

Essay Questions

1. What are the different scales Ecology is studied at?

Organismal ecology: physiology and behavior; observations on how animals adapt to its environment

Population ecology: looks at how the size and growth of a population changes thru various factors

Community ecology: groups of population in an area

Ecosystem ecology: the community and the impacts it has on weather etc.

Landscape ecology: the flow of energy from 1 ecosystem to the next

Global ecology: how everything comes together and impacts the biosphere

2. Explain why the Earth has seasons?

Seasons are determined by the tilt towards or away from the sun:

Tilt towards the sun – summer, more sun (longer days)

Tilt away from sun – winter, less sun (shorter days)

*Fall & Spring more sun blast on the equator

*Summer more sun blast on the north tropics

*Winter more sun blast on the south tropics

3. Why is it wet near the equator but dry at 30 degrees N or S? What is a Hadley cell?

The sun hits the equator of the earth and heats up air which causes it to rise causing condensation and resulting in rain; this “wet cloud” is known as the Hadley Cell. This is why during the summer seasons in the U.S. we will experience heavier rainfalls than in the winter, since the sun is hitting us more. For those in summer during our winter season they will be getting the rain since the sun is hitting them more causing condensation on their side.

This is also why the equator is very tropical rainforested and the more you go away from the equator it is dryer and deserty.