

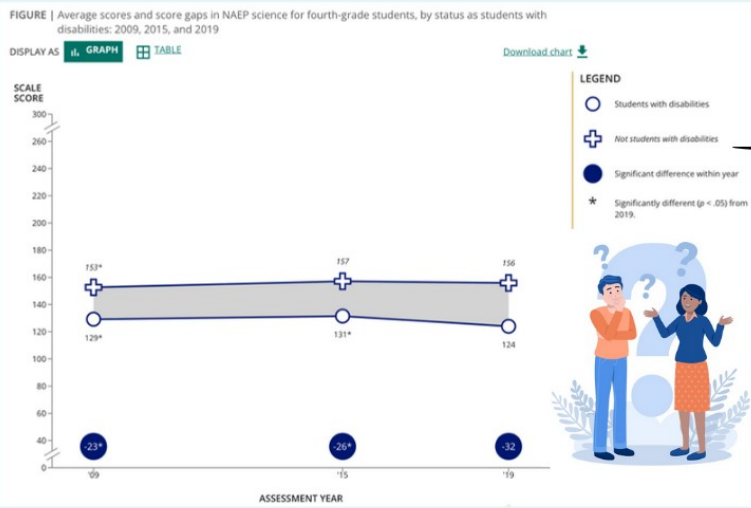
Limited knowledge of the quantity, type, and quality of science instruction for students with learning disabilities in elementary schools nationwide.



#2201464: Science Instruction for Elementary Students with Learning Disabilities

How do **students with learning disabilities** experience science instruction and how does the type of instruction provided align with emerging effective practices and in turn affect students' meaningful engagement and **science achievement**?

AVERAGE NAEP SCIENCE SCORES



U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2019 Science Assessment.

NAEP Basic Achievement Level | Minimum score = 131
NAEP Proficient Achievement Level | Minimum score = 167
NAEP Advanced Achievement Level | Minimum score = 224



CROWDSOURCE SCIENCE

While the achievement disparity in science is well documented, little data exist on reasons **WHY** such a stark disparity exists.

- Limited to relatively small studies
- Non-representative samples of students
- Specific geographic regions
- Potentially ungeneralizable findings

(e.g., Vannest et al., 2009)

THE POWER IS IN THE MULTIPLIER.

The 2023-2024 Crowdsourc Science study included:

14

STATES

19

STUDY SITES

29

TEACHERS

Methods

Descriptive **Observation**

- National Teacher Survey about Science Instruction
- Student demographics and academic information
- Instructional materials and student work samples
- Audio recordings of science instruction
- Direct classroom observations
- Text message teacher time sampling surveys
- Teacher interviews

Also completed by a nationally representative sample of 4th and 5th grade teachers.

Challenge Area Overcome

Crowdsourcing

- Institutional Review Board reliance agreements
- Tiered recruitment (e.g., schools, teachers, students)
- Standardized protocols and procedures across sites
- Scalable training resources
- Partner timeline tracking systems
- Central data collection systems

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