Coherence and Alignment Among Science Curriculum, Instruction, and Assessment (CASCIA) Project

Grade 8 Unit 3: Understanding Earth History and the Origin of Species

Task 2 Prompt 3 Scored and Annotated Anchor Set

May 2025

Grade 8 Unit 3: Understanding Earth History and the Origin of Species, Task 2 Prompt 3 Scored and Annotated Anchor Set was developed with funding from the U.S. Department of Education under the Competitive Grants for State Assessments Program CFDA 84.368A. The contents of this paper do not represent the policy of the U.S. Department of Education, and no assumption of endorsement by the Federal government should be made.

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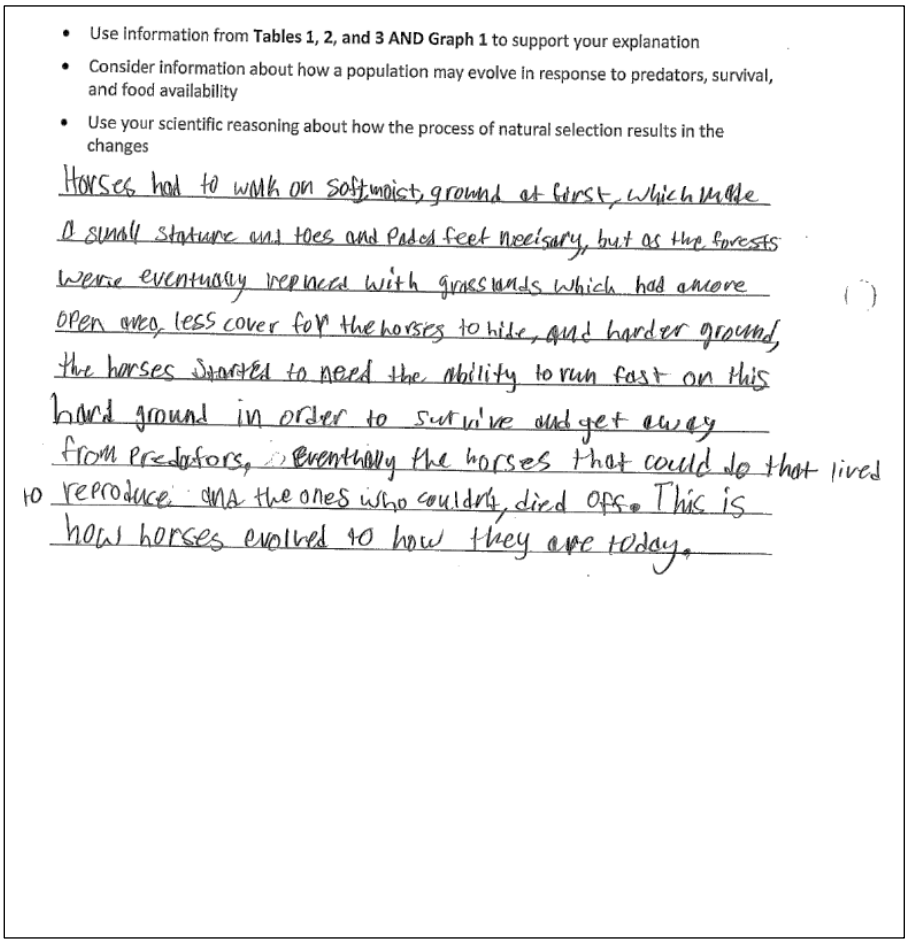
CASCIA Grade 8 EOU Assessment 3 Task 2: Hold Your Horses!
Prompt 3 Score Point 3

Prompt 3 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 3	No aspect of the response is correct	Identifies **one (1)** of the **three (3)** aspects	Identifies **two (2)** of the **three (3)** aspects	Response includes the following aspects: • Relates the changing environment to the changes in the animals' anatomy • Makes connections to specific structures, such as the height and toe shape to specific environmental conditions • Describes how natural selection and/or adaptations led to improved chances for survival	NA

Score Point 3 (3/3 aspects met)

- Relates the changing environment to the changes in the animals' anatomy.
- Makes connections to specific structures to specific environmental conditions.
- Describes how natural selection and/or adaptations led to improved chances for survival.



