6Q3 - Quiz on the Basic Physics of Climate Science

Name:_____

Period:_____

Date:_____

1. List three important considerations for understanding Earth's worldwide climate.

I.

II.

III.

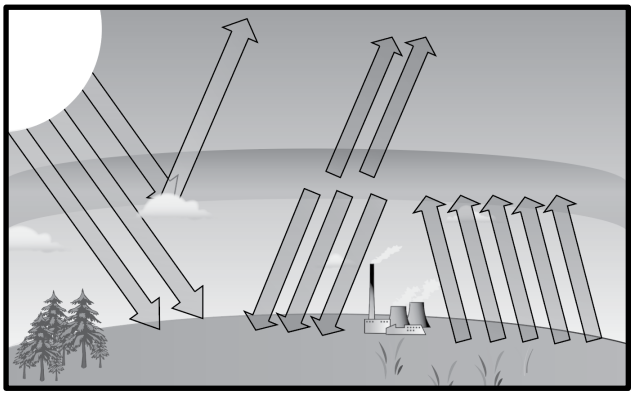
2. Choose a location on earth and explain how above three considerations influence that location's climate.

3. For each factor listed in the table, put a checkmark in the energy effect(s) it initially/primary has.

Factor	E_{Input}	$E_{storage}$	E_{Output}
Atmospheric composition			
Volcanic activity			
Circulation of the Oceans			
Deforestation			
Earth's orbit and the orientation of its axis			
Circulation of the Atmosphere			
Glaciation			
Human activities			
Sun's energy output			

4. For the scenario of Decreasing Global Temperatures: Select *two* factors from the list above that would lead to global decreasing temperatures and *modify* (by changing, adding, or subtracting arrows) and *annotate* the energy model below to demonstrate a causal chain resulting in decreasing global temperatures.

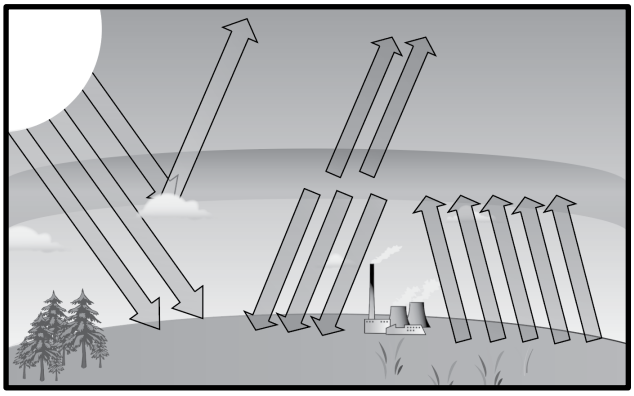
Factor 1: _____ Factor 2: _____



5. Explain with reference to the diagram above how the changes you made would decrease the global temperature of the Earth.

6. For the scenario of Increasing Global Temperatures: Select *two* factors from the first page that would lead to global increasing temperatures and *modify* (by changing, adding, or subtracting arrows) and *annotate* the energy model below to demonstrate a causal chain resulting in increasing global temperatures.

Factor 1: _____ Factor 2: _____



7. Explain with reference to the diagram above how the changes you made would increase the global temperature of the Earth.