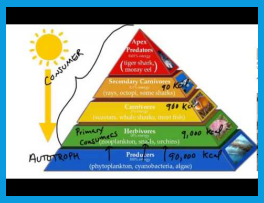
UNIT 3 SURVIVE THE 5

The Living World

CH 3-6

1

WHAT KIND OF PYRAMID IS THIS?



2

WHAT DOES A FIRST ORDER CONSUMER EAT?

- plants

3

WHAT DOES A SECOND ORDER CONSUMER EAT?

- meat

4

WHAT DOES A THIRD ORDER CONSUMER EAT?

- Whatever it wants… ☺

5

WHAT IS THE FIRST LAW OF THERMODYNAMICS?

- Conservation of energy- energy can be transformed from one form to another, but cannot be created or destroyed.

6

WHAT IS THE SECOND LAW OF THERMODYNAMICS?

- states that the total entropy of an isolated system always increases over time

7

WHAT IS "HIGH QUALITY ENERGY"

- organized or concentrated to perform useful work

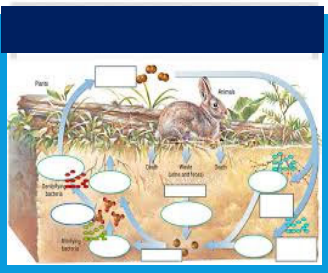
8

WHAT IS "LOW QUALITY ENERGY?"

- dispersed and disorganized energy and has little ability to do work

9

WHAT CYCLE IS THIS?



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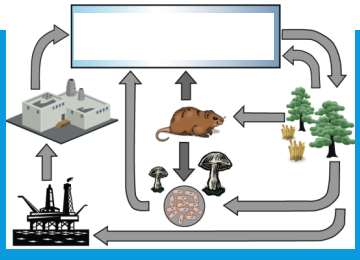
WHAT CYCLE IS THIS?



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HOW DOES HIGH QUALITY MATTER BECOME LOW QUALITY MATTER?

- It become less organized

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PUT THESE THINGS IN ORDER BASED ON THEIR QUALITY OF ENERGY FROM HIGH TO LOW….

- (note this is not the right order, its just a list)
- Electricity
- Wood
- Coal
- Uranium
- Heat

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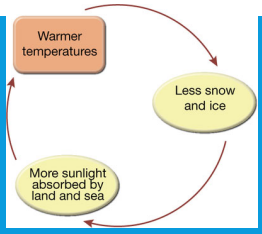
WHAT KIND OF FEEDBACK LOOP IS THIS?



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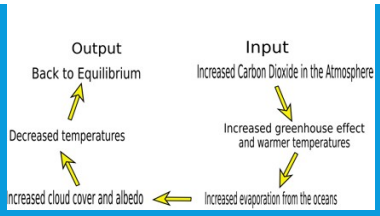

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WHAT IS THE SYNERGIST EFFECT?

- An effect arising between two or more agents, entities, factors, or substances that produces an effect greater than the sum of their individual effects

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WHAT IS THE LAW OF CONSERVATION OF MATTER?

- matter cannot be created or destroyed.

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WHAT IS A "HIGH THROUGHPUT" ECONOMY?

- Economic system in most advanced industrialized countries, in which ever–increasing economic growth is sustained by maximizing the rate at which matter and energy resources are used, with little emphasis on pollution prevention, recycling, reuse, reduction of unnecessary waste, and other forms of resource conservation

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WHAT IS A "LOW THROUGHPUT" ECONOMY?

- Economy based on working with nature by (1) recycling and reusing discarded matter, (2) preventing pollution, (3) conserving matter and energy resources by reducing unnecessary waste and use, (4) not degrading renewable resources, (5) building things that are easy to recycle, reuse, and repair.

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Chapter 5/6

What is a trophic level?

A trophic level is a feeding level

20

Chapter 5/6

Draw a trophic pyramid and label the levels.

21

Chapter 5/6

Identify an organism on each of the first 4 trophic levels.

First = plants, second = insects, third = bird, fourth = hawk that eats bird

22

Chapter 5/6

How much energy is passed up at every level?

23

Chapter 5/6

The majority of the energy lost is in the form of.

Waste Heat

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Chapter 5/6

What is the difference between a food chain and a food web?

Food chain is more simple and linear. Food web shows multiple interconnections.

25

Chapter 5/6

A more stable biome will have a _____ food web.

More diverse, more complex

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Chapter 5/6

Draw a three organism food chain on the board.

Grass – rabbit - fox

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Chapter 5/6

Put these in order from largest to smallest:
Organism
community
species
population
ecosystem

Ecosystem, community, population, species, organism

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Chapter 5/6

What is a biogeochemical cycle?

A repeating process that processes essential nutrients through both the living and the nonliving environment.

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Chapter 5/6

What is denitrification?

Turning Nitrates in the soil into atmospheric nitrogen

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Chapter 5/6

Elaborate on the tolerance ranges of generalist species vs specialist species

A generalist will have a greater tolerance range of temperature, habitat type etc.
A specialist will have a narrower tolerance range.

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Chapter 5/6

A fox is dead in the desert. What are two possible limiting factors that could have caused its death?

Lack of water, lack of food, lack of habitat, predator

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Chapter 5/6

What are 2 differences between an chemosynthetic autotroph and a photosynthetic autotroph.

Chemosynthetic – uses hydrogen sulfide to make energy and happens deep underwater in hydrothermal vents.
Photosynthetic – uses sunlight to make energy and happens where there is sunlinght.

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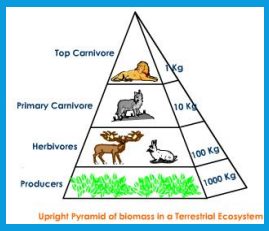
Chapter 5/6

Explain why this biomass pyramid has this shape



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Chapter 5/6

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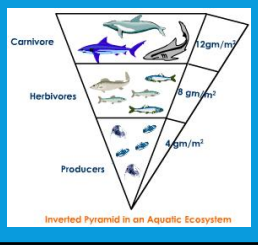

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Chapter 5/6

What is the difference between a biomass pyramid and a pyramid of numbers?

Biomass is mass(weight) and numbers is just the numbers of species.

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Chapter 5/6

What biome has very little stratification?

A desert, or a grassland. Stratification is layers: a rainforest will have a lot of layers.

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