

Student name: _____

Which of the following levels of organization is/are correctly ordered?

Population, ecosystem, landscape, individual

Individual, population, community, ecosystem

Biosphere, landscape, individual, community

Ecosystem, landscape, region, population

None of the choices are correct.

Robert MacArthur's observations on the Warblers of North America indicate that they are fiercely competitive.

cannot coexist.

reduce competition by feeding during different times of the day.

reduce competition by feeding in different zones.

both are fiercely competitive and cannot coexist.

What is ecology?

The study of relationships between organisms and the environment

The study of animal and plant population interactions

The study of the abiotic portion of the environment

The study of the biosphere

The study of environmental change

Nalini Nadkarni's study of tropical and temperate rain forests determined that rain forests have nutrient rich soils.

the herbaceous layer determines the nutrient balance.

epiphyte mats contain a significant source of nutrients.

as one moves up the canopy, species richness decreases.

None of the choices are correct.

The highest level of ecological organization focuses on
the gene.

the biosphere.

warbler use of trees.

forests.

None of the choices are correct.

A population can be defined as

a group of individuals of a single species inhabiting a defined area.

an association of interacting species.

a group of individuals of a single species and all of the physical and chemical factors influencing them.

all of the organisms in a defined area.

None of the choices are correct.

Physiological ecologists study

nutrient cycling and energy flow through ecosystems.

exchanges of materials, energy, and organisms between communities.

physiological and anatomical mechanisms by which organisms deal with variation in their
physical and chemical environment.

physiological and anatomical mechanisms by which organisms deal with variation in their social
environment.

None of the choices are correct.

The pioneering work of Nalini Nadkarni in rain forest ecology revealed that epiphyte mats in some tropical forests contain nutrient quantities equal to the nutrient content of the canopy foliage.

the epiphyte mass in temperate rain forests may be four times the mass of leaves on their host tree.

in both temperate and tropical rain forests, trees obtain nutrients by extending roots into epiphyte mats.

All of the choices are correct.

Population ecologists do **not** study

reproductive ecology.

distribution and abundance.

energy flow.

extinction.

adaptation.

Ecologists study

communities.

ecosystems.

individual organisms.

populations.

All of the choices are correct.

An ecosystem is defined as

all the organisms that live in an area.

the physical environment with which organisms interact.

an association of interacting species.

all of the organisms that live in an area and the physical environment with which they interact.

all of the individuals of a single species that live in an area and the physical environment with which they interact.

According to Margaret Davis, who studied pollen contained within lake sediments, the vegetation landscape of the Appalachian Mountains from 12,000 years ago until approximately 100 years ago changed from

spruce→chestnut→beech.

chestnut→spruce→beech.

beech→spruce→chestnut.

spruce→beech→chestnut.

chestnut→beech→spruce.

Norris and colleagues found that warblers using different habitats did not have different carbon isotopes in the tissues.

true

false

Field studies and laboratory studies are mutually exclusive.

true

false

Temperate and tropical rain forest trees extract nutrients from epiphytic mats.

true

false

Stable isotope analysis uses variation in element masses to better understand ecological phenomena.

true

false

Margaret Davis' studies on lake pollen sediments indicate that the forests of eastern North America did not change with the changing climate.

true

false

Ecology can be defined as the study of the impact of human activity on the environment.

true

false

Ecology is a modern science of which ancient man had no knowledge.

true

false

_____ are aerial plants that obtain nutrients from trapped organic matter.

Populations changing genetically over time in response to variation in their environments is termed _____.

Which of the following statements below demonstrates the interactions between ecological areas and processes?

The smallest level, the biosphere, is where we can see exchanges of materials, energy, and organisms.

Landscape ecology, the largest level of organization, has all of the areas on Earth that support life.

Exchanges between ecosystems leads to the level of landscape ecology.

Geographic ecology includes the exchanges between ecosystems leading to the level of landscape ecology.

Even though ecologists would like to study isolated levels of the environment, that would be difficult since all levels are interconnected.

true

false

Which U.S. law protects endangered species?

Convention on International Trade in Endangered Species

The Endangered Species Act

The Species Protection Act

The Protection and Care of Species Act

Critical habitat protection for endangered species brings together the studies of adaptations of species, community through geographic levels of ecology, and global ecology.

true

false

Answer Key

Test name: CH1 Ecology Concepts and Applications E9

B

D

A

C

B

A

C

B

C

E

D

D

FALSE

FALSE

TRUE

TRUE

FALSE

FALSE

FALSE

Epiphytes

Evolution

C

TRUE

B

TRUE