PROPOSAL TO ADOPT A TEXTBOOK

Proposal Request Information
Prior to filling out this form, please read the Textbook Adoption Proposal Checklist with pertinent policies regarding textbook adoption.

FOR DISTRICT USE ONLY FINAL COMMITTEE RECOMMENDED APPROVAL GRADE LEVELS:	9-12

Section I
To be filled out by requesting educator:

Ia. REQUESTOR AND REVIEW TEAM INFORMATION

School	ThunderRidge High School	
Date	August 10, 2023	
Requesting Educator	Stephanie Mills	
Email address	ssmills@dcsdk12.org	
Phone number	720-381-8770	
Proposal Review Team Member	**Reviewer's Name**	**Contact Information - email**
District Coordinator	Tyson Emborg	temborg@dcsdk12.org
IT Representative	Joel Boeckmann	jnboeckmann@dcsdk12.org
Colleague	April Kelly (Castro)	alkelly@dcsdk12.org
Parent	Stephanie Sjoland	ssjoland@gmail.com

Ib. BOOK INFORMATION

Title of proposed text	Environmental Science: Sustaining Your World
Author (s)	Miller and Spoolman
Publisher	National Geographic Learning/Cengage
Edition	2nd edition
ISBN number	978-0-357-54184-5
Copyright date	2023

Course and/or subject area in which textbook will be used	Environmental Science
Grade level(s)	9 - 12
Total cost for purchasing the textbooks? See Checklist for Required Process	Class set of 32 - $3.112 ($97.25 per book- This is the most likely scenario) School set of 90 - $8752.50 Quote from publisher
Dates the textbook information was displayed at the school and posted on the school's website (2 week min.)	August 16 - September 30, 2023
Date the textbook was communicated to the School Accountability Committee?	September 20, 2023

Ic. RATIONALE

Please provide a brief rationale explaining your decision to include this text in the curriculum.

This textbook has so many ways for the students to access the curriculum, from learning about scientists working in the field to Engineering concepts and projects to Case Studies and "Tying It All Together" STEM connections in the chapter reviews.

The textbook is part of the National Geographic series at Cengage so the stunning photographs and illustrations engage the student in the wonder and beauty of the natural world.

Id. ALIGNMENT WITH DCSD'S GUARANTEED AND VIABLE CURRICULUM

Please write a detailed description of how the textbook aligns to DCSD's Curriculum - Colorado Academic Standards (CAS) and Essential Skills:

The textbook covers the following priority learning outcomes from the District.

HS Life Science Standards -

Life Science GLE 4 EO a. Use mathematical and/or computational representations to support explanations of **factors that affect carrying capacity of ecosystems at different scales**. (HS-LS2-1)

Life Science GLE 4 EO b. Use mathematical representations to support and revise explanations based on evidence about **factors affecting biodiversity and populations in ecosystems of different scales**. (HS-LS2-2)

Life Science GLE 5 EO a. Construct and revise an explanation based on evidence for the **cycling of matter and flow of energy** in **aerobic and anaerobic conditions.** (HS-LS2-3)

Life Science GLE 5 EO b. Use mathematical representations to support claims for the **cycling of matter and flow of energy among organisms in an ecosystem**. (HS-LS2-4

Life Science GLE 5 EO c. Develop a model to illustrate **the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and**

geosphere. (HS-LS2-5)
Life Science GLE 6 EO a. Evaluate claims, evidence, and reasoning that the **complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem**. (HS-LS2-6)
Life Science GLE 6 EO b. Design, evaluate, and refine a solution for **reducing the impacts of human activities on the environment and biodiversity**. (HS-LS2-7)
Life Science GLE 11 EO a. Construct an explanation based on evidence that **the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment**. (HS-LS4-2)
Life Science GLE 11 EO b. Apply concepts of statistics and probability to support explanations that **organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait**. (HS-LS4-3)
Life Science GLE 12 EO a. Construct an explanation based on evidence for how **natural selection leads to adaptation of populations**. (HS-LS4-4)
Life Science GLE 12 EO b. Evaluate the evidence supporting claims that **changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species**. (HS-LS4-5)
Life Science GLE 13 EO a. Create or revise a simulation to test a **solution to mitigate adverse impacts of human activity on biodiversity**. (HS-LS4-6)

