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 A Scored and Annotated Anchor Set

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Grade 8 Unit 4: Providing Solutions to Problems Using Simple Wave Properties, Task 2 Prompt 1 Part A 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 A Score Point 2

Prompt 1 Part A Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 1 Part A.	No aspect of the response is correct	Response includes **one (1)** of the **two (2)** aspects	Response includes the following aspects: • Includes the relationship between wavelength and speed of light • Describes that frequency of light does not change when passing through different mediums	NA	NA

Score Point 2 (2/2 aspects met)

- Part A
  - Includes the relationship between wavelength and speed of light.
  - Describes that the frequency of light does not change when passing through different mediums (i.e., ". . . once the frequency is set it can't change . . .").

Prompt 1

Part A.

Rainwater is transparent which allows light to be transmitted through it. However, whenever light travels from one medium to another, like from air to water during a rainstorm, the speed of light changes.

When light passes from air to water, does it change wavelength, frequency, or both? Explain your answer.

both speed wavelegth decrese when it bends then the water bu frequenty does not because once the frequncy is set it cant change

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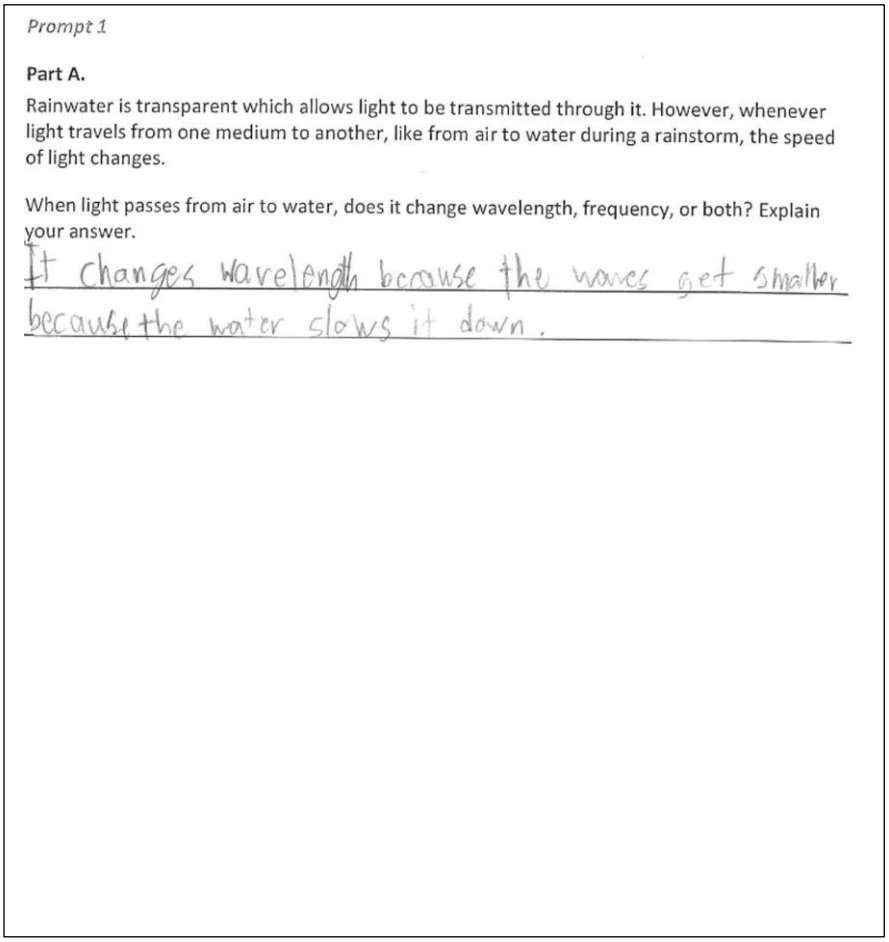
Prompt 1 Part A Score Point 1

Prompt 1 Part A Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 1 Part A.	No aspect of the response is correct	Response includes **one (1)** of the **two (2)** aspects	Response includes the following aspects: • Includes the relationship between wavelength and speed of light • Describes that frequency of light does not change when passing through different mediums	NA	NA

Score Point 1 (1/2 aspects met)

- Part A
  - Includes the relationship between wavelength and speed of light.
  - Does **NOT** describe that frequency of light does not change when passing through different mediums.