- Use information from **Tables 1, 2, and 3 AND Graph 1** to support your explanation
- Consider information about how a population may evolve in response to predators, survival, and food availability
- Use your scientific reasoning about how the process of natural selection results in the changes

Horses had to walk on soft moist ground at first, which made a small stature and toes and padded feet necessary, but as the forests were eventually replaced with grasslands which had a more open area, less cover for the horses to hide, and harder ground, the horses started to need the ability to run fast on this hard ground in order to survive and get away from predators, eventually the horses that could do that lived to reproduce and the ones who couldn't died off. This is how horses evolved to how they are today.

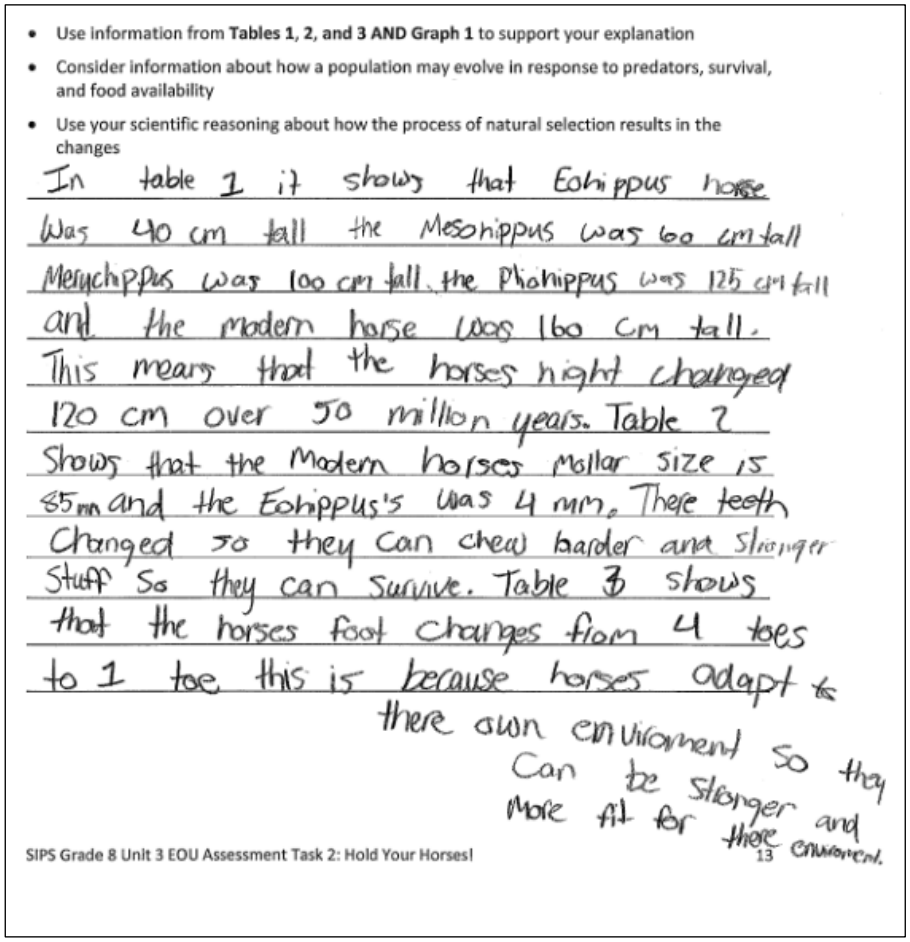
CASCIA Grade 8 EOU Assessment 3 Task 2: Hold Your Horses!
Prompt 3 Score Point 2

Prompt 3 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 3	No aspect of the response is correct	Identifies **one (1)** of the **three (3)** aspects	Identifies **two (2)** of the **three (3)** aspects	Response includes the following aspects: • Relates the changing environment to the changes in the animals' anatomy • Makes connections to specific structures, such as the height and toe shape to specific environmental conditions • Describes how natural selection and/or adaptations led to improved chances for survival	NA

Score Point 2 (2/3 aspects met)

- Does **NOT** relate the changing environment to the changes in the animals' anatomy.
- Makes connections to specific structures, such as the height and toe shape, to specific environmental conditions (i.e., ". . . teeth changed so they can chew harder and stronger stuff. . .").
- Describes how natural selection and/or adaptations led to improved chances for survival (i.e., ". . . horses adapt. . . so they can be. . .more fit for their environment.").



