

A photograph showing a teacher and students in a classroom setting, looking at a laptop screen together.

Master Class

Objectives

- Understand the value and importance of teaching data throughout the curriculum.
- Consider how to utilize Discover Data resources in order to empower students through data analysis and application.
- Identify how to apply data literacy and data analysis across the curriculum using the foundational knowledge and resources found throughout the Discover Data master class Series.

Introduction

[Discover Data](#) is an initiative powered by the [Nielsen Foundation](#) in collaboration with Discovery Education and the [National AfterSchool Association](#). The Discover Data platform provides relatable, real-world applications of data and introduces students to professionals using data to innovate for the future.

As our globally connected world becomes increasingly dependent on the universal language of data, it is more important than ever to engage students in this ever-evolving conversation and empower them with the ability to be the data-driven thinkers of tomorrow. Through this master class series, you will have the opportunity to visit two classrooms and discover how to incorporate data to validate, illustrate, and make connections to the concepts you are teaching. You'll also learn about valuable resources, available through Discover Data, to immerse your students in impactful lessons that connect to national standards and your curriculum.

This master class series allows educators to take a deeper look at the tools needed to facilitate and embed data-driven instruction into your classroom. These Discover Data master class videos will introduce you to two educators who teach students how to problem solve and uncover solutions through the power of data. Step into their classrooms and consider how these lessons could work in your classroom, with your students. Reflect on your practice, and consider barriers and how to incorporate new data-driven approaches. Teaching is a journey, and it is better traveled with other passionate professionals along the way.

Closer look

Educators like you inspire students to consider the world around them every day. It is important to ensure that students have the necessary critical lens to discern the data that they are inundated with on a daily basis. Why should we teach data throughout our curriculum?

Theme 1: Data is the bridge that connects your classroom and students to the real world. | [Link to video](#)

Theme 2: Teaching with data equips your students with the critical thinking skills needed to be the solution seekers of tomorrow. | [Link to video](#)

In this Discover Data master class series, you will explore these two themes and consider how to incorporate these ideas into your teaching practice.

Featured educators

- **Gayla Davidson** (she/her) | Science Teacher | DeSoto West Middle School | DeSoto, TX
Gayla Davidson is a passionate science teacher who believes diversity and inclusion are needed in every classroom. She teaches middle school students in suburban Dallas, Texas and has taught in classrooms K–8. Gayla is a keynote speaker and educational consultant who loves to share her expertise and experience in STEM education with educators across the country. She enjoys traveling and discovering the world while experiencing culture and learning new languages and perspectives.
- **Becky Plotkin** (she/her) | Instructional Facilitator | Pinelake Preparatory Mooresville, NC
Becky Plotkin has worked in education for over 25 years. She is an instructional coach and teacher in Mooresville, North Carolina. She teaches AP Research, AP Psychology, and global studies, and serves as the faculty advisor for Model United Nations as well as Rho Kappa National Honor Society. As an early adopter of educational media in the classroom, Becky has worked hard to support educators in the implementation of technology and to design curriculum that supports literacy in a multimodal environment. She has earned multiple accolades and awards, including National Board Certification, the 2015 PBS Digital Innovator of the Year, and membership to the Discovery Education Leadership Council. When Becky isn't facilitating professional development, teaching, or coaching, she enjoys traveling and considers herself a lifelong learner.

Theme 1—Developing a critical lens

"Teachers already teach data in their classrooms. What we must do is get our students to connect that data analysis to their lives and community. Then, they can understand the impact and it doesn't matter what subject you teach."—Gayla Davidson

Teaching data equips your students with the critical thinking skills needed to be the solution seekers of tomorrow.

We are inundated with information every day, which can be overwhelming for young people. It is often difficult for them to decipher this constant feed of information. Students need to develop critical thinking skills and a critical lens in order to identify, understand, and solve problems in their world.

Many classrooms are already teaching students how to collect, understand, and interpret data. The critical missing element is the connection to real-world problem solving. When we take topics like [social media and misinformation](#), [environmental justice](#), or [access to healthcare](#), we engage and empower students to understand and use the power of data to find solutions to issues impacting the world around them. Regardless of what subject matter you teach, data sets are often used as a starting point to understand information or a topic. It is important to teach students where and how to find reliable and inclusive data sets. As the solution seekers of tomorrow, students need to understand that sometimes data alone does not always include all the context needed to find a solution to a problem. Often there are also multiple solutions to a problem and data can help us decide the most inclusive and sustainable solution. Students must learn how to not only analyze data, but also consider possible bias, missing data, and data quality. Gayla Davidson facilitates necessary conversations with her students in order to help them develop this critical lens, which empowers them to make these considerations.

Theme 2—Connecting to the real world

"Data literacy is important because our students need to understand topics at a deeper level, and they need to be able to evaluate data in order to make their own questions and solve their own problems."
—Becky Plotkin

Data is the bridge that connects your classroom and students to the real world.

Now, more than ever, students are aware of the problems that impact their community and the world around them. When we connect a classroom's curriculum to content that is relevant to the lives of students, engagement increases. Once your students have developed a critical lens with which to interpret data, the next step is to guide them to develop their own questions and solve problems in their everyday lives. The solutions to those problems lie deeper than what appears on the surface. In order to dig in deeper, students must be able to analyze data and determine viable solutions to problems they have identified.

Your role as educator becomes one of facilitation and questioning in order to guide students through the process of solution seeking. This is a challenging role for many educators, as our students often seek the first and quickest "answer." However, as our students tackle global problems that do not have clear-cut

solutions, they must develop the ability to be comfortable not knowing the immediate “answer or solution” to a problem. Finding solutions to global problems takes time, grit, research, and analysis of multiple data sources, in addition to collaboration. Sometimes, this also means considering our own bias or limited perspective. Consider how Becky navigates facilitating this role within her classroom.

Reflect

Now that you have had the opportunity to journey into two different classrooms, take a moment to reflect on your teaching practice:

- Gayla has necessary conversations with all of her students to help them develop a critical lens. How can you create a safe and inclusive environment for your students where you can have necessary conversations? How can you show vulnerability with your students and model necessary conversations in your classroom? How can you model data analysis and problem solving in your classroom?
- How does Becky support her students by teaching data in her classroom? How do her efforts drive students toward solving their everyday problems and provide a foundation for their role as the solution seekers of tomorrow?

Resources

The following [Discover Data](#) resources can be used to engage your students with lessons centered around data instruction:

- Launch student inquiry with a personalized, [self-paced student interactive](#) project that takes a deep dive into the importance of data in our daily lives!
- Get started with ready-to-use [classroom activities and curriculum connectors](#) that are available in both English and Spanish!
- Introduce your students to [diverse industry professionals](#) and empower them by allowing them to see what their impact can be!

Look forward

We had the opportunity to visit the classrooms of Gayla and Becky. Hopefully, you had the opportunity to see how their approaches can connect to your own teaching practice and educational journey. Below are some next steps to consider:

- Consider what these practices look like within your own classroom and what the impact could be on your students and community. These practices look different in every classroom and within each community.
- Provide various opportunities for students to engage in real-world problem solving and data analysis within your classroom, school, and community. Empower and encourage them to use their critical lens to use data and seek solutions for the problems they see directly impacting the world around them.
- Encourage students to analyze global problems that do not yet have solutions, using computational thinking and data application. How could they play a role in solving these global problems? Help them identify the most sustainable and inclusive solutions, using data.