Prompt 1

Part A.

Rainwater is transparent which allows light to be transmitted through it. However, whenever light travels from one medium to another, like from air to water during a rainstorm, the speed of light changes.

When light passes from air to water, does it change wavelength, frequency, or both? Explain your answer.

It changes wavelength because the waves get smaller because the water slows it down.

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

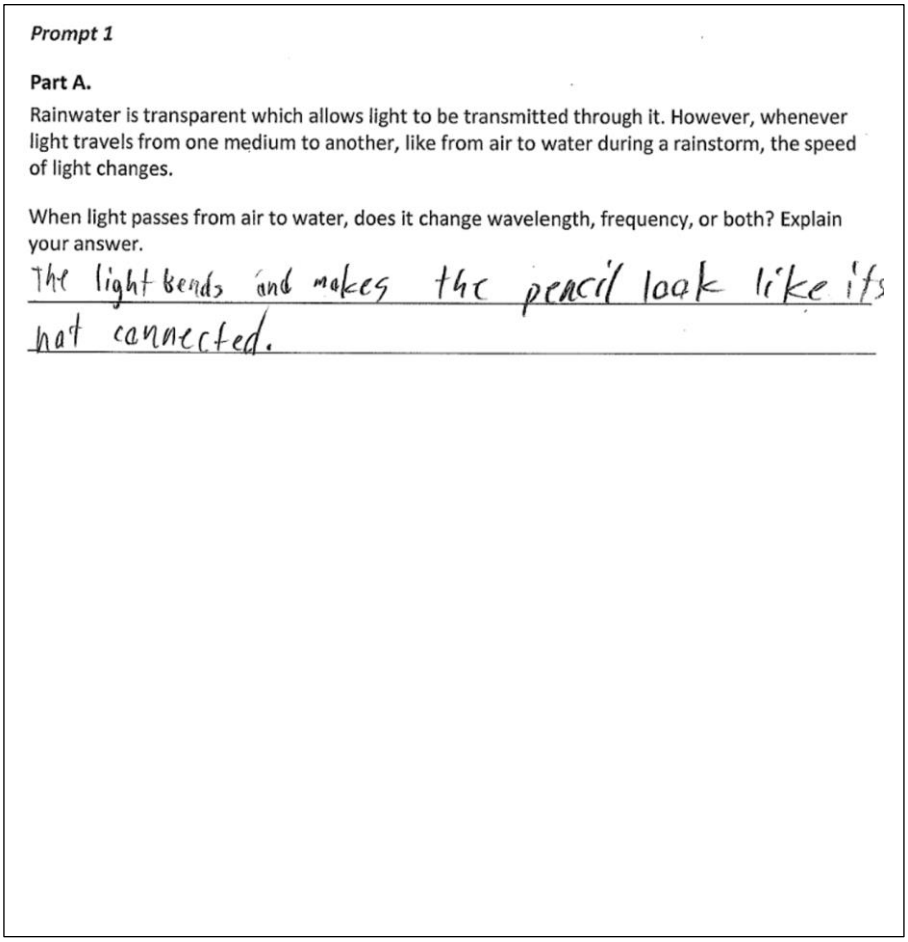
Prompt 1 Part A Score Point 0

Prompt 1 Part A Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 1 Part A.	No aspect of the response is correct	Response includes **one (1)** of the **two (2)** aspects	Response includes the following aspects: • Includes the relationship between wavelength and speed of light • Describes that frequency of light does not change when passing through different mediums	NA	NA

Score Point 0 (0/2 aspects met)

- Part A
  - Does **NOT** include the relationship between wavelength and speed of light.
  - Does **NOT** describe that frequency of light does not change when passing through different mediums.



Prompt 1

Part A.

Rainwater is transparent which allows light to be transmitted through it. However, whenever light travels from one medium to another, like from air to water during a rainstorm, the speed of light changes.

When light passes from air to water, does it change wavelength, frequency, or both? Explain your answer.

The light bends and makes the pencil look like it's not connected.