

# The Messy Data Coalition

[messydata.org](http://messydata.org)

**Today's learners will enter a world defined by data.** By the end of 2020, there will be ten times as many bits of data in the digital universe as there are stars in the physical universe. Already today, data plays a pivotal role in our homes, our workplaces, and our communities.

But in too many learning experiences and classrooms across the nation data is not yet playing this crucial role. This is a tremendous oversight. It is also an incredible opportunity. The ability to understand and work with data represents far more than the ability to manipulate numbers or make basic charts. It is power to solve our greatest problems and address our stark injustices. These are the skills that will shape humanity's future. All learners need access to them.

Today's fourth graders are tomorrow's data scientists, data workers, and data citizens. They will have jobs whose titles have not even been invented yet. They will need to design solutions to questions society has never before encountered. Right now, we're failing them.

The Messy Data Coalition is a broad-based group of teachers, parents, professional organizations, researchers, curriculum and software developers, policymakers, and industry members committed to actively and equitably bringing data fluency to K-12 classrooms and learning experiences nationwide.

We aim to bring data education to one million classrooms and learning opportunities and 100 million learners in the next decade. As we do, we lay the groundwork for a future filled by communities of data-informed decision-makers and workplaces of data-fluent problem solvers.

We recognize that this data-fluent world is a completely new entity. We acknowledge that today's data—and tomorrow's—is a far cry from yesterday's. It is big, complex, unstructured: messy. And so are the problems it represents. Preparing today's learners for this world of messy data is an unprecedented undertaking. We recognize that teaching and learning for data fluency will need to rise to meet the revolution that has already transformed civilization and industry. We draw on a base of past research, knowledge, and practice, yet strive to identify and tackle new challenges.

The Messy Data Coalition invites you to join the revolution. Only by working together to coordinate, align, and create the necessary initiatives and networks will we be able to deliver this crucial and urgent transformation for teaching and learning. Come join the movement today.

## Catalyzing K-12 Data Education - A Coalition Statement

As organizations, individuals, and citizens of the globe, we recognize the important role data play in modern society from public health to policy to personal lives. In the wake of the global pandemic, the need to understand and work with data effectively is clearer than ever.

This moment also offers a rare clarity about the core pursuit of education. As we build data science education from the ground up, we have a grand opportunity. We can reimagine education in a way that avoids reinforcing traditional patterns of injustice and provides **all** learners the opportunity to thrive in a data-rich world.

**As a united coalition, we hold that all K-12 learners—and all those who work to serve K-12 education— should be able to:**

- Analyze, visualize, and communicate effectively with and about data, wrangling messy data fluently to form compelling stories, powerful solutions, and innovative ideas
- Apply and use data concepts within and across subjects, including within mathematics, science, and statistics but also in art, language, history, social studies, or interdisciplinary projects
- Know and navigate the life of data, from its nature, structure, and human origins to the ways it flows through social and technical systems, how it becomes transformed to represent and communicate information, and how it enables reasoning and decision making
- Appreciate data's many associated complexities and limitations, including the thorny issues of data equity, privacy, ethics, and fairness and bias of algorithms

**And we commit to creating a world in which:**

- *Learners* across K-12 encounter immersive data experiences with regularity from the earliest years onward, so that they develop practical data skills and deep data habits of mind
- *Educators and parents* see data as a medium of open exploration, fostering opportunities for learners to engage in discovery, investigation and modeling
- *Administrators and policymakers* appreciate and support data education, promoting policies—including high school graduation and university admissions requirements—that remove barriers for learners and ensure their future success
- *Publishers and creators* of K-12 resources prioritize data in the materials they create, placing nuanced treatments of data into central curricular roles
- *Funders and influencers* actively promote data education, advocating for and funding efforts that ready learners for data-filled lives and careers

We commit to doing this all equitably, recognizing that equal opportunity does not inherently exist, but that we must actively create it together.

These precepts are essential—society's future depends upon the actions we take today. We stand together as a coalition, committed to unified action until they become reality.