

**State of Florida Instructional  
Materials Adoption Publisher  
Questionnaire (Form IM8)**

BID #: 772

SUBMISSION TITLE: World of Chemistry, Florida Edition

GRADE LEVEL: 09-12

COURSE TITLE: Chemistry 1

COURSE CODE #: 2003340

ISBN #: 9798214071862 Print SE / 9788214087221 Ebook SE

PUBLISHER: Cengage Learning, Inc.

AUTHOR: Zumdahl/Zumdahl/DeCoste

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**AUTHORS & CREDENTIALS: LIST FULL NAME OF AUTHOR(S), WITH MAJOR OR SENIOR AUTHOR LISTED FIRST. BRIEFLY PROVIDE CREDENTIALS FOR EACH AUTHOR.**

**Steven S. Zumdahl**

Steve Zumdahl is the author of market-leading textbooks in introductory chemistry, general chemistry, honors-level chemistry, and high school chemistry. Recently retired from his long-time position as Director of Undergraduate Programs at the University of Illinois, he has received numerous awards for his contributions to chemical education. These include the National Catalyst Award in recognition of his contribution to chemical education, the University of Illinois Teaching Award, the UIUC Liberal Arts and Sciences Advising Award, and the School of Chemical Sciences Teaching Award (five times). He earned his B.S. in Chemistry from Wheaton College (IL), and his Ph.D. from the University of Illinois.

**Susan A. Zumdahl**

Susan A. Zumdahl earned a B.S. and M.A. in Chemistry at California State University--Fullerton. She has taught science and mathematics at all levels, including middle school, high school, community college, and university. She is past director of the Merit Program for Emerging Scholars in Chemistry at the University of Illinois. In addition, she spearheaded the development of a sophisticated web-based electronic homework system for chemistry and is co-author on several chemistry textbooks.

**Donald J. DeCoste**

Donald J. DeCoste is Associate Director of General Chemistry at the University of Illinois, Urbana-Champaign and has been teaching chemistry at the high school and college levels for 26 years. He earned his BS in Chemistry and PhD from the University of Illinois, Urbana-Champaign. At UIUC he has developed chemistry courses for nonscience majors, preservice secondary teachers, and preservice elementary teachers. He teaches courses in introductory chemistry and the teaching of chemistry and has received the School of Chemical Sciences Teaching Award four times. Don has led workshops for secondary teachers and graduate student teaching assistants, discussing the methods and benefits of getting students more actively involved in class. When not involved in teaching and advising, Don enjoys spending time with his wife and three children.

**STUDENTS: DESCRIBE THE TYPE(S) OF STUDENTS FOR WHICH THIS SUBMISSION IS INTENDED.**

*National Geographic World of Chemistry, Florida Edition* is Intended for Florida High School Students.

**1.LIST THE FLORIDA DISTRICTS IN WHICH THIS PROGRAM HAS BEEN PILOTED IN THE LAST EIGHTEEN MONTHS.**

*World of Chemistry, Florida Edition* is a new program for the Florida Science adoption and has not yet been piloted in Florida.

**2.HOW ARE YOUR DIGITAL MATERIALS SEARCHABLE BY FLORIDA’S ACADEMIC STANDARDS (SECTION 1006.33(1)(e), FLORIDA STATUTES)?**

Within the MindTap School platform, a user can search for a specific standard code using the search bar at the top of the page and retrieve a list of all activities within the course that are tagged to that standard. Additionally, a user can click on "Materials" and browse through the sets of standards that are associated to the course. Clicking on a specific standard will retrieve the list of all activities within the course that are tagged to that standard.

**3.IDENTIFY AND DESCRIBE THE COMPONENTS OF THE MAJOR TOOL. The Major Tool is comprised of the items necessary to meet the standards and requirements of the category for which it is designed and submitted. As part of this section, include a description of the educational approach of the submission.**

**Educational Approach: (The information provided here will be used in the instructional materials catalog in the case of adoption of the program. Please limit your response to 500 words or less.)**

*World of Chemistry, Florida Edition* is designed to be accessible to all students with:

- Approachable writing and narrative style
- National Geographic Explorers and images
- Detailed problem-solving support
- Engineering design
- Real-world applications

National Geographic Explorers and visuals capture student attention and tell the story of how chemistry is critical to daily life.

