

INKBIOLOGY FLASHCARDS

Ecology, populations and environmental change

Unit B20 · 21 cards · fronts and backs

Print double-sided, flipping on the long edge, and each answer lands behind its question. Cut along the card borders.

Definitions in mark-scheme wording, and the misconceptions that lose marks. These cards and each lesson's whole-lesson check run on the website with spaced-repetition scheduling, at inkphysics.co.uk/biology/flashcards.

DEFINITION

Define: Population.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Community.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Habitat.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Ecosystem.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Abiotic factor.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Biotic factor.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Carrying capacity.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Exponential growth.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

All the populations of all the species living in the same place at the same time.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

All the organisms of one species living in the same place at the same time, able to breed with one another.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

A community together with the non-living surroundings it interacts with, treated as one working unit.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

The place where an organism lives: a rock pool, a hedgerow, the gut of a cow.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

A living influence: competitors, predators, prey, parasites, pathogens, mates.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

A non-living influence: temperature, light, pH, water, oxygen, wind, soil depth.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Growth in which the population multiplies by a constant factor per unit time, so the number added per unit time keeps increasing.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

The population size that a particular environment can support over a sustained period, given the resources available in it.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Niche.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Competitive exclusion principle.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

SPOT THE ERROR

Say what is wrong with this claim:

Predators control the numbers of their prey:
that is what keeps a prey population in
check.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

Define: Saprobiont.

NUTRIENT CYCLES: NITROGEN, PHOSPHORUS AND EUTROPHICATION

DEFINITION

Define: Mycorrhiza.

NUTRIENT CYCLES: NITROGEN, PHOSPHORUS AND EUTROPHICATION

SPOT THE ERROR

Say what is wrong with this claim:

Eutrophication kills fish because the algae
are toxic.

NUTRIENT CYCLES: NITROGEN, PHOSPHORUS AND EUTROPHICATION

DEFINITION

Define: Succession.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP

DEFINITION

Define: Pioneer species.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP

DEFINITION

Two species cannot occupy the same niche in the same place indefinitely; the better competitor eliminates the other.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

The role a species plays in its community: all the conditions it can tolerate and all the resources it uses, including where it lives, what it eats, what eats it and when it is active.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

DEFINITION

An organism that obtains its energy from dead material by secreting enzymes onto it and absorbing the soluble products.

NUTRIENT CYCLES: NITROGEN, PHOSPHORUS AND EUTROPHICATION

SPOT THE ERROR

The graph offered as proof argues the other way: the predator peak arrives after the prey peak, which is what you would expect if the prey were driving the predator. The two drive each other, with the prey's own food supply usually setting the ceiling.

POPULATIONS AND THEIR LIMITS: WHAT STOPS THE NUMBERS RISING

SPOT THE ERROR

The fish suffocate. The algae die, bacteria decompose them, and those bacteria respire aerobically in enormous numbers, stripping the dissolved oxygen from the water. The killer is several steps past the bloom, and each step is a marking point.

NUTRIENT CYCLES: NITROGEN, PHOSPHORUS AND EUTROPHICATION

DEFINITION

A mutualistic association between a fungus and a plant root, in which the fungus increases the surface area for absorbing water and mineral ions and receives organic compounds in return.

NUTRIENT CYCLES: NITROGEN, PHOSPHORUS AND EUTROPHICATION

DEFINITION

The first species to colonise a bare surface, adapted to survive there when almost nothing else can.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP

DEFINITION

The change over time in the species occupying an area, in which each community alters the environment and makes it more suitable for the community that follows.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP

DEFINITION

Define: Seral stage.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP IT

DEFINITION

Define: Climax community.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP IT

DEFINITION

Define: Plagioclimax.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP IT

DEFINITION

Define: Deflected succession.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP IT

SPOT THE ERROR

Say what is wrong with this claim:

Woodland is the natural state of Britain, so the best thing conservation can do for a piece of land is leave it alone.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP IT

DEFINITION

The final, relatively stable community, which persists until something disturbs it.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP

DEFINITION

One identifiable community in the sequence; the whole sequence is a sere.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP

DEFINITION

Succession that has been diverted from its natural course by an ongoing external factor.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP

DEFINITION

A community held at a stage short of its climax by a repeated interference, usually human or from grazing animals.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP

SPOT THE ERROR

Chalk downland, lowland heath, hay meadow and coppiced woodland are among the richest habitats in Britain, and each exists because succession has been interrupted for centuries by grazing, cutting or burning. Leaving them alone turns them into scrub and then woodland.

SUCCESSION: HOW BARE ROCK BECOMES WOODLAND, AND WHY WE STOP