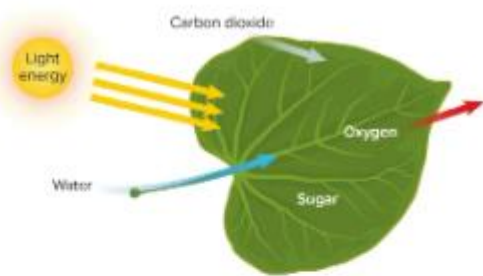


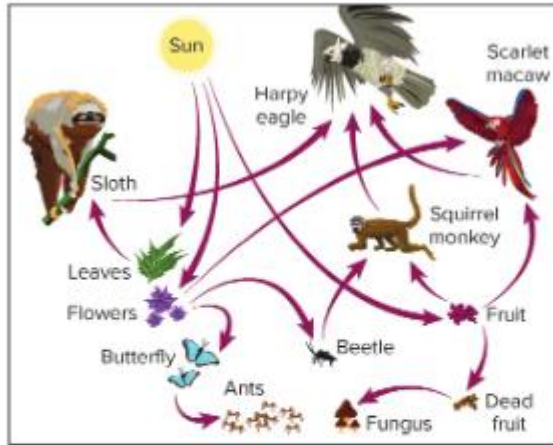
يُحظر تصوير أو تداول هذه الوثيقة، وسيتم اتخاذ الإجراءات القانونية اللازمة ضد من يخالف ذلك

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Grade 7 General Science End of Term 1 Exam Coverage Practice Questions (PDF)

1.	Define ecosystem.
2.	What is photosynthesis? What is cellular respiration?  Photosynthesis Carbon dioxide + Water $\xrightarrow{\text{Light energy}}$ Sugar + Oxygen $6\text{CO}_2 + 6\text{H}_2\text{O} \xrightarrow{\text{Light energy}} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$ Which is the best explanation of the change in energy shown in the model? A New energy is produced by plants during photosynthesis. B Large amounts of energy are released into the environment during photosynthesis. C Energy from sunlight is destroyed as it powers photosynthesis. D Energy input from the environment is stored in food molecules during photosynthesis.
3.	Where does photosynthesis occur? Where does cellular respiration occur?
4.	List the organisms that are photosynthetic. List the organisms that perform cellular respiration.
5.	Classify producers, consumers, and detritivores by their source of energy. Explain the relationship between consumers, producers and detritivores in an ecosystem.
6.	Define herbivore, carnivore, omnivore.
7.	What are the differences between a food chain, a food web and a food pyramid?

Analyze the food web. Which statement is correct?



- A** The model tracks the transfer of energy as energy flows in this ecosystem.
- B** The transfer of matter back into the environment occurs only at the detritivore level.
- C** The model shows the transfer of matter only.
- D** The decomposers in the model use matter but not energy for their life processes.

8. Describe the following cycles of matter:

Nitrogen cycle:

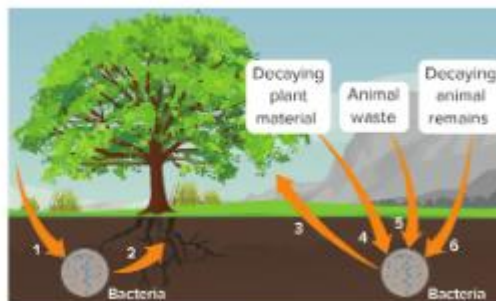
Carbon cycle:

Water cycle:

Oxygen cycle:

9. What is nitrogen fixation?

Keisha and her classmates created a model of the nitrogen cycle. Their diagram is shown below.





	What is the function of the bacteria shown in the model? A They prevent the nitrogen from harming the plants. B They remove the nitrogen from the soil. C They remove the oxygen from the soil. D They return the nitrogen to the system.																
10.	List reasons why populations would decrease. List reasons why populations increase.																
11.	Define extinct. What characterizes extinction?																
12.	What is a symbiotic relationship? What are different types of symbiotic relationships? Give specific examples.																
13.	Identify how populations interact in a community. Copy the chart into your Science Notebook, and write descriptions. <table border="1"> <thead> <tr> <th>Relationship</th><th>Description</th></tr> </thead> <tbody> <tr> <td>Predator-prey</td><td></td></tr> <tr> <td>Cooperative</td><td></td></tr> <tr> <td>Competitive</td><td></td></tr> <tr> <td>Symbiotic</td><td></td></tr> <tr> <td>a. Mutualism</td><td></td></tr> <tr> <td>b. Parasitism</td><td></td></tr> <tr> <td>c. Commensalism</td><td></td></tr> </tbody> </table>	Relationship	Description	Predator-prey		Cooperative		Competitive		Symbiotic		a. Mutualism		b. Parasitism		c. Commensalism	
Relationship	Description																
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14.	Provide examples for predator-prey, cooperative, and competitive relationships. Provide examples of relationships of mutualism, parasitism, and commensalism.																
15.	Compare and contrast ecological succession, primary succession and secondary succession. What is a climax community?																
16.	How do aquatic ecosystems change?																