*World of Chemistry, Florida Edition* fully aligns with the curriculum requirements of the Florida Next Generation Sunshine State Standards, and the B.E.S.T. Standards.

**Major Tool - Student Components Describe each of the components, including a format description.**

The **Student Edition** of *World of Chemistry, Florida Edition* is the Major Tool for students. It consists of 21 Chapters and is available in print as well as online on the MindTap School platform with interactive elements (videos, animations, and assessments).

Special Features Include:

The **Explorers at Work** features in many chapters introduce students to a National Geographic Explorer whose research relates to the Chemistry concepts presented in the chapter.

**Exploring Engineering** features highlight the work of engineers who apply chemistry concepts to solve real-world problems.

**A Case Study** at the end of each chapter takes an in-depth look at a real-world issue or topic related to the chapter content.

**Chemical Engineering** features showcase solutions to global problems and relate the practices of engineering to chapter content.

**Chemistry in Your World** features explore real-world applications of chemistry in a variety of fields, including science and technology, consumer issues, and history.

**Chemistry Pioneers** features highlight the contributions of a diverse range of people to our understanding of chemistry.

#### **Major Tool - Teacher Components Describe each of the components, including a format description.**

The **Teacher's Edition** of *World of Chemistry, Florida Edition* is the Major Tool for teachers and is available in print as well as online on the MindTap School platform.

The Teacher's Edition provides helpful tools and strategies for effective classroom instruction. Each **Chapter Planning Guide** offers a section-by-section guide for classroom planning and time management. Objectives, labs, and student in-text features are clearly identified for each section. Teacher's Edition resources and support for all learners are also highlighted.

Strategies to support diverse learners are provided throughout the text, from Differentiated Instruction boxes to English Language Learners notes, tips are provided to help teachers meet individual needs of students.

The Teacher eEdition provides complete access to all Student components and the following instructional support and tools:

All content that is in the Student Edition

Standards Correlation

Ability to customize the course and re-arrange the content

Ability to create assignments

Strategies for Differentiation

Gradebook

Reports

Groups

StudyHub

PowerPoint Lecture Notes

Activity Guide

Assessment Handbook

**4. IDENTIFY AND DESCRIBE THE ANCILLARY MATERIALS. Briefly describe the ancillary materials and their relationship to the major tool.**

**Ancillary Materials - Student Components Describe each of the components, including a format description.**

National Geographic Learning/Cengage does not offer ancillary instructional materials for *World of Chemistry, Florida Edition*.

**Ancillary Materials - Teacher Components Describe each of the components, including a format description.**

1. Assessment Handbook - This manual provides a printable version of all chapter pretests and posttests, chapter tests and performance tasks in the program. Available Print / Digital PDF in Mindtap platform.
2. Teacher Hands-On Activities and Laboratory Guide - This manual contains long-term projects and investigations to supplement classroom learning. Available Print / Digital PDF in Mindtap platform.

**5. IDENTIFY WHICH INDUSTRY STANDARD PROTOCOLS ARE UTILIZED FOR INTEROPERABILITY?**

MindTap, National Geographic Learning/Cengage's online portal for teaching and learning, has been certified by IMS Global at the v1.3 LTI Advantage interoperability level.

**6. HOW MUCH INSTRUCTIONAL TIME IS NEEDED FOR THE SUCCESSFUL IMPLEMENTATION OF THIS PROGRAM? Identify and explain the suggested instructional time for this submission. If a series, state the suggested time for each level. The goal is to determine whether the amount of content is suitable to the length of the course for which it is submitted.**

This program is aligned to either a half-year or a full-year course. Lessons, activities, and review questions are designed to be flexible and to provide the teacher with the opportunity to extend or shorten the time spent on lessons as needed. A Chapter Planner at the beginning of each chapter also assists with planning.

