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

Grade 8 Unit 4: Providing Solutions to Problems Using Simple Wave Properties

Task 2 Prompt 1 Part C Scored and Annotated Anchor Set

May 2025

Grade 8 Unit 4: Providing Solutions to Problems Using Simple Wave Properties, Task 2 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.

CASCIA Grade 8 EOU Assessment 4 Task 2: Color My World

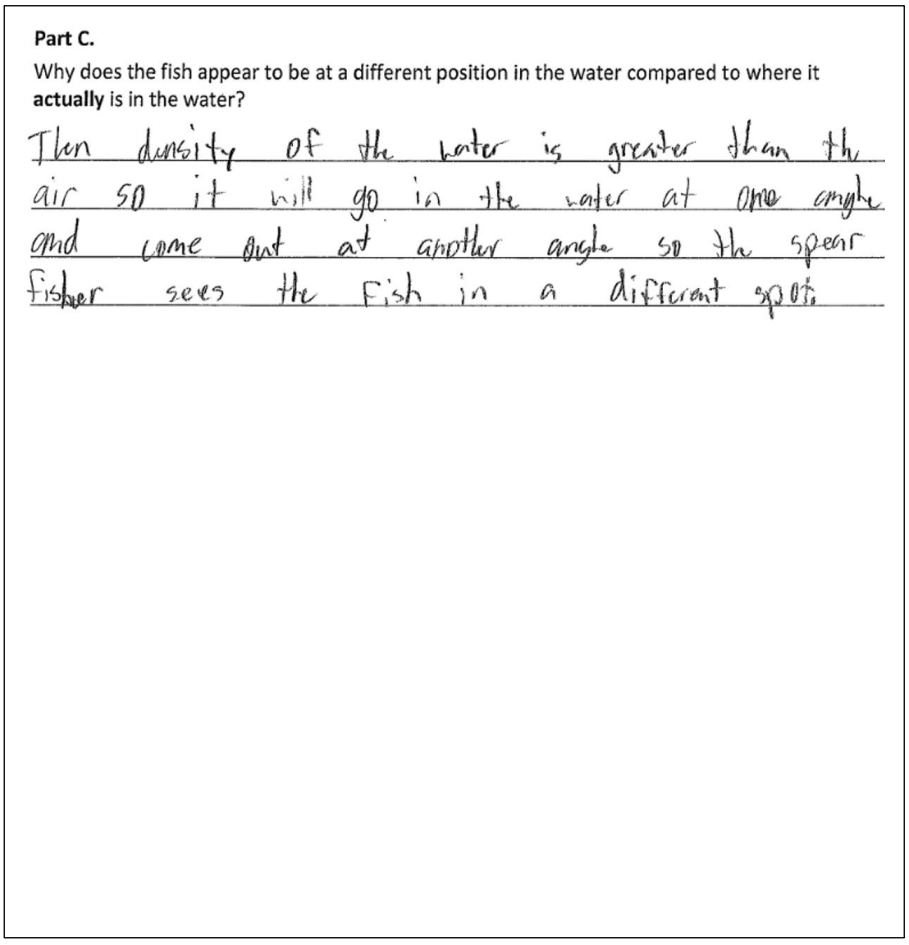
Prompt 1 Part C Score Point 2

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: • Use of the model to explain what the spear fisher sees • Supports explanation with the relationship between the density of the medium and its effect on the speed **or** direction light travels	NA	NA

Score Point 2 (2/2 aspects met)

- Part C
  - Uses the model to explain what the spear fisher sees (i.e., includes both the fish and the spear fisher).
  - Supports the explanation with the relationship between the density of the medium and its effect on the speed at which light travels.



Part C.

Why does the fish appear to be at a different position in the water compared to where it **actually** is in the water?

Then density of the water is greater than the air so it will go in the water at one angle and come out at another angle so the spear fisher sees the fish in a different spot.

