



NATIONAL GEOGRAPHIC Science



Program Authors









Built for Your Classroom

Modular Life, Earth, and Physical Science units at the primary grades allow you to engage K-2 students in a wealth of active discovery and shared exploration through the use of Big Books and little books in English and Spanish. The program then grows with your students by transitioning to grade-level sets of Life, Earth, and Physical Science Student Books at grades 3–5. At every grade, myNGconnect gives students and teachers online access to the books and digital program resources.



Modular unit-based Classroom Sets at Grades K-2







Life, Earth, and Physical Science Student Books at each Grade 3–5







Exploring Science, Grades K-5

Enhance Next Generation Science Standards (NGSS) instruction with the optional **Exploring Science** program.

Complete and Flexible Integrated Print and Technology with Hands-On Inquiry

Designed to Take Students Beyond

Students join leading National Geographic Scientists and Explorers in the field via special video segments launching each unit and at various points throughout the program. These valuable interactions provide students with real-life models of how scientists conduct studies and gain scientific knowledge, and provide an excellent opportunity to address STEM topics in the classroom.





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Greg Marshall



Mireya Mayor, Ph.D.



Anissa Ramirez, Ph.D.



Severe-Storms Researcher



Tierney Thys, Ph.D. Marine Biologist, Filmaker



Katey Walter, Ph.D. Aquatic Ecologist, Biogeochemist



Connections to Real Scientists!



Revealing the Nature of Science

In *National Geographic Science*, process skills build at each grade level to ensure a complete understanding of the Nature of Science. Throughout the program, process skills and the Nature of Science work together to help students think and act like scientists.





Modeling Real Scientists in the Field

Kindergarten

PROCESS SKILLS

Nature of Science

OBSERVE

- Science knowledge is based on evidence.
- Science knowledge can change based on new evidence.

Grades 1 & 2

OBSERVE & INFER

- Science conclusions are based on observation and inference.
- Science theories are based partly on things that cannot be observed.

Grade 3

• There is often no single "right" answer in science.

CLASSIFY

Grade 4

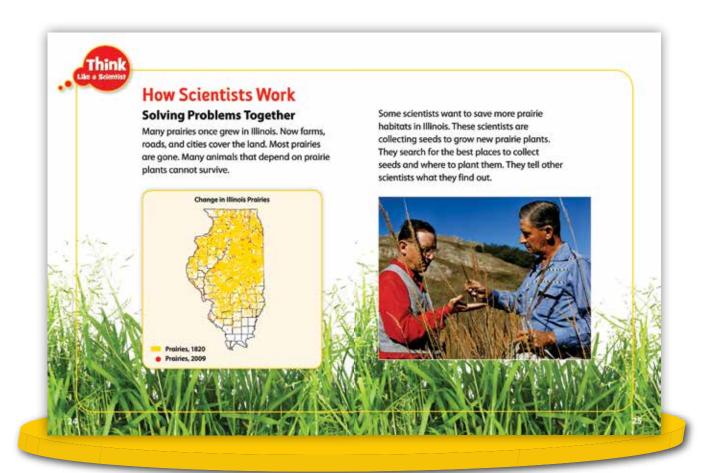
Scientific theories provide the base upon which predictions and hypotheses are built.

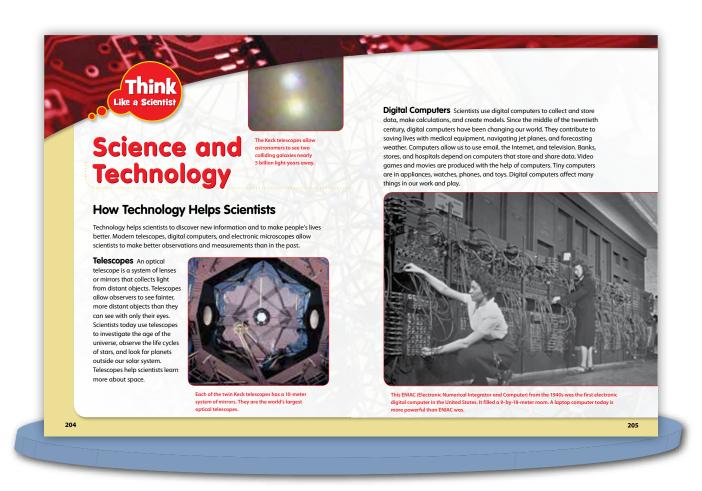
PREDICT/HYPOTHESIZE

Grade 5

DESIGN EXPERIMENTS

- There is no single, scientific method that all scientists follow.
- There are a number of ways to conduct the practice of science.







