

High School Environmental Science

Program Component Review

District Summary

ENVIRONMENTAL SCIENCE SELECTION

Pearson

Environmental Science: Your World, Your Turn

SCIENCE CONTENT

Question 1: Is the science content superficial or does it deepen conceptual understanding, application of practice to content knowledge, problem solving, and scientific reasoning/inquiry?

Question 2: How well does “Teacher Background” prepare a new teacher or a teacher new to the grade level to:

- Present the concept?
- Apply practice to content knowledge?
- Build scientific reasoning/inquiry?
- Make connections between conceptual understanding, application of practice to content knowledge, problem solving, and scientific reasoning/inquiry?

Question 3: What suggestions are provided to prevent or correct the development of misconceptions as students learn?

Questions 4: How does the program support the teacher in facilitating scientific discourse about this concept?

Content Score = 24

INSTRUCTIONAL PROGRAM

Question 1: When the concept is first introduced, what connections are made to students’ lives and prior knowledge?

Questions 2: What materials are available to help with the learning of vocabulary essential to understanding this standard:

- Definitions with visuals and examples?
- Pronunciations?
- Words used in context and in sentences?
- Suggestions for teaching and practicing both academic language (conclusion, analyze) and content vocabulary (erosion, biodiversity, carrying capacity)?

Question 3: How well do the different types of student work support:

- Developing conceptual understanding? Is there evidence of a progression from concrete to pictorial to more abstract means of learning concepts?
- Learning and practicing the necessary skills and procedures?
- Is there evidence of developing skills in the context of problem solving and inquiry?
- Developing scientific reasoning?
- Applying their understanding to practical application of concepts?

Question 4: What kinds of practice of the standard are there for students to:

- Immediately practice the skill or concept?
- Revisit and apply what has been learned later in the program?
- Revisit and apply what has been learned in a different context? (e.g. understanding of aquifer and the application of this information to community development)

Question 5: How does technology support a balanced curriculum of this standard for:

- Conceptual understanding?
- Skills and procedures?
- Scientific reasoning?
- Applying their understanding to real world applications?

Question 6: Are the technology-based/lab-based activities engaging for students?

Question 7: Does the text support learning of reading/writing standards for literacy in science and technical subjects? (CCSS ELA 6-12) Do the teacher materials support teachers with instruction in the reading/writing standards for literacy in science and technical subjects? (CCSS ELA 6-12)

Question 8: What evidence is there that the text was written to CCSS and NGSS?

Instructional Program Score = 52

ASSESSMENT

Question 1: What support is available to help teachers check for student misconceptions?

Question 2: How well do progress monitoring assessments inform instruction of concepts and provide information on student understanding?

Question 3: How well do the assessments adequately assess student procedural knowledge, conceptual understanding, and scientific reasoning?

Question 4: How well do the assessments prepare students for CCSS assessments? (e.g. are the assessments multiple choice or do they involve use of higher level thinking skills?)

Assessment Score = 27

UNIVERSAL ACCESS

Question 1: What support is provided for English Language Learners (e.g., visual aids, advanced or graphic organizers such as word webs or concept maps, reference charts, word walls, etc.)?

Question 2: What support is provided for Special Education students (e.g., modified or alternative tasks, advanced graphic organizers, tactile or auditory support, etc.)?

Question 3: What opportunities are provided for advanced learners to deepen or extend their understanding of the standard (e.g., complex tasks, extension of learned skills, links to other content areas, special challenges, etc.)?

Question 4: How well do the Universal Access strategies present the concept in an alternative form (e.g., hands-on, different context, etc.)?

Universal Access Score = 26

TOTAL SCORE = 129

Houghton Mifflin Holt McDougal

Environmental Science (2nd Edition)

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Question 3: What suggestions are provided to prevent or correct the development of misconceptions as students learn?

Questions 4: How does the program support the teacher in facilitating scientific discourse about this concept?

Content Score = 28

INSTRUCTIONAL PROGRAM

Question 1: When the concept is first introduced, what connections are made to students' lives and prior knowledge?

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Question 8: What evidence is there that the text was written to CCSS and NGSS?

Instructional Program Score = 45

ASSESSMENT

Question 1: What support is available to help teachers check for student misconceptions?

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Question 3: How well do the assessments adequately assess student procedural knowledge, conceptual understanding, and scientific reasoning?

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Assessment Score = 24

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Question 3: What opportunities are provided for advanced learners to deepen or extend their understanding of the standard (e.g., complex tasks, extension of learned skills, links to other content areas, special challenges, etc.)?

Question 4: How well do the Universal Access strategies present the concept in an alternative form (e.g., hands-on, different context, etc.)?

Universal Access Score = 25

TOTAL SCORE = 122