

GLY 29 - Spring 2011 - Homework Assignments

Homework 1

assigned 1/27/11, due 2/3/11

Describe the direct effects that would occur if the Earth's albedo were to decrease. Describe the negative feedbacks in the climate cycle and how they would modify the effects.

Homework 2

assigned 2/3/11, due 2/10/11

If it got really, really cold, ice covered the Earth, decreasing photosynthesis and respiration, then CO₂ built up and eventually warmed the Earth...

- what would happen to all the excess CO₂; where would it go (think inorganic)
- describe the chemistry

Homework 3

assigned 2/10/11, due 2/17/11

Long-term, gradual changes in global seafloor spreading rates have caused large, long-term (tens of millions of years) cycles of sea level rise and fall that have periodically covered inland continental areas with shallow seas. What climate impacts would changing rates of seafloor spreading have?

- describe the direct effects
- describe how the effects would be modified by feedbacks in the climate system

Homework 4

assigned 2/17/11, due 2/24/11

A) How/when did the Appalachian Mountains form and what is the relationship to the climate of the time?

B) What caused excess CO₂ in the atmosphere in the Cretaceous

- cite specific evidence

Homework 5

assigned 4/7/11, due 4/14/11

Describe what the Medieval Warm Period and Little Ice Age were, when they were, and the evidence for them. Were they global climate events? Summarize the evidence for their extent.

Homework 6

assigned 4/14/11, due 4/21/11

Why is it difficult to determine global sea level rise?

How much did sea level rise in the 20th century?

What were the largest sources of sea level rise?

What is the current rate of sea level rise?

What is the principal concern over coming decades (by century's end) with regard to rising sea level (what will the major problem be)?