



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

Grade 8 Unit 1: Forces and Energy

Task 3 Prompt 2 Scored and Annotated Anchor Set

August 2024

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CASCIA Grade 8 EOU Assessment 1 Task 3: Roller Coaster Thrills

Prompt 2 Score Point 3

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) of the three (3) aspects	Response includes two (2) of the three (3) aspects	Response includes the following aspects: - Gravitational forces exist between all objects - Earth's gravitational attraction is exceptionally large compared to the attraction between any other two objects on Earth - Because the gravitational attraction is so large between an object and the Earth, the attraction between smaller objects is not observed	NA

Score Point 3 (3/3 aspects met)

- Includes that gravitational forces exist between all objects.
- Includes that Earth's gravitational attraction is exceptionally large compared to the attraction between any other two objects on Earth (i.e., The student's answer includes, "... they have to be big like the Earth to be seen.").
- Includes that because the gravitational attraction is so large between an object and the Earth, the attraction between smaller objects is not observed.

Prompt 2

Some people think only massive objects have gravity. They also think that there is no gravitational force of attraction between objects such as a pencil and a car because they do not observe a pencil being attracted toward a car.

Explain why the gravitational force of attraction between a pencil and a car is not observable. In your explanation, include information about the **mass of objects** and **gravitational force**.

all object have a gravitational force but they are too small to be seen they have to be big like the earth to be seen.

CASCIA Grade 8 EOU Assessment 1 Task 3: Roller Coaster Thrills

Prompt 2 Score Point 2

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) of the three (3) aspects	Response includes two (2) of the three (3) aspects	Response includes the following aspects: - Gravitational forces exist between all objects - Earth's gravitational attraction is exceptionally large compared to the attraction between any other two objects on Earth - Because the gravitational attraction is so large between an object and the Earth, the attraction between smaller objects is not observed	NA

Score Point 2 (2/3 aspects met)

- Includes that gravitational forces exist between all objects (i.e., Although not stated explicitly, the student does say, "... since the car has mass, it has gravity.>").
- Includes that Earth's gravitational attraction is exceptionally large compared to the attraction between any other two objects on Earth.
- Does **NOT** include that because the gravitational attraction is so large between an object and the Earth, the attraction between smaller objects is not observed.

Prompt 2

Some people think only massive objects have gravity. They also think that there is no gravitational force of attraction between objects such as a pencil and a car because they do not observe a pencil being attracted toward a car.

Explain why the gravitational force of attraction between a pencil and a car is not observable. In your explanation, include information about the **mass of objects** and **gravitational force**.

The mass of the earth is huge and that's why its gravitational pull is larger than a car but since the car has mass it has gravity

CASCIA Grade 8 EOU Assessment 1 Task 3: Roller Coaster Thrills

Prompt 2 Score Point 1

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) of the three (3) aspects	Response includes two (2) of the three (3) aspects	Response includes the following aspects: - Gravitational forces exist between all objects - Earth's gravitational attraction is exceptionally large compared to the attraction between any other two objects on Earth - Because the gravitational attraction is so large between an object and the Earth, the attraction between smaller objects is not observed	NA

Score Point 1 (1/3 aspects met)

- Includes that gravitational forces exist between all objects (i.e., The student states, "All objects have gravitational force.").
- Does **NOT** include that Earth's gravitational attraction is exceptionally large compared to the attraction between any other two objects on Earth.
- Does **NOT** include that because the gravitational attraction is so large between an object and the Earth, the attraction between smaller objects is not observed.

Prompt 2

Some people think only massive objects have gravity. They also think that there is no gravitational force of attraction between objects such as a pencil and a car because they do not observe a pencil being attracted toward a car.

Explain why the gravitational force of attraction between a pencil and a car is not observable. In your explanation, include information about the **mass of objects** and **gravitational force**.

All objects have gravitational force. But you can't
see it because it's so small of a force.

CASCIA Grade 8 EOU Assessment 1 Task 3: Roller Coaster Thrills

Prompt 2 Score Point 0

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) of the three (3) aspects	Response includes two (2) of the three (3) aspects	Response includes the following aspects: - Gravitational forces exist between all objects - Earth's gravitational attraction is exceptionally large compared to the attraction between any other two objects on Earth - Because the gravitational attraction is so large between an object and the Earth, the attraction between smaller objects is not observed	NA

Score Point 0 (0/3 aspects met)

- Does **NOT** include that gravitational forces exist between all objects.
- Does **NOT** include that Earth's gravitational attraction is exceptionally large compared to the attraction between any other two objects on Earth (i.e., The student states that the gravitational force is strong on Earth, but also that "The mass doesn't matter against the gravitational pull . . .").
- Does **NOT** include that because the gravitational attraction is so large between an object and the Earth, the attraction between smaller objects is not observed.

Prompt 2

Some people think only massive objects have gravity. They also think that there is no gravitational force of attraction between objects such as a pencil and a car because they do not observe a pencil being attracted toward a car.

Explain why the gravitational force of attraction between a pencil and a car is not observable. In your explanation, include information about the **mass of objects** and **gravitational force**.

*The mass doesn't matter Against the Gravitational Pull
Because the gravitational force is the strongest
thing on Earth Because No matter what you will
Stay on the ground*