CASCIA Grade 8 EOU Assessment 4 Task 2: Color My World

Prompt 1 Part C Score Point 1

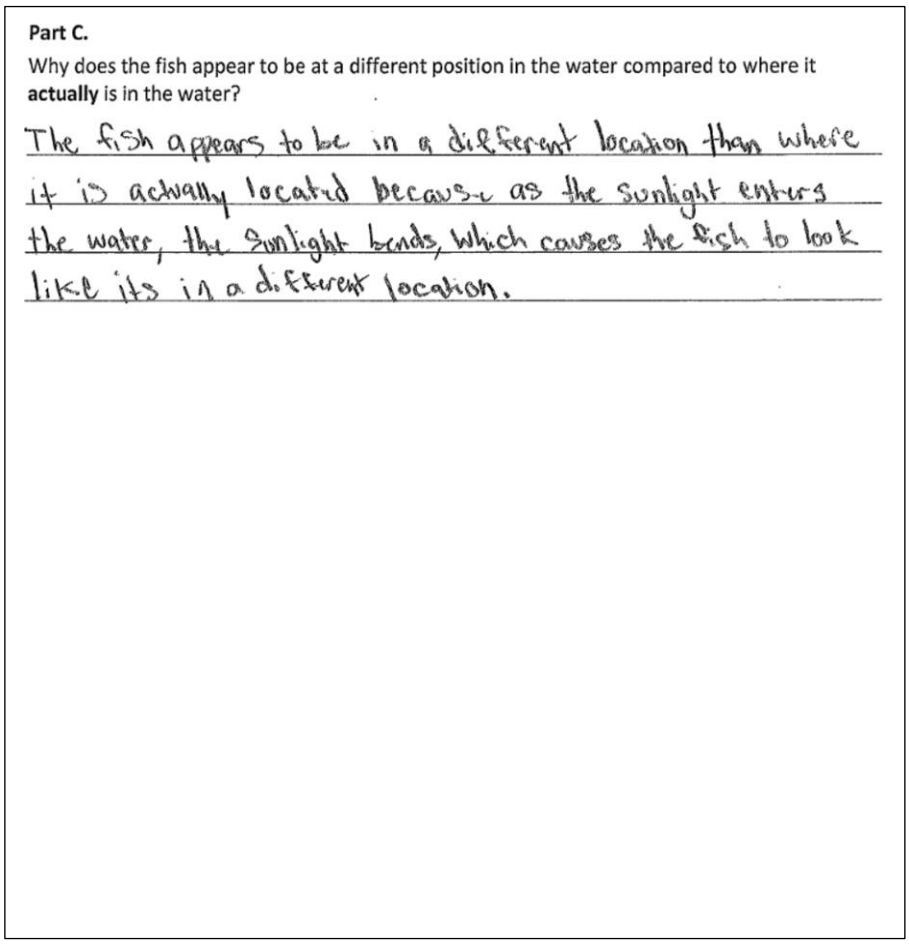
Prompt 1 Part C Rubric

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: • Use of the model to explain what the spear fisher sees • Supports explanation with the relationship between the density of the medium and its effect on the speed **or** direction light travels	NA	NA

Score Point 1 (1/2 aspects met)

- Part C
  - Uses the model to explain what the spear fisher sees (i.e., includes the fish and its location).
  - Does **NOT** support the explanation of the relationship between the density of the medium and its effect on the speed at which light travels.

NOTE: While the student response includes the "bending" of light when it enters the water there is no description of that relationship to the density of the media (i.e., air and water).



Part C.

Why does the fish appear to be at a different position in the water compared to where it **actually** is in the water?

The fish appears to be in a different location than where it is actually located because as the sunlight enters the water, the sunlight bends, which causes the fish to look like its in a different location.

CASCIA Grade 8 EOU Assessment 4 Task 2: Color My World

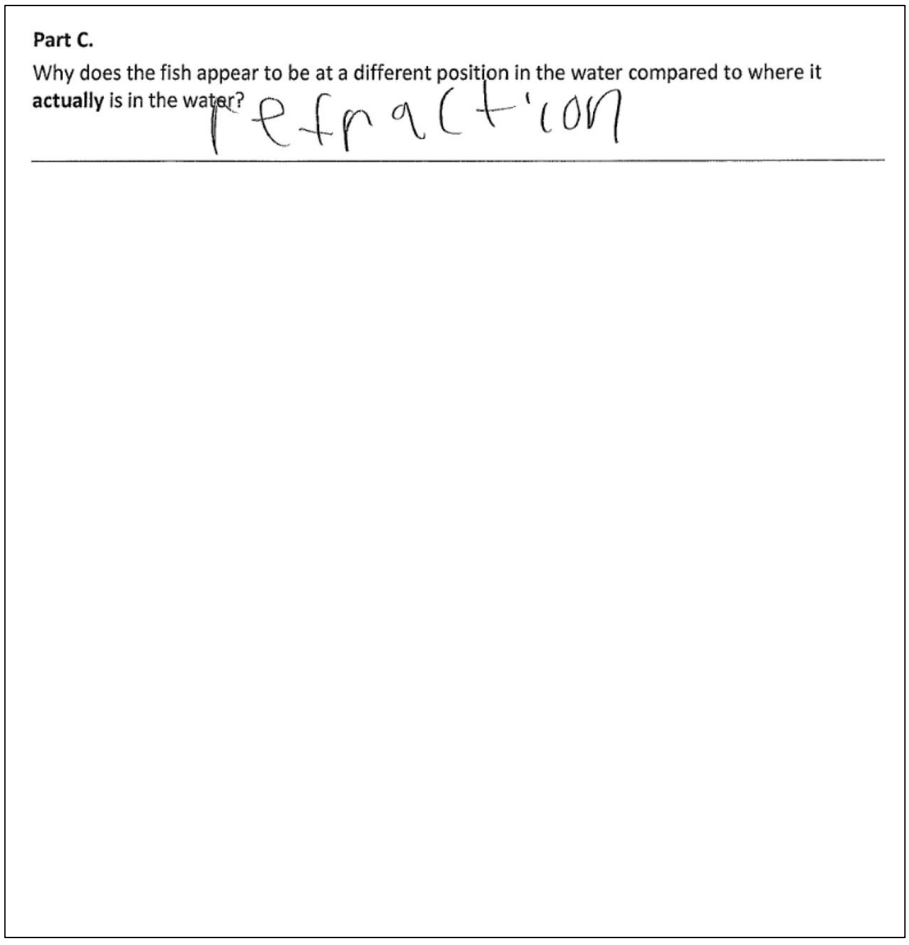
Prompt 1 Part C Score Point 0

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: • Use of the model to explain what the spear fisher sees • Supports explanation with the relationship between the density of the medium and its effect on the speed **or** direction light travels	NA	NA

Score Point 0 (0/2 aspects met)

- Part C
  - Does **NOT** use the model to explain what the spear fisher sees.
  - Does **NOT** support the explanation of the relationship between the density of the medium and its effect on the speed at which light travels.



Part C.

Why does the fish appear to be at a different position in the water compared to where it **actually** is in the water?

refraction