Data Literacy Advocate Packet
University of Chicago Center for RISC

IF YOU ONLY DO ONE THING

1) Contact your State Superintendent and voice your opinion on the issue. You can contact them through your state's Department of Education. We have included a search for the DoE's contact information **here**, and a list of State Superintendents **here**. We encourage you to voice your own thoughts, but if you would prefer a template, you can find it **here**.

IF YOU ONLY DO TWO THINGS

2) Spread the word about this issue by sending this advocate pack to your friends, colleagues, and neighbors. Post it on LinkedIn, Facebook, or wherever you want to engage your community. Here is a Tiny URL: **https://tinyurl.com/dataAdvocacy**

DOCUMENT OVERVIEW

The purpose of this document is to provide direction and resources for anyone who believes our education system is failing our students by overemphasizing irrelevant math concepts and failing to prepare them for the world of data in which they will live. **The Center for RISC** believes that placing greater emphasis on *data literacy* (the ability to explore and answer questions with data) will make America more innovative, equitable, and globally competitive. We believe creating a generation of data fluent citizens will spur widespread economic growth and civic engagement. We hope this document helps move the conversation along.

This is a living document. It will evolve as the movement grows and matures. If you have recommendations for how to make this document better, please **email us**.

ACTION STEPS

We have designed a list of steps you can take to help our country better serve our students. We recommend you follow the steps in order, though some are only relevant for certain individuals (parents of K-12 students, for example). Below the list we provide detail to each of the steps, including information about why it is important and relevant resources.

1. Contact your state's Department of Education.

2. Spread the word about this issue by sending this advocate pack to your network.

3. Contact your county Board of Education and voice your opinion.

4. [Parents and students] Request your school principal support data literacy.

5. [University affiliates] Ask your Dean of Admission to make a statement.

6. Spread the word through the Freakonomics Radio Podcast

7. Sign the petition to support the cause.

8. Help us fulfill an unmet movement need.

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1. Contact your state's Department of Education.

   Call, email, or fax **your state's Department of Education** to voice your opinion on the matter. We suggest you direct your letter to the **State Superintendent**, who, in most cases, can affect change through the Department of Education and by putting pressure on legislators.

   We would prefer you contact them with your own thoughts, but if you'd like to use a template we have prepared, you can find one **here**. We think it is best to emphasize the following:

   1) The current standards around data are not enough
   2) Data science pathways should be available and accessible to all students
   3) Data is present in every aspect of our lives, and thus should be intertwined in all courses and especially in mathematics
   4) Much of the mathematics we teach current students holds little relevance for their lives or careers. The problem solving and critical thinking skills students develop through current classes can be acquired through data science curricula.

Why it matters:

   Superintendents of the state Department of Education have the most sway on getting things done both in the department and in the legislature. By bringing their attention to this issue, we can ensure those in a position to make meaningful change know that old standards are not good enough.

Resources:

   Link to State Board search: **https://www2.ed.gov/about/contacts/state/index.html**
   Link to RISC template: **Template to State Boards of Education**

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2. Spread the word about this issue by sending this advocate pack to your network.

Tweet it, text it, email it, print it and pass it out. However you can get the word out, we would appreciate you passing this packet on to your personal networks.

Why it matters:

Policymakers are slow to act by design, and should be expected to only respond to a significant number of individuals advocating for a similar change. By mobilizing a large network of engaged citizens, we collectively increase the probability of success. While writing to your Department of Education is great, we need you to help us get the message out as far and wide as possible.

Resources:

Here's a message you can try:

> I believe that we are failing our kids by not providing them with the education they need and deserve. Data is a central part of our lives, but instead of learning how to understand data, students are dividing polynomials and learning other skills that most people will never need. I hope you will join me in embracing a vision of tomorrow's education that includes teaching students data-related skills. You can join the movement and make your voice heard by following the steps in this guide: **https://tinyurl.com/dataAdvocacy**

But you likely know better what would work best with your friends and colleagues. Creativity is encouraged!

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3. Contact your **county Board of Education** and voice your opinion.

Board of education are centrally important in our nation's education ecosystem. As such, this step is similar to the first, but at a local level. We suggest you at least contact them through a call, email, or fax, but if you're feeling fired up about data education, you can always **go to one of their public hearings and use your right as a citizen to voice your opinion**.

If you are going to call, email, or fax a member of your county Board of Education to voice your opinion on the matter, we prefer you contact them with your own thoughts. If you'd like to use a template we have prepared, you can find one **here**. We think it is best to emphasize the following:

1) The current standards around data are not enough
2) Data science pathways should be available and accessible to all students, and not seen as remedial
3) Data is present in every aspect of our lives, and thus should be intertwined in all courses and especially in mathematics
4) Much of the mathematics we teach current students does not help them in their lives or careers. The problem solving and critical thinking skills students develop through current classes can be acquired through data science curriculum. The current standards around data are not enough.

Why it matters:

In most states, county Boards of Education oversee policies around operation of schools, approve curricula, and represent the public by serving as a communication link between the community and the school system. As such, they represent an ideal forum for making change in your community.

