

2023–2024 Gr8 Science Benchmark Unit 4

Answer Key

Question 1. C – 1 Point

Standards

MS-PS4-1

Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.

Question 2. C – 1 Point

Standards

MS-PS4-3

Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.

Question 3. D – 1 Point

Standards

MS-PS4-1

Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.

Question 4. D – 1 Point

Standards

MS-PS4-2

Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.

Question 5.

Response 1: O – 3 Points

Response 2: O – 2 Points

Standards

MS-PS4-1

Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.

Question 6. B – 1 Point

Standards

MS-PS4-1

Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.

Question 7. B – 1 Point

Standards

MS-PS4-1

Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.

Question 8. C – 1 Point

Standards

MS-PS4-2

Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.

Question 9.

Response 1: 0 – 2 Points

Response 2: 0 – 2 Points

Standards

MS-PS4-2

Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.

Question 10. 0 – 3 Points

Standards

MS-PS4-3

Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.

Question 11. B – 1 Point

Standards

MS-PS4-3

Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.

Question 12. A – 1 Point

Standards

Question 13. B – 1 Point

Standards

MS-PS4-3

Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.

Question 14. D – 1 Point

Standards

Question 15. D – 1 Point

Standards

MS-LS4-4

Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.

Question 16. B – 1 Point

Standards

MS-LS4-4

Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.