



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

Grade 8 Unit 2: Gravity and Motion of Objects in the Solar System

Task 3 Prompt 1 Part C Scored and Annotated Anchor Set

March 2025

Grade 8 Unit 2: Gravity and Motion of Objects in the Solar System, Task 3 Prompt 1 Part C 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 2 Task 3: Earth's Solar System

Prompt 1 Part C Score Point 2

Prompt 1 Part C Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 1 Part C.	No aspect of the response is correct	Response includes one (1) of the two (2) aspects	Response includes the following aspects: - A planet with a much lower gravitational pull (e.g., Pluto) - Evidence for lower gravitational pull from Table 1	NA	NA

Score Point 2 (2/2 aspects met)

- Part C
 - Includes a planet with a much lower gravitational pull (e.g., Pluto).
 - Includes evidence from Table 1 to support their response (i.e., The student response includes, "... gravitational pull of 0.7 . . .").

Part C.

If you were to land a spacecraft on the surface of a planet, you would want to know your rate of descent.

Which object listed in Table 1 would be **most likely** to land like a floating feather with a low rate of descent? Why?

A spacecraft would land the gentlest on Pluto, since Pluto has a gravitational pull of 0.7, the least of all 9 objects.

CASCIA Grade 8 EOU Assessment 2 Task 3: Earth's Solar System

Prompt 1 Part C Score Point 1

Prompt 1 Part C Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 1 Part C.	No aspect of the response is correct	Response includes one (1) of the two (2) aspects	Response includes the following aspects: - A planet with a much lower gravitational pull (e.g., Pluto) - Evidence for lower gravitational pull from Table 1	NA	NA

Score Point 1 (1/2 aspects met)

- Part C
 - Includes a planet with a much lower gravitational pull (e.g., Pluto).
 - Does **NOT** include evidence from Table 1 to support their response.

NOTE: The student response compares 'lightness' of both the feather and Pluto, rather than referring to the gravitational pull data.

Part C.

If you were to land a spacecraft on the surface of a planet, you would want to know your rate of descent.

Which object listed in Table 1 would be most likely to land like a floating feather with a low rate of descent? Why?

Pluto because it is the 'lightest'
and the feather is really light.

CASCIA Grade 8 EOU Assessment 2 Task 3: Earth's Solar System

Prompt 1 Part C Score Point 0

Prompt 1 Part C Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 1 Part C.	No aspect of the response is correct	Response includes one (1) of the two (2) aspects	Response includes the following aspects: - A planet with a much lower gravitational pull (e.g., Pluto) - Evidence for lower gravitational pull from Table 1	NA	NA

Score Point 0 (0/2 aspects met)

- Part C
 - Does **NOT** include a planet with a much lower gravitational pull (e.g., Pluto).
 - Does **NOT** include evidence from Table 1 to support their response.

Part C.

If you were to land a spacecraft on the surface of a planet, you would want to know your rate of descent.

Which object listed in Table 1 would be **most likely** to land like a floating feather with a low rate of descent? Why?

Yes you would like to know how fast you are descending because you could crash. Saturn because it is a gas planet.