

# Science study guide

## CFA #5: ECOSYSTEMS & ENERGY RESOURCES

What you should **definitely** know:

### 8.L.3.1 - ABIOTIC + BIOTIC FACTORS

Drought, limiting factors, abiotic factors, biotic factors, an organism's habitat vs. its niche.

### 8.L.3.2 - SYMBIOTIC RELATIONSHIPS

Specific types of organism interactions including predation, competition, mutualism, parasitism, commensalism, cooperation

### 8.L.3.3 - ENERGY FLOW (FOOD CHAINS + FOOD WEBS)

Producer, consumer, decomposer, herbivore, carnivore, omnivore, 10% rule, nitrogen cycle, carbon cycle, oxygen cycle.

### 8.P.2 - ENERGY RESOURCES

Renewable resources, nonrenewable resources, pros and cons of both types, fossil fuels (coal, oil, etc.), solar power/photovoltaic cells, reasons to increase our use of renewable resources instead of nonrenewable resources.

## Fill in the Blank

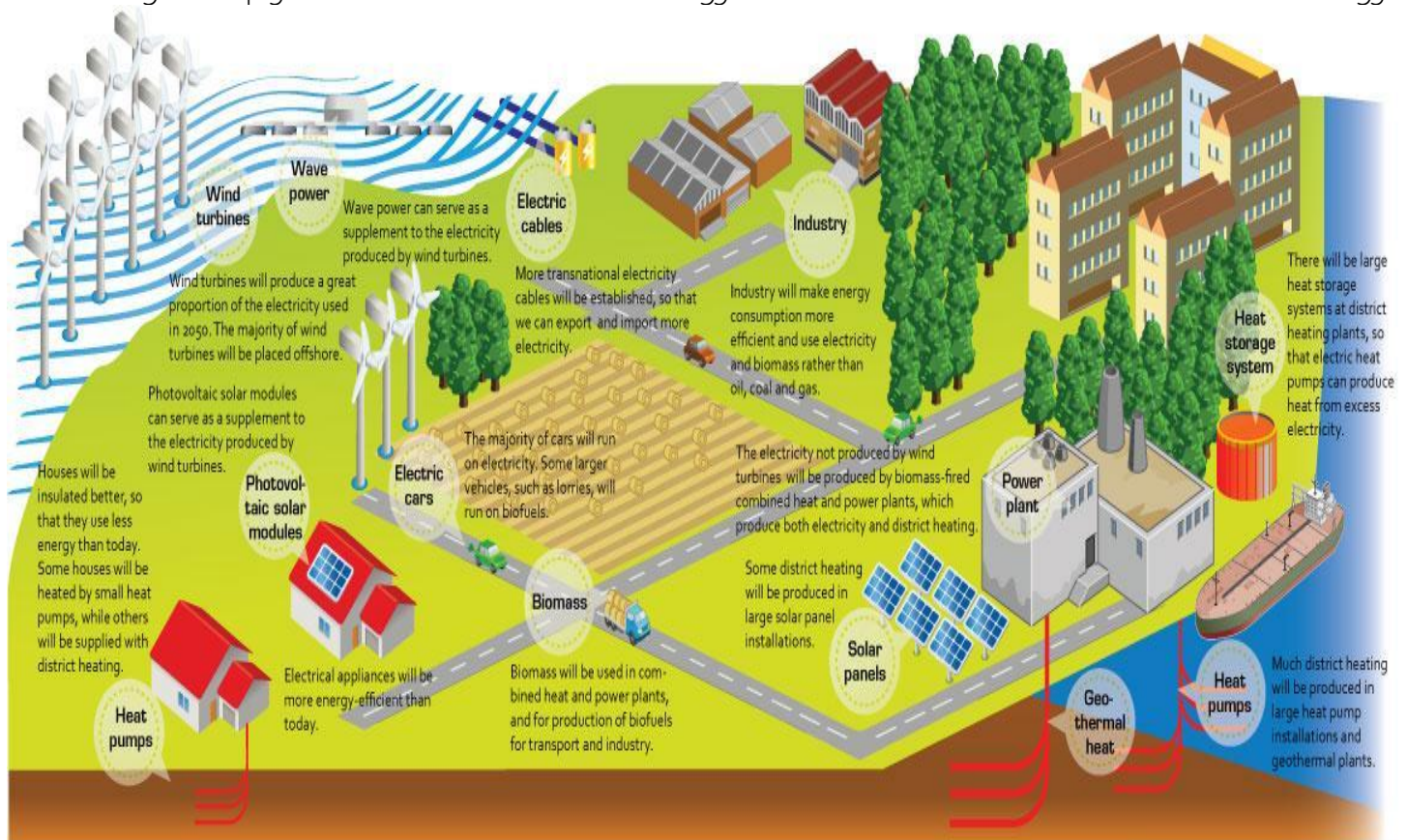
### WORD BANK

Drought	abiotic	predation	producers	consumers	decomposers	plants
Competition	resources	migrate	nuclear	renewable	nonrenewable	photosynthesis
Habitat	deforestation	predator	population	shelter	limiting factors	photovoltaic cells
Decrease	millions	plants	ecosystem	biotic prey	heterotroph	
Bacteria	increase	nonliving	living	animals		

- Long periods without rain are called \_\_\_\_\_.
- \_\_\_\_\_ factors in an ecosystem include things like plants, organisms and different interactions.
- In the first level in an energy pyramid, you will find \_\_\_\_\_.
- When 2 or more organisms fight/battle for the same resources like food, shelter and space, it is known as \_\_\_\_\_.
- Organisms that break down the dead remains or wastes of organisms are known as \_\_\_\_\_. In a food web, almost all top level consumers are broken down by this organism.
- Coal is a fossil fuel that is very cheap. It is considered a \_\_\_\_\_ resource.
- \_\_\_\_\_ are the organisms that take in carbon dioxide exhaled by humans and animals.
- The place an organism lives and has shelter is known as its \_\_\_\_\_.
- Areas like forests (terrestrial ecosystem), lakes (aquatic ecosystem) and coral reefs (marine ecosystem) provide the essential \_\_\_\_\_ that organisms need to survive.
- Animals often \_\_\_\_\_, or move to another location, to find food and/or better weather to survive.
