

## BSCS History



Nearly 60 years ago, a 184-pound metal ball changed the face of science education in the U.S. The ball, known as Sputnik, was launched by the Soviet Union on October 4, 1957, and circled the Earth every 92 minutes at a speed of 18,000 miles per hour. It emitted a radio broadcast beep-beep-beep in A-flat for 21 days.

The relentless beep distressed Americans, reminding them that the Soviets had won the race to space with the first-ever successful launch of a satellite. The Americans' failed attempt two months later with a much smaller satellite that blew up on the launch pad didn't help reduce feelings of loss.

Critics quickly began accusing the United States of falling behind the Soviets in science and technology education. The Cold War heated up and the U.S. formulated a plan to address the socio-political crisis. One year later, the National Aeronautics and Space Administration (NASA) was created, and in that same year, Congress passed the National Defense Education Act (NDEA). The NDEA was signed into law in September 1958 and provided funding to develop state-of-the-art science textbooks.

The National Science Foundation (NSF) was encouraged by Congress to fund the development of those materials. BSCS (Biological Sciences Curriculum Study) was established in 1958 by a grant from the NSF to the education committee of the American Institute of Biological Sciences (AIBS). The AIBS saw the need for an extensive study not only of the content of courses in biological sciences, but also the entire process of teaching and learning for students of all ages. The goal with the creation of BSCS was better science textbooks, particularly in the biological sciences.

"The situation in biology was different from that in the physical sciences," recalled Hiden Cox, executive director of AIBS in 1956. "For each student who took chemistry in high school, there were two who took biology. For every one who took physics, there were four who took biology. For more than half the American population, the only science course ever taken was high school biology."

Cox asked Arnold Grobman of the Florida State Museum to serve as BSCS's first director and H. Bentley Glass, of Johns Hopkins University and former AIBS president, soon joined him as chairman of the executive and steering committees.

Their task? Glass said it best at the first meeting of the BSCS Steering Committee in February 1959: "Our job is to look at the teaching of biology and to see how we think it should be modified. We should educate Americans in general to the acquisition of a scientific point of view. Can we get the people to better understand the fundamentals of life, and, if so, how can we effect this?"

BSCS believed that the authoritarian tone of biology teaching at the time compromised the investigative nature of science and suffocated the inquisitive spirit of the student. By making students active participants in the scientific process and investigations, BSCS felt students would garner a more complete understanding of science as discipline.

When BSCS set out in 1960 to create new biology programs—three experimental versions of a high school biology course, stressing concepts rather than facts and investigations rather than lectures—it tackled the task with a novel approach. Writers and their families moved into a University of Colorado dormitory for the summer, with rooms on the top floor serving as offices. A high school teacher and a university professor were paired in each office as a team and were assigned to write a chapter or laboratory exercise. After each chapter or exercise was completed, it immediately was mimeographed and distributed to the rest of the writers, who were charged with dissecting the work and finding mistakes. Each team prepared a student textbook, teacher's guide, and student laboratory book—in about six weeks.

"The idea that you can't cover everything in a textbook and shouldn't was radical at this time," said Jay Barton, BSCS board chairman from 1978 to 1984. "The writers had to decide what they weren't going to cover as much as what they were."

<https://bscs.org/history>

To learn more about BSCS's fascinating history, order your complimentary copy of *The BSCS Story*, a beautifully put together 62-page publication that's full of fascinating stories from the early years. Learn what made the early BSCS materials controversial, why the first three BSCS versions were known by color (Yellow, Green, and Blue), and how the deer logo came to be.

To order your copy of *The BSCS Story*, visit the [BSCS eStore](#).