17. After a devastating forest fire, small green sprouts begin to appear on the forest floor.



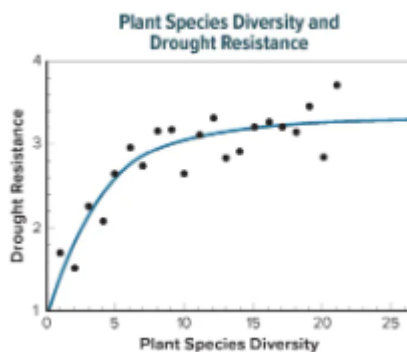
What is happening in the image?

- A The forest is undergoing primary succession.
- B The forest is undergoing secondary succession.
- C The green sprouts will not grow into full plants and the forest will not recover.
- D The forest is suffering from eutrophication.

18. How do scientists measure biodiversity?

19. What is biodiversity?

The graph shows more data from the second experiment described in the Investigation *Plant Productivity*. During the course of the experiment, the region experienced an extended drought. The researchers tracked the relationship between plant species diversity and the ecosystem's resilience to the drought. Values closer to zero on the vertical axis imply less resilience to the drought.



What conclusion can be made by analyzing the data from the graph?

- A As plant biodiversity increases, resistance to drought decreases.



	B As plant biodiversity increases, resistance to drought increases. C Ecosystems with lower biodiversity are better able to respond to changes. D Ecosystems with higher biodiversity are less able to respond to changes. What would happen to the biodiversity index of an ecosystem if a change in the ecosystem caused the number of species to stay the same and the total number of individuals to increase? A The biodiversity index would increase. B The biodiversity index would decrease. C The biodiversity index would stay the same. D The biodiversity index would increase, and then decrease.
20.	List threats to biodiversity and list strategies that can help maintain biodiversity. How are these related? What are measures that can be taken that protect biodiversity? Threat to Biodiversity Habitat Destruction _____ Overexploitation _____ Climate Change



Solution	Benefits	Constraints

21.

What are the levels of organization in an environment? Describe the relationship between individuals, populations, community, ecosystems and the biosphere.

22.

Define biome.

List the characteristics of the following biomes:

Desert

Grassland

Tropical Rain Forests

Temperate Rain Forests

Temperate Deciduous Forests

Taiga

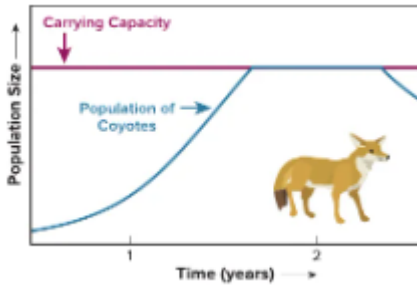
Tundra

23.

What are limiting factors? And how do they affect the population? What is the difference between biotic potential and carrying capacity? Define overpopulation.

Predict A drought decreases the growth of prairie grass. How might this affect the deer population that eats the grass as its main food source? In your Science Notebook, write your response or illustrate your answer using a graphic organizer.