- In the future, it is likely that the use of renewable resources will \_\_\_\_\_ and the use of nonrenewable resources will \_\_\_\_\_.
- The process of \_\_\_\_\_ increases the amount of oxygen in the atmosphere.
- When builders or construction workers remove trees from an area or forest, it is \_\_\_\_\_.
- If a predator population acts on a prey population, the \_\_\_\_\_ will DECREASE.
- If a predator population acts on a prey population, the \_\_\_\_\_ will stay the same or INCREASE.
- Nonrenewable resources take \_\_\_\_\_ or years to form.
- Items that further limit or decrease the carrying capacity in an ecosystem are \_\_\_\_\_.
- Solar energy, or power from the sun, uses \_\_\_\_\_ to convert sunlight into electricity.

19. The “house” of an organism is considered its habitat, or “\_\_\_\_\_”
20. Abiotic factors in an ecosystem are \_\_\_\_\_ and biotic factors are \_\_\_\_\_.
21. For the oxygen cycle \_\_\_\_\_ INCREASE the amount of O<sub>2</sub> in the air and \_\_\_\_\_ decrease the amount of O<sub>2</sub> in the air.
22. A(n) \_\_\_\_\_ is an environment that shares the same abiotic and biotic factors.
23. The act of hunting, killing and eating is called \_\_\_\_\_.
24. Organisms that eat other organisms, including plants and animals are considered \_\_\_\_\_ or heterotrophs.
25. Sunlight, water, air, temperature, shelter and weather are all considered \_\_\_\_\_ factors.
26. Competition between organisms will result in decreases in \_\_\_\_\_ size.
27. Another word for a consumer, or organism that eats other organisms is called a \_\_\_\_\_.
28. \_\_\_\_\_ is the organism responsible for converting nitrogen to a usable form that helps plants.
29. One of the negative impacts of \_\_\_\_\_ energy is that the water used increases temperature potentially harming animals in that ecosystem.
30. Hydropower, geothermal, wind, and solar are all forms of \_\_\_\_\_ energy.

Use the diagram help you understand how different energy sources are all connected to ensure we have energy!



### Last minute study tips!

- Study your fill in the blank section – once finished, make sure you’re in class to get the correct answers!
- Study your vocabulary flashcards!
- Remember our test taking strategies practiced during our launches and practice sessions.

**IF YOU CAN SUCCESSFULLY RECALL ALL OF THIS INFORMATION THEN YOU WILL DEFINITELY SCORE 85% OR HIGHER!**