Address STEM Through Leveled, Hands-On Inquiry

National Geographic Science provides students with abundant and relevant hands-on practices to facilitate a thorough understanding of key science concepts. The four levels of inquiry in the program are designed to help students build confidence and competence in scientific thought and inquiry.

Explore Activity

The Explore Activity builds background for the unit and actively engages students as they explore.



Directed Inquiry

direct instruction throughout the activity. Students are given have done, **elaborate** by asking further questions, and evaluate by answering questions and using a self-reflection rubric.



Also Included Science in a Shap offers quick investigations to activate understanding of science concepts.

Do Your Own Investigation

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Science Inquiry Kits provide all the materials required to complete inquiry activities.

Guided Inquiry

In Guided Inquiry, students become independent learners with guidance from the teacher. Students may manipulate variables, provide explanations, elaborate by asking further questions, and **evaluate** by answering questions and using a selfreflection rubric.

Open Inquiry

In Open Inquiry, students choose their own questions, design and carry out their own plans, collect and record their own data, look for patterns, and communicate that data. Students explain their results, elaborate by asking further questions, and evaluate by answering questions and using a self-reflection rubric.





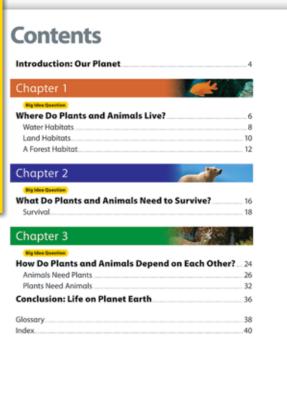


Exploring Standards In Depth

At every level, *National Geographic Science* is targeted and focused on the Big Ideas in Science, inviting students to question, engage, actively explore, and understand core science concepts in English or Spanish.



 At grades K-2, each unit is centered on three chapter "Big Ideas" that target instruction to core science topics.









Online Interactives

Providing Access to Content

National Geographic Science is designed to engage all learners in exploring and understanding the Big Ideas of Science. Focused instruction with built-in support helps you reach students of varying ability levels.

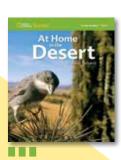




Become An Expert books for grades K–2 tie directly to the unit's Big Ideas and are presented at three reading levels, enabling teachers to effectively differentiate instruction.



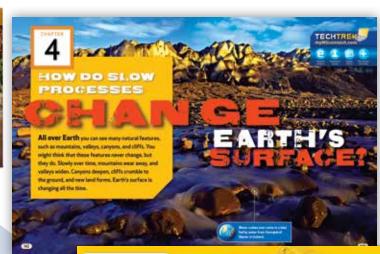




Leveled **Explore On Your Own** books carry forward the topical exploration at grades K–2, offering the flexibility to either extend learning in Science, or to provide connected nonfiction reading in your Language Arts block.

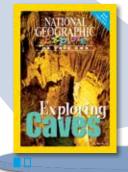


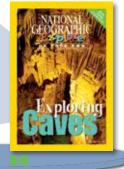
In the **Become An Expert** section of each chapter in grades 3–5, students apply what they've learned through concrete examples found throughout our world.





Pioneer and Pathfinder editions of the **Explore On Your Own** books for grade 3–5 provide the same content at two different reading levels, encouraging all students to read independently.





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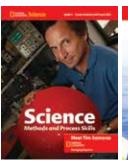


Instilling a Legacy of Scientific Literacy

Real-life models of National Geographic Explorers and scientists in the field help students to develop scientific literacy and better understand the Nature of Science.











Students learn that Science is:

- A way of knowing
- Empirically based and consistent with evidence
- Subject to change when new evidence presents itself
- A creative process







After finishing a plan and analyzing data, a scientist tries to reach a conclusion. A conclusion may be an answer to a question or a solution to a problem. Sometimes scientists don't reach conclusions. Instead, they may come up with more questions.



