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Earth Science 9 Review

Multiple Choice

1) Which of the following is **not** an Earth Sphere?	
a) The Hydrosphere	b) The Biosphere
c) The Pyrosphere	d) The Atmosphere

2) A food web differs from a food chain because	
a) Food webs show multiple predator prey relationships	b) Food webs share less information
c) Food webs do not show where the energy goes	d) Food webs only include different species of spiders

3) When large plastics breakdown from UV light, they form toxic	
a) Macroplastics	b) Carbon Dioxide
c) Glucose	d) Microplastics

4) In the biosphere, a rock is considered	
a) Cool	b) Biotic
c) Abiotic	d) Enerbiotic

5) Carbon Dioxide naturally leaves the atmosphere by	
a) Cellular Respiration	b) Photosynthesis
c) Elemental uptake	d) Nitrogen capture

6) The northern and southern hemispheres have opposite seasonal patterns due to	
a) Earth's tilt	b) Nuclear fusion in the sun
c) The moon's gravitational pull	d) The price of oil

7) A species that is moved to a new location with the possibility of outperforming native species is called	
a) Pioneer species	b) Keystone Species
c) Reese's Species	d) Invasive Species

8) Rock formed from magma is called	
a) Sedimentary rock	b) Igneous rock
c) Metamorphic rock	d) Mineral rock

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9) To become clouds, water molecules in the atmosphere undergo	
a) Precipitation	b) Condensation
c) Collection	d) Evaporation

10) The refrigerator compound banned across the world for destroying the ozone layer is called:	
a) ChloroFluoroCarbons	b) ChloroBromoCarbons
c) Carbon Dioxide	d) Dihydrogen Monoxide

11) If a prey species is overhunted:	
a) The prey are guaranteed to go extinct	b) Their predators' population will increase
c) Their predators' population will decrease	d) The top of the food chain will greatly benefit

12) Convection currents **do not** affect	
a) Air movement in the atmosphere	b) Ocean currents in the hydrosphere
c) Movement of the tectonic plates in Earth's Lithosphere/geosphere	d) The formation of the ozone layer in the stratosphere

13) An example of an environmental policy that incentivizes /rewards people being environmentally friendly is	
a) Taxing people when burning carbon products	b) Paying people for generating energy using solar panels
c) Removing a lane of traffic to reduce the number of cars on the road	d) Limiting the amount of energy supplied to each household

14) A type of pollution that directly affects the mating cries of animals is	
a) Carbon dioxide emissions	b) Deforestation
c) Sewage	d) Sound pollution

15) Deforestation occurs because of	
a) Construction needs	b) Agricultural space
c) Mining and resource extraction	d) All of the above

16) Climate change is	
a) The temporary change to the weather of an area	b) The loss of animals in a region of North America
c) The long-term change to the weather and temperature of a region	d) None of the above

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Matching/vocabulary

	An organism that eats both primary producers and animals
	The point in the atmosphere that marks the beginning of space
	A type of organism that is vital (super important) to the health of their ecosystem.
	When toxins or other materials build up inside an organism during its lifetime
	The treaty banning the use of CFCs
	An effort to return an environment back to its natural state before pollution
	The area in the solar system that is the optimal distance away from the sun to allow for life and liquid water
	The part of the hydrosphere that exists as a solid.
	An area of earth that receives similar weather and temperature patterns year-round
	When toxins or other particles increase in organisms as you move up the food chain

Bioaccumulation	Convection Current	Omnivore	Bioremediation	The Goldilocks zone
Keystone Species	Biome	Cryosphere	Albedo effect	The Montreal Protocol
Pioneer Species	Karman line	Carnivore	Biomagnification	The Paris Agreement

Diagram

Make a food chain of the following organisms. Include the names of each level of the food chain. Be sure to show/indicate the direction energy is travelling in the food chain!

Organisms: Alligator, Cricket, Decomposing fungi, grass, frog

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Short Answer

1) Why is carbon dioxide so impactful as a green house gas even though something like sulfur hexafluoride is 26 thousand times stronger at being a greenhouse gas?

2) What kinds of technologies have been created or are being researched to help slow down greenhouse gas emissions or pollution? **Describe** 3 different technologies.

3) A) What is the most vulnerable part of the food chain? **Explain.**

B) What is the most important part of the food chain for it to be stable? **Explain.**

4) Animals eat plants, which are directly needed to remove CO_2 from the atmosphere. Would a reduction in wild animals guarantee an increase in the plants needed to control the greenhouse gases?

5) How do oil spills effect the environment?

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Extending

Hurray! It is the future! A new technology is created that allows humans to teleport anywhere they want around the world. To use the machine, it requires 20 logs of wood, sulfur and fluorine, and some fresh water for every use. The machine generates lots of oil and sulfur hexafluoride in the process. If this technology existed, explain how it would affect the spheres of Earth. Additionally, think about ways the technology can be used, or decide if it is not worth the advantages.

Explain what is happening in the Arctic Ocean due to Greenhouse gases. Describe changes to Earth spheres, food chains/webs/ecosystems, and human habits. Detail what should or could be done in the future regarding this issue.