- Use information from **Tables 1, 2, and 3 AND Graph 1** to support your explanation
- Consider information about how a population may evolve in response to predators, survival, and food availability
- Use your scientific reasoning about how the process of natural selection results in the changes

In table 1 it shows that Eohippus horse Was 40 cm tall the Mesohippus was 60 cm tall Merychippus was 100 cm tall, the Pliohippus was 125 cm tall and the modern horse was 160 cm tall. This means that the horses might changed 120 cm over 50 million years. Table 2 Shows that the Modern horses molar size is 85mm and the Eohippus's was 4 mm. There teeth Changed so they can chew harder and stronger Stuff So they can survive. Table 3 shows that the horses foot changes from 4 toes to 1 toe this is because horses adapt to there own environment so they Can be stronger and more fit for there environment.

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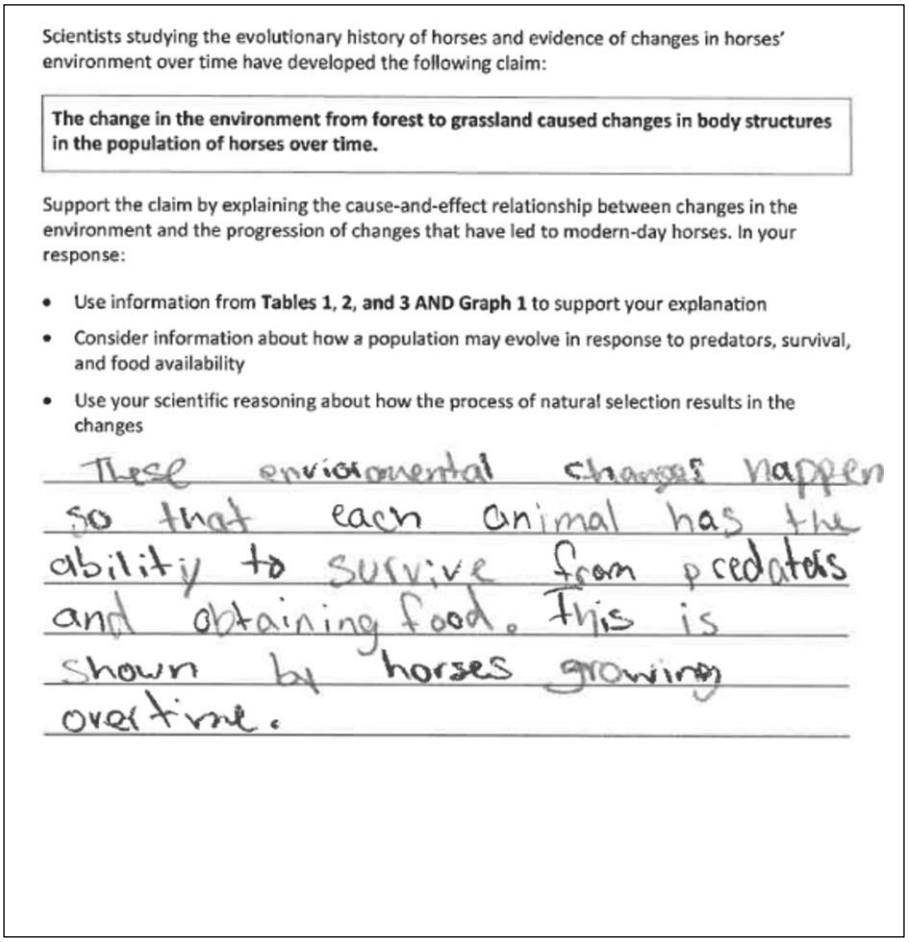
CASCIA Grade 8 EOU Assessment 3 Task 2: Hold Your Horses!
Prompt 3 Score Point 1

Prompt 3 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 3	No aspect of the response is correct	Identifies **one (1)** of the **three (3)** aspects	Identifies **two (2)** of the **three (3)** aspects	Response includes the following aspects: • Relates the changing environment to the changes in the animals' anatomy • Makes connections to specific structures, such as the height and toe shape to specific environmental conditions • Describes how natural selection and/or adaptations led to improved chances for survival	NA

Score Point 1 (1/3 aspects met)

- Relates the changing environment to changes in the animals' anatomy (i.e., ". . .ability to survive from predators and obtaining food. . . horses growing over time.").
- Does **NOT** make connections to specific structures to specific environmental conditions.
- Does **NOT** include natural selection or adaptations in the answer.



Scientists studying the evolutionary history of horses and evidence of changes in horses' environment over time have developed the following claim:

The change in the environment from forest to grassland caused changes in body structures in the population of horses over time.

