Global carbon stores and changes in magnitude *3.1.1.3*

Q1	*Match the terms with their carbon description*	
A	Carbon dioxide and methane in a free gaseous state	
B	Calcium Bicarbonate solution	
C	Organic carbon that is subsurface and undergoing decomposition	
D	Solid carbon compounds slowly moving in tectonic plate rocks	
E	Organic carbon that is subsurface and is preserved from decomposition	
	Lithosphere Cryosphere Atmosphere Hydrosphere Pedosphere	

Q2	**Tick whether these involve the Slow or Fast carbon cycles**	**Slow**	**Fast**
A	Plant growth via photosynthesis		
B	Acid rain wearing away surface rocks through chemical weathering		
C	Volcanic eruptions at destructive margins		
D	Ocean/Atmosphere gas exchange		
E	Tectonic plate movement		
F	Fossil tree remains converting to coal		
G	Zooplankton feeding on Phytoplankton and digesting them		

Q3	**What changes will take place to the carbon stores in the following situations (+ , - , or =)**			
A	Rainforest is cleared for agriculture	**Biosphere**	**Atmosphere**	**Pedosphere**
B	An increase in volcanic eruptions	**Atmosphere**	**Lithosphere**	**Cryosphere**
C	Depletion and exploitation of crude oil deposits	**Atmosphere**	**Biosphere**	**Hydrosphere**
D	Increase in coral reef growth where warmer oceans extend their range	**Hydrosphere**	**Atmosphere**	**Lithosphere**
E	Quarrying of limestone and marble to construct new city expansion	**Lithosphere**	**Atmosphere**	**Biosphere**

Global carbon stores and changes in magnitude *3.1.1.3*

Q4	***Rank (& justify selection) the following carbon stores in terms of their current rate of change where 1= fastest rate of change and 4 = slowest rate of change***
Cryosphere	***Hydrosphere***
Atmosphere	***Biosphere***

Q5	***Construct a flow diagram to illustrate the positive feedback loop that may amplify global warming as the Cryosphere undergoes change***