



SUCCESS STORY

KEY FINDINGS

- **National Geographic Science** develops students' understanding of the Big Ideas in science
- **National Geographic Science** engages students with leveled inquiry investigations
- Science notebooks build students' scientific literacy and inquiry skills

National Geographic Science Increases Students' Science Content and Inquiry Skills



Challenge

Dawes Elementary School, a public school in Chicago, IL, needed to maintain their school performance rating on the District Scorecard by increasing the number of students that met state standards in science. The school's principal, Ms. Dixon, wanted to replace teacher-created science units with a core science program that more closely aligned with the state's tested standards and also built critical thinking skills Dawes' students needed to succeed in science.

The diverse student population at Dawes was often limited in background knowledge, so Ms. Dixon's goal was to build a solid framework of scientific understanding in the early elementary grades so students would be better prepared for the state science achievement test taken in grades four and seven.

Ms. Dixon and Ms. Abuabsah, Dawes' Lead Science Teacher, also knew the importance of capturing students' natural curiosity and interest in science, especially during hands-on activities. They sought a program with engaging, yet practical investigations to help students learn more about the nature of science and science inquiry.

Solution

Dawes' selected **National Geographic Science** as the core science program because it closely aligned with state science standards, developed science content through compelling materials, and provided structured hands-on inquiry to reinforce learning and spark a life-long interest in science. Second-grade classes began using the materials during the 2009–2010 school year.

Teachers used **National Geographic Science's** guided content lessons to build a solid foundation for students' mastery of earth, life, and physical science standards. Students used a science notebook to develop a deeper understanding of new science vocabulary and content.

National Geographic Science's scaffolded inquiry supported students as they developed scientific investigation skills that emulated the work of scientists. "Our students learned about data and making observations through experiencing the progression of exploration, directed, guided, and open inquiry investigations." Ms. Abuabsah explained, "Students used

their science notebooks for taking notes, making observations, analyzing data, and answering open-ended questions—just like real scientists."

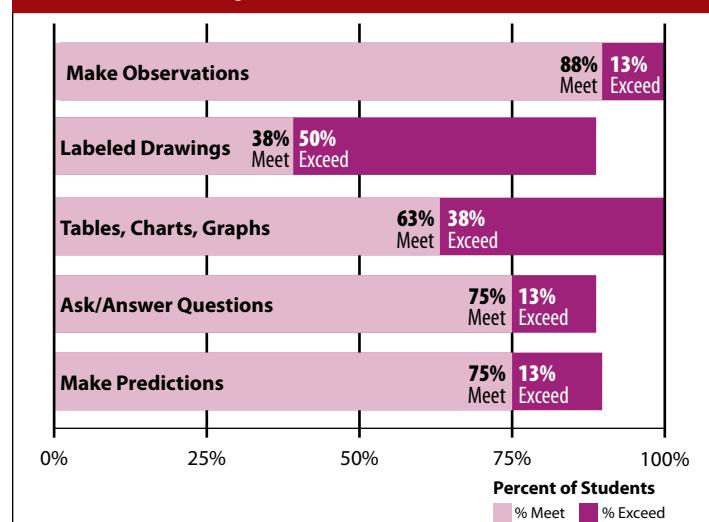
Results

"**National Geographic Science** definitely increased our students' knowledge of science content and of how scientists make sense of the natural world," noted Ms. Dixon. To determine the program's impact on scientific inquiry and literacy skills, students' science notebooks were scored against second grade mastery criteria. At the end of one school year, students using **National Geographic Science** demonstrated grade level mastery (meet or exceed targets) for both recording observational data and using reflective and analytical skills in their science notebooks.

"**National Geographic Science** is solid science that builds inquiry-based skills through active investigations," explained Ms. Abuabsah. The leveled inquiry activities exposed students to science in a very hands-on and practical manner. "For example, our kids really understood the phases of the moon after completing the inquiry activities, recording the data in their science notebooks, and then reflecting and sharing their understanding with their peers," explained Ms. Abuabsah.

Ms. Dixon summarized, "State science assessments require higher-level thinking and informational reading, and **National Geographic Science** provides many content-rich opportunities for students to practice these skills in the early grades." Dawes now implements **National Geographic Science** in grades two and four and is on target to expand their rollout to other grades next year.

Students master second grade science skills



Percentage of second grade students' mastery of inquiry and scientific literacy skills in science notebook entries (2009–2010 school year)