



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

Grade 5 Unit 3: Earth Systems and the Solution of Water Problems

Task 3 Prompt 4 Parts A & B Scored and Annotated Anchor Set

May 2025

Grade 5 Unit 3: Earth Systems and the Solution of Water Problems, Task 3 Prompt 4 Parts A & B 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.

All rights reserved. Any or all portions of this document may be reproduced and distributed without prior permission, provided the source is cited as: Coherence and Alignment Among Science Curriculum, Instruction, and Assessment (CASCIA) Project. (2025). *Grade 5 Unit 3: Earth Systems and the Solution of Water Problems, Task 3 Prompt 4 Parts A & B Scored and Annotated Anchor Set*. Lincoln, NE: Nebraska Department of Education.

CASCIA Grade 5 EOU Assessment 3 Task 3: Protecting Earth's Soil

Prompt 4 Parts A & B Score Point 2

Prompt 4 Parts A & B Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 4 Part A. & Part B.	No aspect of the response is correct	The response includes one (1) of the two (2) aspects	Response includes the following aspects: • Measurement of the depth of the fertile topsoil • Description of how maintaining a similar or improved depth of fertile topsoil over time shows how well the solution functions over time	NA	NA

Score Point 2 (2/2 aspects met)

- Part A
 - Includes measurement of the depth of the fertile topsoil.
- Part B
 - Includes a description of how maintaining a similar or improved depth of fertile topsoil over time shows how well the solution functions over time.

Part A.

What measurements should the Murdochs collect to know if the solutions are working to prevent the erosion of the fertile topsoil?

Before they make a windbreak they should measure how deep the soil is. After they plant the trees they should measure how deep the soil is.

Part B.

If the solutions are working, what pattern would you expect to see in the data?

If the windbreak is working after a whole year they should lose no soil. If the windbreak is not working their measurements should go down.

CASCIA Grade 5 EOU Assessment 3 Task 3: Protecting Earth's Soil

Prompt 4 Parts A & B Score Point 1

Prompt 4 Parts A & B Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 4 Part A. & Part B.	No aspect of the response is correct	The response includes one (1) of the two (2) aspects	Response includes the following aspects: • Measurement of the depth of the fertile topsoil • Description of how maintaining a similar or improved depth of fertile topsoil over time shows how well the solution functions over time	NA	NA

Score Point 1 (1/2 aspects met)

- Part A
 - Includes the measurement of the depth of the fertile topsoil.
- Part B
 - Does **NOT** Include how the solution improves the depth of fertile topsoil over time (i.e., "... 90% successful because of a dry soil.").

Part A.

What measurements should the Murdochs collect to know if the solutions are working to prevent the erosion of the fertile topsoil?

The Murdochs should collect the depth of the soil to see if the wind breaks work.

Part B.

If the solutions are working, what pattern would you expect to see in the data?

in the data the pattern will be 90% successful because of a dry soil.

CASCIA Grade 5 EOU Assessment 3 Task 3: Protecting Earth's Soil

Prompt 4 Parts A & B Score Point 0

Prompt 4 Parts A & B Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 4 Part A. & Part B.	No aspect of the response is correct	The response includes one (1) of the two (2) aspects	Response includes the following aspects: - Measurement of the depth of the fertile topsoil - Description of how maintaining a similar or improved depth of fertile topsoil over time shows how well the solution functions over time	NA	NA

Score Point 0 (0/2 aspects met)

- Part A
 - Does **NOT** include the measurement of the fertile topsoil.
- Part B
 - Does **NOT** include how maintaining the topsoil depth over time will show how well the solution functions.

Part A.

What measurements should the Murdochs collect to know if the solutions are working to prevent the erosion of the fertile topsoil?

#2 will be the best solution.

Part B.

If the solutions are working, what pattern would you expect to see in the data?

tree row, no tree row