**7. WHAT PROFESSIONAL DEVELOPMENT IS AVAILABLE? Describe the ongoing learning opportunities available to teachers and other education personnel that will be delivered through their schools and districts as well as the training/in-service available directly from the publisher for successful implementation of the program. Also provide details of the type of training/in-service available and how it may be obtained. (The information provided here will be used in the instructional materials catalog in the case of adoption of the program.)**

Please refer to a separate detailed document called the Florida Customer Care Package which describes all the product implementation training that is available based on the purchased products and quantities. The training ranges from multiple day, in-person training with several scheduled follow up trainings over multiple years to individual 1 on 1 online/remote training sessions. There are also many online on-demand training modules available to keep teachers successful any time of the day or week to ensure successful implementation and use of our products in the classroom.

**8. WHAT HARDWARE/EQUIPMENT IS REQUIRED? List and describe the hardware/equipment needed to implement the submission in the classroom. REMEMBER: Florida law does not allow hardware/equipment to be included on the bid; however, schools and districts must be made aware of the hardware/equipment needed to fully implement this program.**

Please access MindTap system requirements through the following link: <https://help.cengage.com/mindtap/mt-student/common/system-requirements.html> or see below.

Cengage web-based learning platforms require broadband internet access and supported web browsers and plugins.

#### Supported Browsers

Supported browsers for different activity types may vary. If you are using SAM in MindTap, see [SAM in MindTap System Requirements](#).

#### Windows®

- Chrome™ 96 and 97
- Firefox® 96 (Windows 10 only)
- Edge 96 and 97 (Windows 10 only)

#### macOS™

- Chrome 96 and 97
- Safari® 14 and 15

#### Chrome OS™

- Chrome 96 and 97

#### iOS

- Safari 14 and 15

Other browsers and versions than those listed might also work, but are not supported. If you have problems when using an unsupported browser version, try using a supported browser version before contacting Customer Support.

#### Workstation Recommendations

- Download bandwidth: 5+ Mbps
- RAM: 2+ GB
- CPU: 1.8+ GHz / multi-core
- Display: 1366 × 768, color
- Graphics: DirectX, 64+ MB
- Sound (for some content)
- [Check Your System](#)

Use the browser check tool to see if you need to update your browser or install missing plugins.

- [Browser Settings](#)

Configure the following settings in your web browser. (Click on the link.)

- [Browser Plugins](#)

Some content and tools might require the following browser plugins. (Click on the link.)

**9. WHAT LICENSING POLICIES AND/OR AGREEMENTS APPLY? If software is being submitted, please attach a copy of the company's licensing policies and/or agreements.**

Attached are two National Geographic Learning/Cengage policies: the MindTap licensing policy and the privacy policy.

[Cengage-Group-School-Terms\\_of-Use-January-2022.pdf](#)

[cengage-privacy-notice-october-2020-1508150.pdf](#)

**10. WHAT STATES HAVE ADOPTED THE SUBMISSION? List any states in which this submission is currently adopted.**

*World of Chemistry, Florida Edition* is new for the Florida Science adoption and not been adopted in other states.

**11. WHAT OPEN EDUCATIONAL RESOURCES RELATED TO THIS BID DO YOU MAKE AVAILABLE(S)? List and describe each of the components, including a format description. (Open Educational Resources (OER) are high-quality, openly licensed, online educational materials that offer an extraordinary opportunity for people everywhere to share, use and reuse knowledge.)**

Open Educational Resources (OER) are not included in the National Geographic Learning/Cengage bid.

