogy that is unique **and** original.

Function of bilayer	Does not talk about the bilayer function or provides incorrect information.	Does not explain what passes through the membrane **OR** Does not explain why they are able to pass through it.	Explains what passes through the bilayer **AND** Why they are able to pass through it. **AND** Provides an example of a molecule that can pass.	**Meets requirement plus** Provides multiple examples of molecules that can pass the bilayer.	**Above requirement plus** Connects diffusion to the lab we did in class.

Form of Passive Channel (Aquaporin)	Does not talk about the passive channel form or provides incorrect information.	Does not explain why no energy is needed.	Explains why it is called a "Passive" channel. **AND** Explains how the form helps its passive nature.	**Meets requirement plus** Explains why certain molecules cannot use diffusion across the membrane.	
Function of Passive Channels (Aquaporin)	Does not talk about the passive channel form or provides incorrect information.	Does not explain what passes through the Aquaporin Channel	Mentions that Aquaporin is one type of passive channel **AND** Explains what Aquaporin does for the cell	**Meets requirement plus** Uses vocabulary from class to explain it.	**Above Requirement plus** Gives examples related to concentration/equilib-rium

Form of Active Channels	Does not talk about the active channel form or provides incorrect information.	Does not talk about how the channels change state.	Explains that active channels have two different states **AND** how they change states.	**Meets requirement plus** Provides examples of molecules that pass through The active channels.	**Above Requirement, plus** Relates the energy source back to organelles and the energy unit.
Function Active Channel	Does not talk about the active channel function or provides incorrect information.	Mentions the two types of channel but does not talk about energy source.	Mentions the two types of channels by name **AND** Explains the difference between the energy source of the two channels.	**Meets requirement plus** Explains the Source of energy for each channel type.	**Above Requirement plus** explains what active channels are able to do that passive transport cannot. **AND** Includes math with ratios to explain it.
Vocabulary	Does not show evidence of knowledge of all 3 terms.	Defines the words: (1)Diffusion, (2)Osmosis, (3)Concentrati on gradient	Uses the words Diffusion, Osmosis, Concentration gradient in context while talking about the form and function	**Meets requirement plus** uses terms from solution notes in a meaningful way.	**Above Requirement plus** uses another vocabulary relevantly from class.