Population Growth and Carrying Capacity



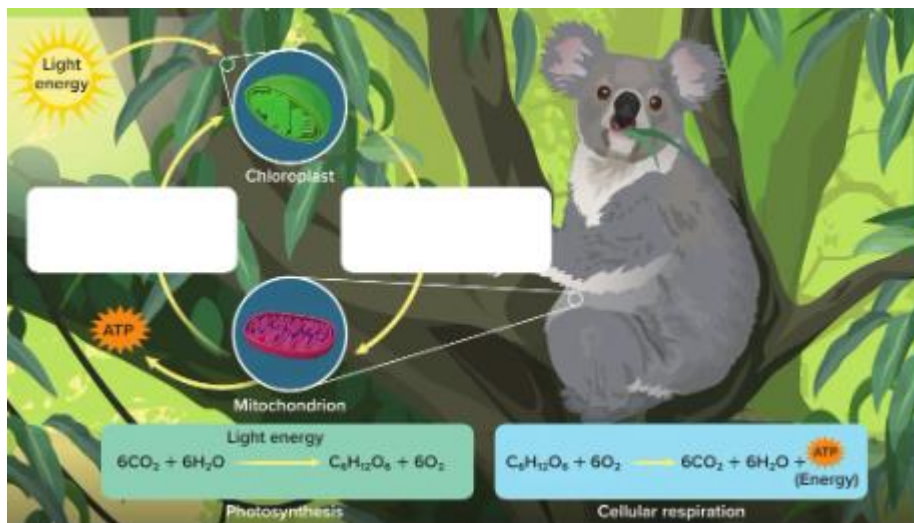
A population of coyotes lives in a habitat with plentiful food and no predators. Analyze the graph and interpret what is happening to their population size at the one year mark.

- A The population size is increasing.
- B The population size is decreasing.
- C The population size is remaining the same.
- D The population size cannot be inferred from the graph.

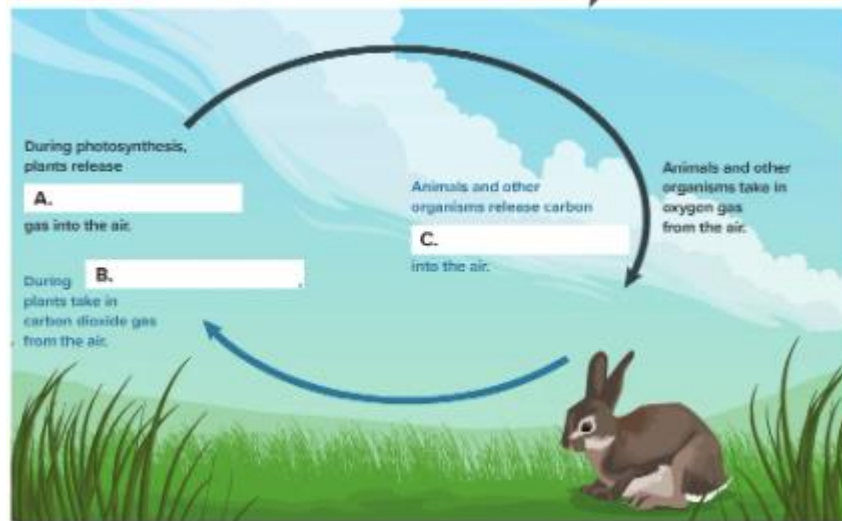
Which of the following explains what happened to the coyote population size when it reached its carrying capacity, and why?

- A The population size continued to increase because the ecosystem had not changed.
- B The population size stopped increasing because it had reached the largest number of coyotes that the ecosystem could support.
- C The population size became zero because the ecosystem could no longer support the coyote population.
- D The population size can no longer be inferred from the graph once carrying capacity is reached.

24. Compare photosynthesis and cellular respiration. What is required for photosynthesis? What are the products of photosynthesis? What is required for cellular respiration? What are the products of cellular respiration?



25. Label evaporation, condensation, and precipitation in the diagram below.



Which of the following is NOT true about systems that cycle matter?

- A Living things play a role in the cycling of matter.
 - B Matter changes form as it cycles.
 - C Some matter is destroyed as it cycles through the environment.
 - D Matter is constantly cycling through the environment.
26. In an energy pyramid, approximately 10 percent of the energy available in one trophic level is transferred to the next level. Which statement helps explain why this occurs?
- A Consumers eat both producers and other consumers.
 - B Organisms use most of the available energy to fuel their own life processes.
 - C Predators eat more organisms in their own level than organisms in other levels.
 - D Producers exist in only the lowest level of the pyramid.



27.	How does human activity cause disruptions in ecosystems? How are pollution and invasive species threats to biodiversity?
28.	 Evaluate the following possible solutions to combat the threats to biodiversity shown in the image above. Which of the following would be the least effective solution? - A regulating fishing - B bioremediation - C proper disposal of wastes - D reducing the use of harmful chemicals
29.	Define species.