Support the claim by explaining the cause-and-effect relationship between changes in the environment and the progression of changes that have led to modern-day horses. In your response:

- Use information from **Tables 1, 2, and 3 AND Graph 1** to support your explanation
- Consider information about how a population may evolve in response to predators, survival, and food availability
- Use your scientific reasoning about how the process of natural selection results in the changes

These environmental changes happen so that each animal has the ability to survive from predators and obtaining food. This is shown by horses growing over time.

CASCIA Grade 8 EOU Assessment 3 Task 2: Hold Your Horses!

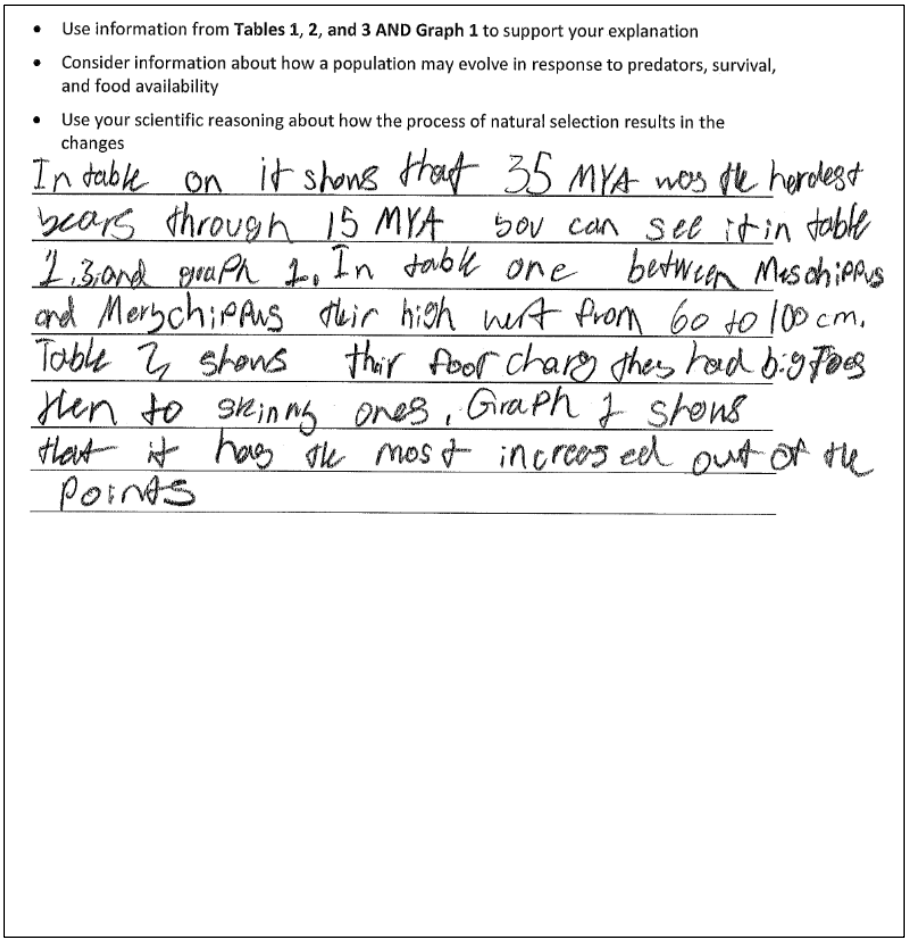
Prompt 3 Score Point 0

Prompt 3 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 3	No aspect of the response is correct	Identifies **one (1)** of the **three (3)** aspects	Identifies **two (2)** of the **three (3)** aspects	Response includes the following aspects: • Relates the changing environment to the changes in the animals' anatomy • Makes connections to specific structures, such as the height and toe shape to specific environmental conditions • Describes how natural selection and/or adaptations led to improved chances for survival	NA

Score Point 0 (0/3 aspects met)

- Does **NOT** relate the changing environment to the changes in the animals' anatomy (i.e., the answer contains no reference to environment changing).
- Does **NOT** make connections to specific structures' shapes to specific environmental conditions (i.e., the answer restates structures without any reference to their advantages).
- Does **NOT** describe how natural selection and/or adaptations led to improved chances for survival.



- Use information from **Tables 1, 2, and 3 AND Graph 1** to support your explanation
- Consider information about how a population may evolve in response to predators, survival, and food availability
- Use your scientific reasoning about how the process of natural selection results in the changes

In table on it shows that 35 MYA was the hardest bears through 15 MYA you can see it in table 1, 3 and graph 1. In table one between Mesohippus and Merychippus their high was from 60 to 100 cm. Table 2 shows their food chart they had big toes then to skinny ones. Graph 1 shows that it has the most increased out of the points