Through his work, T.H. has concluded that it is important to provide all people with the knowledge of how to access basic human need like clean water and food. This knowledge is vital to a more peoceful and eco-friendly world.

☐ Share Results Scientists share their results with other people. They want others to learn what



L's work has allowed entire less to change for the better ten families learn how here a more sustainable style, they share their coviedge with others. T.H. they not on to other areas in ed of his height.

Supporting Literacy Through Science

National Geographic Science also builds literacy skills to help students succeed across content areas.

Reading Comprehension

Teacher Edition support at K–2 includes opportunities to work with four comprehension strategies to ensure content learning is deep and lasting.

- · Preview and Predict
- Monitor and Fix Up
- Make Inferences
- Sum Up

At Grades 3–5, these four strategies are used to reinforce content learning.





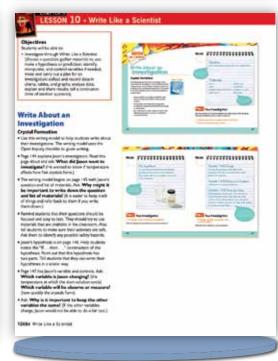
Expository Writing

Instruction at K–2 includes ample opportunity for students to express their understanding in four modes of scientific writing.

- Nonfiction Narrative
- Expository Nonfiction
- Procedural Text
- Persuasive Text

At Grades 3–5, students are given opportunities to write like a scientist by practicing procedural writing in the Science Inquiry and Writing Book.





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Science







Integrated Technology

myNGconnect for Students

The Student Home Page provides easy access to an array of technology tools designed to support and enhance the student's learning.

Spanish components available as eBooks



Science Vocabulary Science Science Science of the Science of the

Student eEditions

- Big Ideas, Student Inquiry Books, Become an Expert, and Explore On Your Own books available online
- Highlighting, note-taking and search tools built-in, along with Read-to-Me audio support.



Vocabulary Games

• Highly-interactive student games with rewards to teach vocabulary from units at K–2 and chapters at 3–5.



NG Digital Library

- Access to videos, images and simulations
- $\bullet \ Easy-to-use \ search \ and \ topic-specific \ media \ packages.$



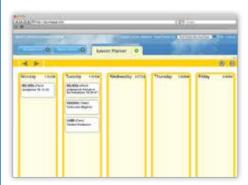
Enrichment Activities

• Interactive resources to expand science concepts presented in the units.

myNGconnect for Teachers

The Teacher Home Page provides the ability to easily find and manage program technology resources and provides online access to the full array of student and teacher materials.





Online Lesson Planner

- Tailor instruction to the amount of time you have each day
- Plan group and independent work
- Print plans at-a-glance or in detail.



Online Professional Development

• Resources to enhance lesson delivery and encourage best practices.



Teacher eEdition

 Online edition with embedded links to Unit Launch Videos, Assessment Handbook, and Learning Masters.



Classroom Presentation Tool

 Allows teachers to project all print materials and visuals for a lesson.

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Science







Kindergarten Units



Grades 1–2 Modular Units



Life, Earth, and Physical Science for Grades 3-5



Program Components

	Kindergarten	Grades 1–2	Grade 3	Grade 4	Grade 5
Big Ideas Big Books					
Big Ideas Student Books					
Science Inquiry Big Books					
Science Inquiry Student Books					
Science Inquiry and Writing Student Books					
Become An Expert Books					
Explore On Your Own Books	•				
Teacher's Editions		••			
Big Ideas & Vocabulary Cards					
Write About Big Books					
Learning Masters	•				
Assessment Handbook					
ExamView® CD-ROM					
Science Methods and Process Skills Big Book and Teacher's Guide	•	•	•	•	•
Science Inquiry Kits					
Science Inquiry Safety Kits					
Science Inquiry Kit Consumables Refill					
myNGconnect Technology					
eBooks					

Enhance NGSS lessons with the optional **Exploring Science** program.







■ English ■ Spanish available



Promote science success as you share The National Geographic Experience

- Immerse Students in the Nature of Science and Inquiry
- Unlock the Big Ideas in Science for All Learners
- Build Scientific and Content Literacy
- Available in Spanish
- Address STEM Inquiry









