



## Expedition Day 5 Questions and Answers

- 1) Have animals or plants gone extinct because of climate change and no other reason?
  - This is very complex question. It is hard to attribute an extinction to any one reason and is usually a combination of many factors.
- 2) How do you study climate change if you have only been studying it recently?
  - The geologic record found in the layers of sedimentary rock can tell us what the seasons were like almost a billion years ago.
- 3) How do you measure carbon dioxide in the air?
- 4) Is Alaska your favorite place to work?
  - Yes, for a number of reasons including its beauty and the ease of finding ice to study!!
- 5) The sun cycle effects the northern lights, does the sun cycle effect the ice?
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- 6) Does ice forming and melting help clean the ocean?
  - Not really. It will certainly hold debris in the ice for awhile, but when it melts it will go right back into the water column.
- 7) Is greenhouse gas growth directly related to population growth?
  - Yes, if you look at a growth curve of both the population and greenhouse gases they look identical. However, very small portion of the human population (the U.S., Europe, etc) produce the vast majority of the green houses gases.
- 8) IS there an artic o-zone hole? Does it effect ice?
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- 9) Has climate change effected humans?
  - Yes, for instance the Inupiaq people have changed the way they hunt.
- 10) Is photography the only way to preserve ice slides?
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- 11) Do global warming and global cooling balance each other?
  - If the amount of moisture put in the atmosphere increases the clouds maybe the cooling will balance out the warming.
- 12) Do only certain gases contribute to green house effect or do dust and ash play a part?
  - Initially the dust and ash have cooling affect but the other gases released by volcanoes may also be green house gases.
- 13) are there any natural toxins in the Artic?
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- 14) Does climate change change human life expectancy or only the quality of human life?
  - In undeveloped countries like Bangladesh the rising oceans would probably change life expectancy and qualities. In the short term in may not change that of a westerner.
- 15) Yesterday when you were talking about sea floors you talked about the Canadian Arctic sea floor and the Interior Arctic sea floor. Where is the Interior Arctic?

- Nearer the north pole, away from the coast lines. In other words way out in the middle of the arctic ocean.
- 16) How do you know where to drill for ice core samples?
- It depends on whether we are looking for young or old ice. The young ice usually has less snow on it and is thinner.
- 17) If the Arctic temperature average increased by ten degrees, what would happen to places like Anchorage or Juneau or Fairbanks?
- Sea levels would rise and the places right on the coast would have increased erosion or even flooding.
- 18) If temperatures increased in the arctic what would happen in the lower 48?
- There might be a change in weather patterns, which would be hard to predict. Similar things would happen to the coastal communities as here in Alaska.
- 19) If temperatures increase will trees start to grow on the north slope?
- There is some evidence of that along some of the northern rivers already. The first trees to start to grow are the willows and later the spruce.