

Building Health and Data Literacy in K-12 Schools

With our world ever-evolving, many schools are seeing the value in adding elements of health and data literacy into the K-12 curriculum.



Key Takeaways

- COVID-19 revealed people of all ages deal with a health literacy gap, yet health education is not mandatory across the US.
- Learning how to read, work with, analyze and communicate with data has practical advantages for career opportunities down the line, including careers in health information.

Growing health and data literacy skills in elementary school, middle school, and high school can put students on the road to success as they enter college and adulthood.

Health information literacy incorporates both health and data literacy, and is defined by the [Institute of Medicine](#) as the “degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.”

Building Health Literacy

Believe it or not, health education has been part of some K-12 instruction since the 1800s, according to reports from the [National Academy of Medicine](#). However, unlike common core subjects like mathematics and English, health education is not mandatory across the United States.

COVID-19 revealed people of all ages deal with a health literacy gap.

According to an article published in [The Lancet Public Health](#), “health literacy might help people to grasp the reasons behind the recommendations and reflect on outcomes of their various possible actions.” Further research published in the [Health Promotional International](#) journal also found that health literacy about COVID-19 acted as a “social vaccine,” as people who better understand the risks of the COVID-19 pandemic are more likely to take serious precautions.



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Help K-12 Students Learn about Data Science

[The University of California, Los Angeles](#) is currently partnering with 135 high schools to implement a data science curriculum. They welcome high school administrators, especially those in California, to reach out for partnerships.

Health literacy resources for students and teachers:

For elementary school students

- [Be Sunbeatable](#) is a free curriculum for kids to learn about sun safety. (University of Texas MD Anderson Cancer Center)
- [Eagle Books](#) and [Eagle Books Toolkit](#) are free downloadable books and a toolkit designed to teach children about healthy living and diabetes prevention. (Centers for Disease Control and Prevention)

For elementary and middle school students

- [BAM! Body and Mind](#) is a resource for teachers of students from fourth to eighth grade that is targeted towards helping them make healthier lifestyle decisions. (Centers for Disease Control and Prevention)

For middle school students

- [Health Information Literacy Outreach: A Curriculum for Improving Health Information Literacy of 6th Grade Children](#) is a curriculum to promote health literacy and also learn about the health effects of lead poisoning. (Massachusetts College of Pharmacy and Health Sciences)
- [Germs & Your Health \(Grades 4-8\)](#) is a free lesson plan for educators showing students how handwashing, getting nutritious foods, and getting enough exercise and sleep can help the human body fight illness. Also available in Spanish. (Health World Education)
- [Eagle Books \(5-8\)](#) and [Eagle Books Toolkit](#), like the version for elementary schoolers, are free downloadable books and a toolkit about how they can live healthy lives. (Centers for Disease Control and Prevention)

For middle school and high school students

- [NERD Academy Curriculum](#) is a free resource that teaches students about public health and epidemiology-related careers and different aspects of jobs in these fields. (Centers for Disease Control and Prevention)

For high school students

- [Navigating the Health Care System](#) is designed to help high school students learn to manage their own health as they become adults. (Nemours Children's Health)
- [Is This Legit? Accessing Valid and Reliable Health Information](#) is designed to help students look into the influence of family, peers, culture, media, technology, and other factors on health behaviors. (National Institute of Health and National Institute on Drug Abuse)

Building Data Literacy

Data literacy is a newer field than health literacy, which means there are currently fewer resources available for K-12 students. According to the [National Council of Teachers of Mathematics](#), an effective K-12 data literacy program will help students learn to ask questions about data, as well as “develop and evaluate...predictions that are based on data.”

Learning how to read, work with, analyze and communicate with data has practical advantages for career opportunities down the line.

Research from the [Data Literacy Project](#) found:

- 85% of executives believe data literacy will become as vital in the future as the ability to use a computer is today.
- US workers who can demonstrate their data literacy skills can expect a 20% salary increase.
- 78% of global employees are spending time every month investing in their own personal development. These employees are spending an average of nearly seven hours on personal upskilling each month at an average cost of \$2,800 over the last 12 months.

Data literacy resources for students and teachers:

For pre-school and elementary school students:

- [Safety Smart Online](#), through the *Lion King*'s characters Timon and Pumba, gives kids in pre-school through third-grade age-appropriate lessons on the importance of protecting personal information online and what to do if people are targeted by cyberbullies. (Health World Education).

For elementary, middle, and high school students:

- [YouCubed's data science curriculum](#) has different tasks and data talks targeted toward kindergarten, first and second grade, third to fifth grade, sixth and seventh grade, and eighth to tenth-grade students. (Stanford University's Graduate School of Education)
- [Statistics in School](#) This project from the census bureau gives teachers lesson plans on how they can incorporate data from the census into mathematics, English, history geography, and sociology lessons for students in grades K-12. (Census Bureau)

For middle and high school students:

- [What is the Difference Between Mis- and Disinformation?](#) This lesson shows how data science overlaps with journalism and social media. Its focus is on teaching students about the difference between misinformation and disinformation, as well as helping students learn how to talk about these issues. (PBS Newshour)

For high school students:

- [Examining Risk Factors Associated With COVID-19 Using the Pandemic Vulnerability Index](#) teaches high schoolers what factors put people in danger during COVID-19. In this program, students develop and use models, as well as analyze and interpret data. (National Institute of Environmental Health Sciences)

Advocating for Changes in Curriculum

Many public schools have curriculum committees where parents and teachers can give input or even be official committee members. Parents can also reach out to school board members and speak about this issue during relevant times at open sessions during school board meetings.

Assessing Health Education Curriculum

You can [download free tools](#) to assess health education curricula and improve school health and safety policies and programs. Whether you use these resources or make your own curriculum, the Centers for Disease Control and Prevention (CDC) recommends effective health curriculums:

- Teach functional health information
- Shape personal values and beliefs that support healthy behaviors
- Help students develop essential health skills necessary to adopt, practice, and maintain health-enhancing behaviors

Better Health is in Your Hands™

Additional Information:

- [Factors Influencing Students to Enroll in Health Information Management Programs](#) (*Perspectives in Health Information Management*)
- [Access + Understanding: The Role of Health Literacy in Patient-Centric Health IT](#) (Journal of AHIMA)
- [From public health to personal finance, statistical literacy is essential for careers and everyday life](#) (K12 Dive)
- [Why Data Literacy Should Be Taught In High Schools](#) (Forbes)

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