

Study Notes for ESC110L Midterm Exam

1. According to the first ecological footprint lab, we learned that countries with ecological deficits generally are wealthier and more wasteful
2. Conversely, countries with ecological credits tend to have more land and natural resources and have less human populations per land area.
3. When our lab referred to per capita use in hectares, we know that a hectare is a land area that is slightly more than twice the area of an acre.
4. From the second ecological footprint lab, we learned that the sustainable average worldwide carbon footprint per person per year should be no more than 2 metric tons.
5. A metric ton is a unit of weight equal to 1,000 kilograms or 2,205 pounds.
6. From the food web lab, we know that a food web is a series of interconnected food chains.
7. From the food web lab, we learned that plant or vegetable foods in the web are known as producers because they produce food energy after absorbing sunlight through photosynthesis.
8. Within a food chain or food web, a plant-eating deer is identified as both a herbivore and a primary consumer.
9. From the lab safety video, we learned that classroom equipment within a lab may include a fire extinguisher, an eyewash station, a first aid kit, and a chemical spill kit.
10. We learned that for lab safety, items that should not be worn include loose clothing, dangling jewelry, open-toed shoes and long scarves.
11. For laboratory work or for life generally, deductive reasoning is when we go from specific to general (example statement, "That cow is eating grass, therefore All cows eat grass.")
12. Conversely an inductive reasoning goes from general to specific such as a statement "All cows eat grass, there is a cow, therefore it eats grass.
13. In conducting a science experiment, we refer to probability as the measurement of how likely something will occur.
14. In science, it is possible to repeated do the same thing with precision and still not do it accurately.
15. In science lab work, we like to use a control which is very similar to something being studied, but differs in a key factor or variable needed to see how that difference affects the experiment.
16. A hypothesis is an educated guess or testable explanation.
17. In a food chain that includes primary consumers, secondary consumers and tertiary consumers, a jungle lion would best be classified as a tertiary consumer because it may consume almost any other animal in the jungle.
18. The United States is an example of a wealthy country with a large ecological deficit.
19. Canada has large areas of vacant land and resources and would display an ecological credit.
20. Trophic levels or items in a food chain include producers such as grass, consumers such as rabbits, wolves, decomposers such as bacteria, and detritivores such as worms or vultures.

21. In the ionization lab, we learned that ions are chemicals that are either single or plural and that have either a positive or negative charge.
22. As an ion, hydrogen has a positive charge and will combine with a negative ion to form a neutral compound.
23. A positively charged hydrogen ion sodium (Na) combines with a negative ion chlorine (Cl) to form a salt known as NaCl or sodium chloride.
24. The correct names of all known elements or atoms are found in periodic tables.
25. In lab we indicated water as 2 atoms in ionic form of hydrogen combined with one atom of oxygen in ionic form.