2023-2024 Gr7 Science Benchmark Unit 4

Answer Key

Question 1.

Figure 1 shows the rock layers and fossils found in a particular outcropping.

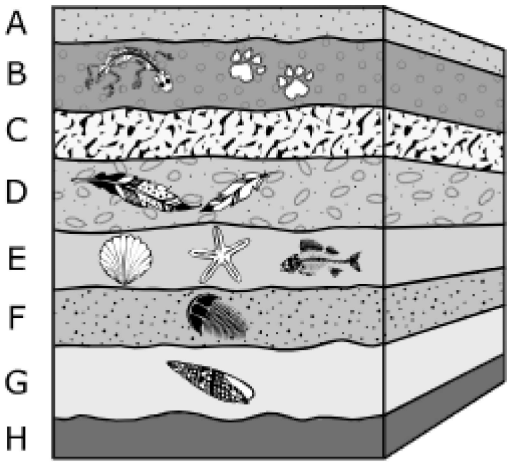

Figure 1. Outcropping 1

Figure 2 shows the rock layers and fossils in a second outcropping.

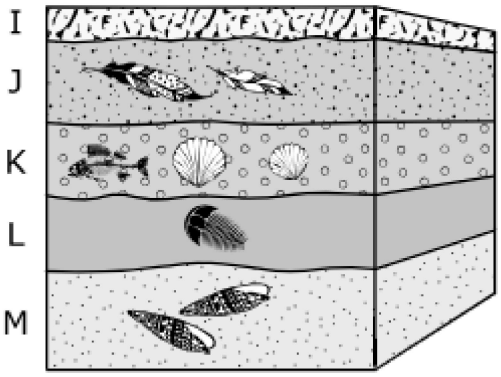

Figure 2. Outcropping 2

Complete the sentences to compare the two outcroppings.

Drag the correct answer to each box. Not all answers will be used.

B	D	J	L	fossils	rocks	differe	similar

Layer [D] and layer [J] are the same age. Each layer contains the same type of [fossils] because they formed during [similar] time periods.

• 4 Points

Standards

MS-ESS1-4

Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.

Question 2. C – 1 Point

Standards

MS-ESS1-4
Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.

Question 3. C – 1 Point

Standards

MS-ESS1-4
Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.

Question 4. D – 1 Point

Standards

MS-ESS2-1
Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

Question 5. B – 1 Point

Standards

MS-ESS2-1
Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

Question 6. A – 1 Point

Standards

MS-ESS2-1
Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

Question 7. D – 1 Point

Standards

MS-ESS2-2
Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

Question 8. O – 4 Points

Standards

MS-ESS2-2
Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

Question 9. C – 1 Point

Standards

MS-ESS2-3
Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.

Question 10.

Response 1: A – 1 Point

Response 2: A – 1 Point

Response 3: B – 1 Point

Standards

MS-ESS2-3

Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.

Question 11. C – 1 Point

Standards

MS-ESS3-1

Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.

Question 12. A – 1 Point

Standards

MS-ESS3-1

Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.

Question 13. A – 1 Point

Standards

MS-ESS3-1

Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.

Question 14. B – 1 Point

Standards

MS-ESS3-2

Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

Question 15. C;E;F – 3 Points

Standards

MS-ESS3-2

Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

Question 16. O – 2 Points

Standards

MS-ESS3-2

Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

Question 17. B - 1 Point

Standards

MS-PS1-4
Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.

Question 18. C - 1 Point

Standards

MS-PS1-4
Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.