Resources:
Letter Template

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4. [*Parents and students*] Request your school principal support data literacy.

Contact your school principal and let them know your position. We have provided some talking points that we think can get the conversation going. Depending on what grade-level you or your children are this will have different components, which we include below. Of course, feel free to email them this advocate pack! Be sure to highlight that data exploration can be a great pathway to improved critical thinking and prepare learners for the world outside school. Principals are focused (rightfully so!) on what is best for their students and will not want to add something new unless it is clear as to how it helps them further their aim of educating the next generation.

You may find some extra mileage here by also contacting your superintendent at the same time!

1) [K-6] Insist that principals support data literacy by:
   a) working with teachers to promote the use of data in all courses and
   b) offering funds for professional development to teachers wishing to include data science in their curriculum.
2) [6-12] insist that principals support data literacy by:
   a) working with teachers to promote the integration of data in current courses (you could refer them to **the Concord Consortium**, who offers free, open-source data activities),
   b) offering funds for professional development to teachers wishing to include data science in their curriculum (you could refer them to **Bootstrap, a group that does this for Algebra and Physics teachers**), and
   c) offering courses for students that focus on data science (you could refer them to the premade high school **Introduction to Data Science** (IDS) course from UCLA).

Why it matters:

Principals are centrally important to our education system. They determine which courses are offered at their schools and what professional development teachers can access. By engaging them, and getting them excited about data science, we can unlock the catalytic potential of new courses and better-trained teachers. The best part? A lot of really smart people have been thinking hard about what to provide principals and teachers that are excited about data science. All the principals need to do is ask!

Resources:

Bootstrap Co-Director Emmanuel Schanzer: **schanzer@bootstrapworld.org**
The Concord Consortium President & CEO Chad Dorsey: **cdorsey@concord.org**
IDS Implementation Specialist Suyen Moncada-Mochado: **smachado@idsucla.org**

5. [*University affiliates*] Ask your **Dean of Admission** to make a statement.

Are you an alum, student, parent of a student, donor, or professional connected to a university or college? Call or email the Dean of Admission (or an Assistant Dean of Admission) at the university or college which you are affiliated with and request they make a statement affirming that they support data science and are excited to admit students with data-related backgrounds.

Why it matters:

High schools craft their curriculum and courses not only based on state standards, but also on perceptions of what colleges and universities want. By addressing this issue at the university level, high school principals can feel comfortable promoting data science pathways for their students, and students can feel emboldened to take courses that may have previously seemed "risky" for college admissions.

Resources:

Check your university's *Undergraduate Admissions* or *Contact Us* pages. If you cannot find the Dean of Admissions' information, an email or call to an Assistant Dean of Admission, Provost, or Assistant Provost can be just as impactful.

6. Spread the word through the **Freakonomics Radio Podcast**

Why it matters:

We found that most of the enthusiasm we've received from this movement has come from those who listened to our **episode of *Freakonomics Radio*** on the issue. We understand that for many, podcasts present an accessible and engaging way of getting information. As such, you might find that people respond better to the podcast than to receiving this packet by itself. Spread the word around on social media, through email, and by word of mouth to your fellow students, parents, or citizens. Have a conversation about the podcast, and about others' reactions to it. You should feel emboldened to host conversations about it with members of the community, your teachers, your childrens' teachers, your neighbors, your local city commissioners, your pastor, your barber, whomever.

Resources:

Podcast page link: **http://freakonomics.com/podcast/math-curriculum/**
Apple Podcast link: **https://tinyurl.com/freakonomicsData**

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7. Sign the **petition** to support the cause.

The petition can be found **here**. You can choose to have your name shown publicly or keep it private.

Why it matters:

All of the earlier, distributed activity is incredibly important. However, it can be good to have a centralized hub where the strength of the movement can be put into numbers. Sign this petition to show your support, so we can prove to policymakers just how strong this movement is.

Resources:

Petition: **https://www.ipetitions.com/petition/bring-data-fluency-to-k12**

8. Help us fulfill an unmet movement need.

As this movement grows and changes, there are certain needs that we have yet to fill. You can find them **here**. If you or someone you know can help us with these, let us know!

Why it matters:

This is a fast-paced, nation-wide movement. We have not met all the players in the space and do not want to duplicate great efforts that are underway. Help us by making a connection or letting us know if you're working on any of the needs outlined!

Resources:

Link to the document: **https://tinyurl.com/dataMovementNeeds**

Further Resources and Readings

If you're interested, we've included some resources and readings so that you can learn more about data science and the movement. Feel free to let us know if you think there is something awesome we should add!

The Concord Consortium's Designing 2030 Report on how to support data education for all

Read about the impact of our partners at the **Charles A. Dana Center** in similar initiatives

Read about reducing inequities in math education from **Opportunity Institute's Just Equations**

Read up on **how schools can engage with elected officials**

RISC's Non-Exhaustive List of Data Science Resources

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