Cheat Sheet Chapter 7 BJU Science Notes

Adaptations Carnivore Community Competition Consumers Decomposers
Ecosystem Energy pyramid Environment Food chain Habitat
Herbivore hibernation individual instinct learned behavior
Migration Niche Omnivore Photosynthesis Population
Predator Prey Producers Producers Sun Symbiosis

Possible essay questions:

1. How are food webs different from food chains?
2. Why would animals migrate?
3. How does mimicry help animals avoid predators?

They may migrate because living conditions in one place is better than the other. Three reasons why animals migrate are: to __reproduce__ and raise their young, to find _food____ and __water__ , and to avoid ___extreme weather__ temperatures.

2. The also may hibernate: hibernation is when some animals__sleep___ all winter and wake up in the ___spring_____. During the __summer___ and __fall___, hibernating animals store extra body ___fat_____. This extra fat provides energy for the animal throughout the winter.
3. During hibernation, the body ____temperature____ and the ____breathing and heart__ rate __drops____.

C. Relationships: symbiosis: is a special __relationship_____ where two species ___interact_____ with one another over a long period of __time____. There are three types of symbiosis: ___parasitism_____, mutualism and ___commensalism____. The type of symbiosis where both partners benefit is called __mutualism_____.

1. parasite: is any __organism_____ that lives on or __in____ another organism and takes food __from__ the _organism___.
2. host: the __plant____ or ____animal____ that a _parasite____ lives on.

D. Behaviors

1. instinct: __basic____knowledge and ___skills____ needed for _survival___.
2. learned behavior: a __behavior_____ that cannot be ___inherited_____.

1. Adaptations are special _characteristics____ or skills that help a living thing ____survive___ in its environment_____.
2. photosynthesis: the ___process_____ that _plants____ make their own __food_____ by using the ___sun's____ light. In order for photosynthesis to occur, the plant needs, light, water and carbon dioxide.
3. adaptations that plants have for them to survive their environment:
    a. larger leaves: for plants that live in _shady places. This is so that it can collect more sunlight.
    b. Vines climbing on trees: benefit the vines so that it can get _higher_____ and receive more __sunlight____.
    c. Venus flytraps and sundews are _carnivorous___ plants. These plants do photosynthesize but they also eat insects and other small animals because the soil that they are planted in does not provide enough _nutrients___.
    d. Plants need to protect themselves because: the cannot __run_____ away when someone wants to chop it down or eat off of it! (LOL!) some ways that they protect themselves are: thorns, spines, stinging hairs, poisons
    e. Poisons are not always intended to kill an animal. It may be for the plant to ___taste___ bad.

B. Animal Adaptations: Animals play dead, use camouflage, disguse themselves, use mimicry and live in groups as means of protecting themselves from predators. The also :
    1. migrate: migration is the ___movement___ of a group of ____animals____ from one ___ecosystem____ to another.

A. Chains and Webs

1. Food chain: is the ___transfer___ of food_____ and _energy_____ through a community. A food chain always begins with a __producer_____.
2. Predator: an animal that __hunts____ and __eats____ other animals.
3. Prey: animals that are __hunted_____ by predators.
4. Food web: shows ___several_____ food webs linked together. They show how organisms ____depend____ upon one another.

B. Energy Pyramid: shows the way that energy moves through an ecosystem. The pyramid shows ___one _ food chain. The ___bottom____ of the pyramid has the, __producers_____ with the largest amount of energy as they receive their energy directly from the ___sun_____. At the top of the pyramid, there are fewer consumers because there is __less____ energy available for them. Only ____about 10%_____ of the energy gained is passed to the next organism on the food chain.

1. Competition: when __two_____ or more organisms are trying to use the____same_____ ___resources___. It can be between members of the __same_____ or __different_____ species.
2. Competition helps to keep the _ecosystem_____ ___balanced__. If there is a limit on certain type of prey, organisms may die off because of a lack of food. The opposite is true, there may be an abundance of a certain prey and that would make the population of the predator increase.

IV. Meeting Needs

A. Plant Adaptations

animal ___eats____, when it _____eats___ and how it protects itself and raises its young.

II. Roles in an Ecosystem

A. The Sun: The __sun_____ is the source of all energy. Plants use energy from ___sunlight___ to produce food in a process called __photosynthesis____. The plants primarily use this food to __grow____ and reproduce.

1. Producers: organisms that __make_____ their own _____food____. All life depends on _producers_____. Plants are producers.
2. Consumers: all living things that ___depend____ on producers_____ for food. Humans are _consumers_____.
   a. Herbivores: consumers that primarily eat plants_____.
   b. Omnivores: consumers that eat both _producers____ and other __consumers_____.
   c. Carnivores: consumers that primarily eat other _consumers_____.
   d. Scavengers: consumers that keep our ecosystem ___clean_. Most scavengers are __carnivores____. They eat remains of another carnivore's kill or road kill, or animals that have died from disease, (eew!)
   e. Decomposers: these organisms help to ___break__ down dead things and __wastes___ So that minerals return to the ___environment____. Most decomposers are ___bacteria____. Others are molds, mushrooms and earthworms.

(There is still one other consumer and these are insectivores. These organisms prey on insects primarily. An example of this is the giant anteater).

III. Energy in an Ecosystem

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I. Parts of an Ecosystem

1. Ecosystem: all the ____living organisms and their _environment____ In a certain section of the earth.
    a. Ecosystems vary in ___size_____ . They can be as large as a ___biome_____ or as small as a rotting tree stump.
    b. There are two parts of an ecosystem: they are _living things_____ and __nonliving___ things. The ___environment_____ is the ___nonliving part_____ and the living things include plants, animals as well as _____bacteria__ that are too small to be seen.
    c. The environment affects the kinds of ____organisms___ that can live in the ecosystem.
2. Individuals v. population: ___one___ living member of an ____ecosystem__ is an __individual_____. All of one type of organism in an ecosystem is considered a __population____.
    a. A species is a specific kind of organism.
3. Community v. population: A __community__ is __larger_____ than a population. A community includes __all____ the different populations that live in a particular ___ecosystem____.
    a. Habitat: a ____place____ to live.
    b. Niche: an __organisms_____ function or job in an ecosystem. A population can share a type of __habitat and food__, however they can never share the same ___niche____. A niche includes what an