HS Earth and Space Science Standards
Earth and Space Science GLE 4 EO d. And **Earth and Space Science GLE 7 EO b. Use a model** to describe how **variations in the flow of energy into and out of Earth's systems result in changes in climate**. (HS-ESS2-4)
Earth and Space Science GLE 7 EO c. Develop a quantitative **model** to describe the **cycling** of **carbon among the hydrosphere, atmosphere, geosphere, and biosphere**. (HS-ESS2-6)
Earth and Space Science GLE 9 EO a. And **Earth and Space Science GLE 10 EO a. Construct an explanation based on evidence** for how **the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity**. (HS-ESS3-1)
Earth and Space Science GLE 9 EO b. Evaluate competing design solutions for **developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios**. (HS-ESS3-2)
Earth and Space Science GLE 11 EO a. Create a computational simulation to illustrate **the relationships among the management of natural resources, the sustainability of human populations, and biodiversity**. (HS-ESS3-3)
Earth and Space Science GLE 11 EO b. Evaluate or refine a technological **solution** that **reduces impacts of human activities on natural systems**. (HS-ESS3-4)
Earth and Space Science GLE 12 EO a. Analyze geoscience **data** and **the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems**. (HS-ESS3- 5)
Earth and Space Science GLE 12 EO b. Use a computational representation to illustrate **the relationships among Earth systems and how those relationships are being modified due to human activity**. (HS-ESS3-6)

SECTION II: Review Team Information

Each review team member will complete an individual section for a formal review of the textbook based on your stakeholder perspective. All members of the review team **MUST review** the proposed textbook prior submission to the Curriculum, Instruction and Assessment Director.

IIa. EVALUATION of textbook (to be completed by requesting educator)

The proposed textbook...	**Y/N**	**Examples/Justification** Please be specific and provide examples if applicable
is appropriate for the following grade level(s)		9 - 12
develops essential knowledge and skills	Y	Engineering Practices in each chapter - Engineering Projects in each of the 5 units. Each chapter section introduces the Core ideas and skills for that section.
provides breadth and depth of content	Y	In addition to facts and information, the textbook provides examples of scientists at work, deeper questions in the "Consider This" sections, "Crosscutting Concepts" questions at the end of each section.
allows students to create meaning and make relevant connections to other knowledge and experience	Y	"Thinking Critically" questions in each chapter "Tying it All Together" challenge at the end of each chapter.
the information in the text includes a variety of cultural perspectives.	Y	The "Explorers at Work" sections show individuals at work globally in different environments.
the text has been reviewed in regard to respecting gender, ethnic and racial uniqueness, similarities and interdependence.	Y	P. 16- Hispanic educator P. 175 - female explorer P. 210 - Asian Indian explorer
the text reflects the current research in the content area.	Y	"Explorers at Work" shows students what scientists are doing in the field of Environmental Science.
Recommend textbook for adoption		☑ Yes ☐ No

IIb. EVALUATION of Book (to be completed by District Coordinator)