**12. ALTHOUGH NOT CALLED FOR IN THE STATE ADOPTION, DO YOU HAVE ADVANCED PLACEMENT (AP) OR ACCELERATED PROGRAM INSTRUCTIONAL MATERIALS AVAILABLE FOR THE COURSE(S) BID FOR ADOPTION?**

National Geographic Learning/Cengage offers the following Advanced Placement and accelerated program instructional materials:

1. *Chemistry, 10th Edition (AP® Edition)* by Zumdahl/DeCoste
2. *Chemistry and Chemical Reactivity, 10th Edition (AP® Edition)* by Kotz/Treichel/Townsend/Treichel

**13. WHAT, IF ANY, FOREIGN LANGUAGE TRANSLATIONS DO YOU HAVE AVAILABLE?**

*National Geographic World of Chemistry, Florida Edition* is available in English only.

**14. DO YOU PROVIDE ACCESS POINT SCAFFOLDING OR AN ACCESS POINT CORRELATION UPON REQUEST?**

*National Geographic World of Chemistry Florida Edition* fully aligns with the curriculum requirements of the Florida Next Generation Sunshine State Standards and the B.E.S.T. Standards. Unit, chapter, and lesson alignments are available at point of use within the Student and Teacher editions in print and digital formats. In addition, suggestions for differentiated instruction appear at the chapter level and in individual lessons in the Teacher edition to provide access to the content with reduced levels of complexity. Access Point correlations are available upon request.

**15. ESSA LEVELS OF EVIDENCE: To be considered an evidence-based program (or practice), it is required to have evidence to show that the program is in fact effective at producing results and improving outcomes in reading when implemented. Identification of evidence level alignment, Levels 1-4 (as outlined in the specifications), for the entirety of the program, part of the program, or individual practices within the program is required. Please explain how your product meets these requirements.**

National Geographic Learning/Cengage is committed to providing results-driven solutions to improve student outcomes. The Science editorial department believes in providing rigorous, challenging, engaging content that is accessible by all learners and for all learning styles.

The National Geographic Learning Science programs are developed with the expertise of highly regarded authors, subject matter experts, program consultants, editorial staff, and reviewers who ensure the implementation of the most recent research studies and pedagogy to promote student achievement. It is the goal of National Geographic Learning to ensure we reach every Florida student in every National Geographic Learning classroom.

In every chapter, we have included a number of tools to help students improve their learning skills and apply them. First, consider the Key Questions list at the beginning of each chapter. These can be used to preview a chapter and to review the material after it's read.

Each Explorers at Work profiles the positive, inspiring, and creative problem-solving thinkers and scientists of National Geographic.

A Case Study anchors a chapter's big ideas to a real-world example. At the end of each Case Study is an As You Read note that challenges students to connect the chapter concepts to their own knowledge or life experiences.

Learning objectives are found in the Core Ideas and Skills box at the start of every lesson. The Key Terms box gives students an at-a-glance list of the important words they'll encounter that can be looked up in the English or Spanish glossary. After each lesson, formative assessments (a mix of multiple choice and constructed responses) measure comprehension of the content of the lesson as well as the building of literacy skills.

Following the last lesson is a Tying it All Together, which guides students through the analysis of data or information related to the real-world challenges discussed in the Case Study and throughout the chapter. A Chapter Summary reviews the big ideas and important details from each lesson. Finally, a Chapter Assessment is included to ensure overall comprehension before moving to a new chapter.

At the end of each unit are guided STEM Engineering projects where students get to take the wheel as the problem-solver working on a real environmental issue. An Engineering Project may take several weeks to complete and involve careful planning and collaboration. In their role as engineers, students will put their math and technology skills to use, apply scientific knowledge and be creative.

In addition to strategies incorporated in the student edition, MindTap, National Geographic Learning's online platform for teaching and learning, is rich in formative and summative assessment to measure reading and content comprehension and employs multiple modes of assessment. The student eBook is also available to be read aloud to reinforce learning. National Geographic Learning is committed to providing results-driven solutions to improve student outcomes. The focus is on the effective use of technology, strong student support, experienced and talented authors and consultants, frequent assessment, and student engagement through print and digital resources. With this strong foundation, National Geographic Learning supports the goals and outcomes of ESSA.