

	Question #	0	1	2	3	4	Total
Prehomework 1	1-3	Answers for questions 1-3 will vary. Recommend giving 1 point each for completion.					/3
	4	No answer	Number represents 25% of answer for question #1 (will vary by student).				/1
	5	No answer	Reduces CO2 buildup in atmosphere or reduces temperature increase	Slows rate of temperature change	Slows rate of temperature change by slowing increase in atmospheric CO2		/3

grade scale:
6-7 = A,
5 = B,
4 = C,
3 = D,
0-2 = F

	Question #	0	1	2	3	4	Total
Prehomework 2	1	No attempt or wrong numbers	Inverted lat and long numbers	Correct lat (29.066) and long (15.833)			/2
	2	No attempt	States "Africa" but does not specify which coast	States northwest coast of Africa, Moroccan coast or Canary Islands			/2
	3	No attempt	Significant increase or decrease	Approximately no change			/2
	4	No attempt	States no change in pH or that pH is increases (sometimes they invert pH and acidity)	States decrease in pH through time			/2
	5	No attempt	States pCO2 does not change	States that pCO2 increases through time			/2
	temp plot	No plot	Included, but incorrect	Includes plot			/2
	pH plot	No plot	Included, but incorrect	Includes plot			/2
	pCO2 plot	No plot	included, but incorrect	Includes plot			/2

grade scale:
16-15 = A,
14-13 = B,
12-11 = C,
10-9 = D,
8-0 = F

	Question #	0	1	2	3	4	Total
Activity 2.1	1	Misplaced all compounds	Has 1 compound in the correct box	Has 2 compounds in the correct boxes	Has 3-4 compounds in the correct boxes	Has all compounds in the correct blocks	/4
	2	No attempt	Release of CO2 to atmosphere	States dissolution/absorption and/or release of CO2			/2
	3	No attempt	Increase pH	Decrease pH			/2

grade scale:
8-7 = A,
6-5 = B,
4-3 = C,
2-1 = D,
0 = F

Question #	0	1	2	3	4	Total
1	No attempt	Attempt at description, but inaccurate	Accurately describes one trend (either pH decrease or $p\text{CO}_2$ increase) without mentioning time	Accurately describes increase in $p\text{CO}_2$ and decrease in pH, but does not indicate that the change is taking place through time OR accurately describes one trend through time	Describes both increase in $p\text{CO}_2$ and decrease in pH through time	/4
2	No attempt	States that pH and $p\text{CO}_2$ are positively correlated	Accurately states negative correlation between pH and $p\text{CO}_2$			/2
3	No attempt	Accurately describes one of the steps in the carbon solubility cycle	Accurately describes two of the steps in the carbon solubility cycle	Accurately describes three of the steps in the carbon solubility cycle	Accurately describes all of the steps in the carbon solubility cycle that connect diffusion of CO_2 into the ocean to increased $p\text{CO}_2$ and decreased pH	/4
4	No attempt or yes	States "some" but is not specific	No			/2
5	No attempt	States that more CO_3^{2-} will help organisms build their shells	States that lowered pH/release of H^+ will harm organisms	States that lowered pH/release of H^+ will weaken shells	States that the release of H^+ will weaken shells because it will react with carbonate in the shells	/4
6	No attempt or local	Regional	Global			/2
7	No attempt	One box labeled correctly and at least one arrow labeled correctly	Increase atmospheric CO_2 box labeled correctly, and at least one arrow labeled wrong	Three boxes labeled correctly, but arrows are labeled wrong OR two boxes correct, but all arrows labeled correctly	All boxes and arrows labeled correctly	/4

Activity 2.2

grade scale:
A = 22-21,
B = 20-18,
C = 17-15,
D = 14-12,
F = 11-0