The proposed textbook...	**Y/N**	**Examples/Justification** Please be specific and provide examples if applicable
is appropriate for the following grade level(s)	Y	This text appropriate for students in grades 9-12. This includes both the content and vocabulary.
develops essential knowledge and skills	Y	The text imbeds the knowledge and skills identified in the Colorado State Academic Standards as being essential. This includes a focus on observation, communication, collaboration, and problem solving. In addition, the content knowledge covers the scope of topics related to modern environmental science.
provides breadth and depth of content	Y	This text provides breadth and depth for each topic. This includes case studies, examples of scientists working in the field, discussions, and content explorations. All of which are rooted in quality materials which provide students with an in depth background prior to inquiry.
allows students to create meaning and make relevant connections to other knowledge and experience	Y	This text allows students to create meaning and make connections through the use of rich content and details that draw upon students interest, knowledge, and background. This includes practical connections to student experience and to materials in other subject areas. This would include a scaffolding from Middle School Social studies as well as High School geography. In addition, the textbook topics range from information drawn from around the world to investigations found in Colorado including a focus on the Colorado River Delta.
the information in the text includes a variety of cultural perspectives.	Y	This text includes information from a variety of cultural perspectives. This is primarily found within each chapter through content extensions and investigation from content experts.
the text has been reviewed in regard to respecting gender, ethnic and racial uniqueness, similarities and interdependence.	Y	This text has been reviewed in regard to respecting gender, ethnic and racial uniqueness, similarities and interdependence. This includes the topics that are covered as well as the voices of experts which are used to highlight content.
the text reflects the current research in the content area.	Y	This text reflects the current research in the content as well as connections to the DCSD curriculum. This includes both content and methodology.

aligns with proposed connections to DCSD curriculum (Colorado Academic Standards, Essential Skills)		
Recommend textbook for adoption		☑ Yes ☐ No

IIc. EVALUATION of textbook (to be completed by a colleague)

The proposed textbook...	**Y/N**	**Examples/Justification** Please be specific and provide examples if applicable
is appropriate for the following grade level(s)		9-12
develops essential knowledge and skills	Y	Each unit has an applicable engineering project, developing essential skills that can be applied to real-world issues
provides breadth and depth of content	Y	The textbook covers a range of topics that address environmental ethics, ecosystems and resources. In addition to facts and information, the textbook provides examples of scientists at work, deeper questions in the "Consider This" sections, and "Crosscutting Concepts" questions at the end of each section to connect to other content areas.
allows students to create meaning and make relevant connections to other knowledge and experience	Y	"Thinking Critically" questions in each chapter "Tying it All Together" challenge at the end of each chapter. "Crosscutting Concepts" questions at the end of each section connect to other content areas.
the information in the text includes a variety of cultural perspectives.	Y	Each chapter begins with a case study, highlighting scientists from different backgrounds all over the world. The "Explorers at Work" sections show individuals at work globally in different environments.
the text has been reviewed in regard to respecting gender, ethnic and racial uniqueness, similarities and interdependence.	Y	Each chapter begins with a case study, highlighting a diverse science story that students can connect to on the basis of race, ethnicity and cultural background. P. 16- Hispanic educator P. 175 - female explorer P. 210 - Asian Indian explorer
the text reflects the current research in the content area.	Y	"Explorers at Work" shows students what scientists are doing in the field of Environmental Science.

aligns with proposed connections to DCSD curriculum (Colorado Academic Standards, Essential Skills)	Y	Yes- a few examples: Chapter 4: Biodiversity and Evolution in the textbook: **Life Science GLE 12 EO a. Construct an explanation based on evidence** for how **natural selection leads to adaptation of populations**. (HS-LS4-4) Chapters 11, 12 and 13 discuss competing nonrenewable and renewable resources and focus on the advantages and disadvantages of each, as well as highlighting alternative practices. **Earth and Space Science GLE 9 EO b. Evaluate competing design solutions** for **developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios**. (HS-ESS3-2)
Recommend for adoption		☑ Yes ☐ No

IId. EVALUATION of textbook (to be completed by Parent)

The proposed textbook...	**Y/N**	**Examples/Justification** Please be specific and provide examples if applicable
is appropriate for the following grade level(s)		9-12
develops essential knowledge and skills	Y	Each chapter has a review of key terms and concepts, critical thinking questions, and a variety of activities and projects to apply their skills and knowledge. Take Action activities allow students to do hands-on activities in their own homes and communities to connect their learning to their own lives.
provides breadth and depth of content	Y	There is breadth and depth of the topics covered under 5 Units, with 3-6 chapters in each unit to examine topics more closely. Explorers at Work, Case Studies, Engineering Projects, and Tying It All Together sections provide both depth and connections of topics.
allows students to create meaning and make relevant connections to other knowledge and experience	Y	Global perspectives of each topic allows students to make connections to other courses they may have taken, current events, and to their own communities. For example, chap. 7 discusses the role that humans play in ecosystem changes and species populations.

