2023-2024 Gr6 Science Benchmark Unit 1

Answer Key

Question 1. B - 1 Point

Standards

MS-LS1-6
Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

Question 2. C - 1 Point

Standards

MS-LS1-6
Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

Question 3. A - 1 Point | B - 1 Point | C - 0 Point | D - 0 Point

Standards

MS-LS1-7
Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.

Question 4. A - 1 Point

Standards

MS-LS1-7
Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.

Question 5. D - 1 Point

Standards

MS-LS2-3
Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

Question 6. A - 2 Points

Standards

MS-LS2-3
Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

Question 7. C - 1 Point

Standards

MS-LS2-3
Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

Question 8. A - 1 Point | B - 1 Point | C - 0 Point | D - 1 Point

Standards

MS-LS2-3
Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

Question 9. A - 2 Points

Standards

MS-LS2-1
Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

Question 10. D – 2 Points

Standards

MS-LS2-1
Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

Question 11. A – 1 Point

Standards

MS-LS2-1
Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

Question 12.

Drag and drop the relationship to the example.

mutualism | parasitism

heartworm in a dog — *parasitism*

sea anemones help crabs fight off predators, and eat leftovers from the crabs' meals — *mutualism*

• 2 Points

Standards

MS-LS2-2
Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

Question 13. A – 1 Point

Standards

MS-LS2-2
Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

Question 14. C – 1 Point

Standards

MS-LS2-4
Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

Question 15. B – 1 Point

Standards

MS-LS2-4
Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

Question 16. O - 2 Points

Standards

MS-LS2-4
Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

Question 17. A - 1 Point

Standards

MS-LS2-5
Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

Question 18. A - 1 Point | B - 1 Point | C - 1 Point | D - 0 Point | E - 1 Point

Standards

MS-LS2-5
Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

Question 19. O - 2 Points

Standards

MS-LS2-5
Evaluate competing design solutions for maintaining biodiversity and ecosystem services.