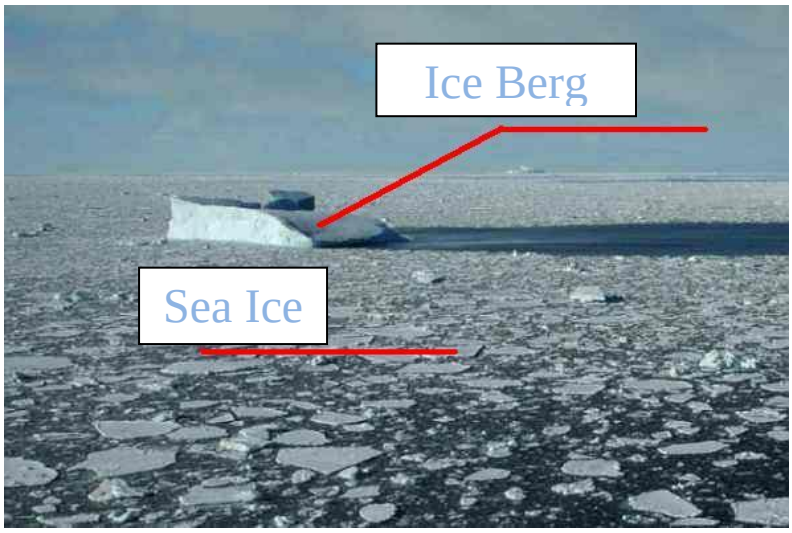
ANSWER ANSWER ANSWER

Round: 2A



1. Label the above photo appropriately with an arrow pointing to one example of sea ice and another arrow pointing to one example of an iceberg. *1 pt each correct label (2 pts)*
2. Provide a definition for both icebergs and sea ice. Also provide two (2) differences relating to the origin of icebergs and sea ice that make them distinguishable from each other.
   - Sea Ice: *Frozen sea water (1 pt) from which the brine has been expelled (the more slowly it forms the more brine is expelled into the surrounding water). Forms in the sea (1 pt) OR forms from saltwater (1 pts)*
   - Iceberg: *A large fragment of ice broken off a glacier that is now drifting (1 pt). Falls into the sea (1 pt) OR forms from fresh water (1 pt)*
3. How does the melting of Arctic sea ice affect the global climate?

   Sea ice reflects much of the sunlight (2pt) back into the atmosphere. This means that areas covered in sea ice don't absorb much solar energy and are much colder (2pt). The more sea ice that melts, the more solar energy is absorbed at the surface raising global temperatures (2pts).
4. The Coast Guard experimented with spraying carbon powder on the surface of large icebergs. What did they expect to happen and why?

   - They expected the ice to melt faster (2 pts)

   - Because it would absorb more energy from light, and hence melt faster (2 pts)
5. How much will melting sea ice contribute to sea level rise? Explain your answer.

   Sea ice will not contribute to sea level rise (2 pts), as ice is already displacing its own weight, so changing it from ice to liquid won't change the water level (2 pts).

REFERENCES:
Graphic: http://www.ldeo.columbia.edu/research/melting-glaciers-tracking-their-path
http://nsidc.org/seaice/intro.html
http://www.ncdc.noaa.gov/paleo/icecore/antarctica/vostok/vostok.html