		This relates to the world history course regarding the Columbian exchange and the movement of people, plants, diseases, and animals between the Old and New Worlds, or to current concerns regarding threats to honeybee populations. Chapters provide connections to what students learn in other courses such as biology, history, geography, and geology.
the information in the text includes a variety of cultural perspectives.	Y	The textbook presents how scientists from around the world work with local populations and representatives to solve environmental issues and provide for the needs of the local communities. Sections on Explorers at Work and case studies highlight how people in different parts of the world interact with their environments and how they need community-specific solutions to meet their needs.
the text has been reviewed in regard to respecting gender, ethnic and racial uniqueness, similarities and interdependence.	Y	The textbook introduces diverse scientists from around the world, with professional representation in the fields of male and female and a wide variety of ethnic and cultural backgrounds. It highlights how these scientists from different disciplines work together, and with local inhabitants, to study, understand, and solve environmental issues.
Recommend for adoption		☑ Yes ☐ No

IIe. EVALUATION of textbook (to be completed by IT Representative)

The proposed textbook...	**Y/N**	**Comments:** Cengage privacy policy reviewed, and this vendor is on the approved software list.
meets privacy act requirements	Yes	On approved software list
vendor has signed *Data Protection Addendum*	N/A	Not needed
Recommend for adoption		☑ Yes ☐ No

SECTION V: Signatures/Approvals

Va.

Does the evaluating ***Educator*** recommend adoption of this textbook?	YES	NO
Date Oct 26 2023 Evaluating Educator Signature Stephanie Mills	☑	

Vb.

Does the evaluating ***Colleague*** recommend adoption of this textbook?	YES	NO
Date Oct 26 2023 Evaluating Colleague Signature April Kelly (Castro)	☑	

Vc.

Does the evaluating ***Parent #1*** recommend adoption of this textbook?	YES	NO
Date Oct 27 2023 Evaluating Parent (#1) Signature Stephanie Sjolaud	☑	

Vd.

Does the evaluating ***IT Representative*** recommend adoption of this textbook?	YES	NO
Date Oct 26 2023 Evaluating IT Representative Signature Joel Boeckmann	☑	

Ve.

Does the evaluating Requesting Educator's ***Administrator*** recommend adoption of this textbook?	YES	NO
Date Oct 27 2023 Administrator Signature Sean Patterson	☑	

Vf.

Does the ***District Coordinator*** certify that the information on this form accurately reflects the process followed at the site.	YES	NO
Date Oct 26 2023 District Coordinator Signature Tyson Euborg	☑	

Vg.

Does the ***Curriculum, Instruction and Assessment Director*** support adoption of this textbook?	YES	NO
Date Oct 26 2023 CIA Director Signature Erica Mason	☑	

Vh.

Does the ***DCSD Cabinet Member*** support adoption of this textbook?	YES	NO
Date Oct 26 2023 DCSD Cabinet Member Signature Matt Reynolds	☑	

SECTION VI: Superintendent's Approval

SUPERINTENDENT'S APPROVAL

Does the ***Superintendent*** approve adoption of this textbook?	YES	NO
Date _____ Superintendent Signature _____		

SECTION VII: Board of Education Approval

BOARD OF EDUCATION APPROVAL

Does the ***Board of Education*** approve adoption of this textbook?	YES	NO
Date _____ Board of Education Signature _____		

OFFICE USE

	DATE	INITIALS
Approved textbook list updated (including recommended grade level)		
Approved form with BOE signatures scanned to CIPG folder on District server		