

Class Summary Table (6th)

Negotiating ideas and evidence through task

Task Number and Name	What we learned from this task.	How it helps us explain the anchoring phenomenon?
Task 1 Temperature, Heat, and Energy	-Temperature is the degree of hotness of particles (speed) -Heat is measurement of the mass (number of particles) and their speed -Everything has heat (unless it is at zero Kelvin)	-The brine, ice, seawater have different amounts of heat -Even cold things have heat -Sealife die because heat exits them
Task 2 Icy Hot and Liquid Cold Lab	-Heating is a way that energy is transferred -Taking away energy strengthens intermolecular forces, allows them to reform, which is phase change -Taking away energy can cause particles to move slower -Adding energy causes intermolecular forces to weaken or break -Adding energy can also cause particles to move faster -Thermal energy is stored in motion of particles (temperature)	-Energy is being transferred from the seawater to the brine -When the seawater loses energy it undergoes a phase change (phase energy) which allows intermolecular forces to reform -The brine absorbs energy which causes its particles to move faster (thermal energy)

	-Phase energy is stored in the arrangement of particles	
Task 3: Water's Wacky Ways	<ul style="list-style-type: none"> -Liquid water is more dense than solid water -Water is not just one particle, it is made of one oxygen and two hydrogens -Cohesion is the attraction of like molecules (due to hydrogen bonds) -Adhesion is the attraction of molecules to other types of molecules -Hydrogen bonds forms due to positive charge on hydrogen and negative charge on oxygen 	-solid water molecules form hexagon rings (this will be helpful when drawing models)
Task 4: Freshwater Ice vs. Saltwater Ice	<ul style="list-style-type: none"> -Seawater creates brine because saltwater has a lower freezing point -Sea ice is cloudy/bumpy because it has brine channels -Seawater ice is not completely solid due to the brine channels that run through it 	<ul style="list-style-type: none"> -When sea forms is created brine channels and when the ice cracks it releases brine into the ocean -The brinicle process starts with the sea ice forming -Brine needs to get really cold in order to freeze
Task 5: Freezing Point Depression	<ul style="list-style-type: none"> -The more salt that is added the lower the freezing point gets depressed -Brine is made of salt (sodium chloride and water) 	<ul style="list-style-type: none"> -The brine doesn't freeze because it has a lot of salt, but it can freeze if it gets cold enough -Brine at the particle level (key concept 18) -Seawater has a higher freezing point than the brine

	<ul style="list-style-type: none"> -The oxygen in water(-) is attracted the sodium(+) and the hydrogen(+) is attracted to the chlorine (-) -Water molecules break up the salt (charges) 	
<p>Task 6: Heating and Cooling Curve Connections</p>	<ul style="list-style-type: none"> -Heating and cooling curves look different for brine and seawater -You can combine heating/cooling curves for different substances to see what phase they are in at the same temperature 	<ul style="list-style-type: none"> -Seawater releases energy which causes the particles to slow down and then change phase to a solid -Brine is absorbing energy and the energy makes the particles move faster -Brine will be a liquid when seawater is a solid
<p>Task 7: Energy Bar Charts</p>	<ul style="list-style-type: none"> -Energy bar charts (LOLs) show how energy is being stored or transferred in a system -The Law of Conservation of Energy states that energy cannot be created or destroyed 	<p>The energy gained by the brine solution came from the surrounding seawater. The brine solution gained thermal energy which caused it to increase in temperature, however, this energy was transferred out of the surrounding seawater which caused it to decrease in thermal energy and phase energy.</p>