

# AlgebridgeSC + Your School = Success in Algebra!

## Why Algebra?

Understanding algebra is a critical factor in the equation that adds up to graduation from high school, success in college and access to Science, Technology, Engineering and Mathematics (STEM) careers. To prepare students for algebra success, the National Mathematics Advisory Panel (<http://www2.ed.gov/about/bdscomm/list/mathpanel/report/final-report.pdf>) recommends a focused, coherent progression of key mathematics skills and topics in the elementary and middle years. AlgebridgeSC spans the learning gap between elementary school mathematics and secondary school algebra by creating a solid learning foundation focused on middle school mathematics, Algebra I, and Math for the Technologies 1 and 2.

## What is AlgebridgeSC?

AlgebridgeSC is an action research pilot that requires a three-year commitment from a team of Algebra I, Math for the Technologies 1 and 2, and middle school mathematics teachers who are from the same feeder school system. This professional learning experience has three intended outcomes:

- 1) Identify and understand the **conceptual progression** of SC Academic Standards for Mathematics middle school through Algebra I /Math for the Technologies 1 and 2;
- 2) **Analyze student work** in order to **differentiate** instruction based on the various levels of student understanding of the SC Academic Standards for Mathematics;
- 3) Implement **differentiated instructional practices** to support students in their various levels of understanding of mathematics in order to accelerate student achievement.

With support and training from the S<sup>2</sup>MART Centers, the participating Algebra I teachers, Math for the Technologies 1 and 2 teachers, and middle school mathematics teachers will establish and participate in professional learning teams (PLTs), through which they will be involved in meaningful dialogue about student learning of mathematics. This dialogue will use classroom and school data to focus on the various levels of student learning in mathematics and will guide teachers to differentiate classroom instruction based on student learning needs.

## Why Professional Learning Teams?

Success in algebra is fostered in a learning environment where students' progress is monitored carefully in foundational coursework. The purpose of professional learning teams is to bring together mathematics educators in a trusting, collaborative professional environment with a common mission of dialogue and action focused on student learning. In other words, PLT's are an effective means to improve instruction and increase student achievement.

## Who can participate?

AlgebridgeSC provides a foundational experience for any school system team seeking to improve student learning in algebra. A school system team consists of Algebra I teachers, Math for the Technologies 1 and 2 teachers, and middle school mathematics teachers from the same feeder system.

## AlgebridgeSC Program Commitments

It is vital to the success of this AlgebridgeSC Innovation Pilot to establish and maintain a coherent and productive relationship between the S<sup>2</sup>MART Centers SC representatives (AlgebridgeSC Team) and the School Teams.

The Innovation Pilot focus and the commitments for the school and the S<sup>2</sup>MART Centers are outlined below:

### Year 1 Commitments:

- For the **School Feeder System Team:**
  - 4 days of professional development (site-based)
  - 1 day of follow up professional development, date TBD (optional to schools)
  - PLT meetings focused on analysis of student work and instructional strategies to differentiate instruction based on results of analysis student work (2 per month, approximately 2 hours in duration)
- For the **AlgebridgeSC Team:**
  - 4 days of professional development training for teachers delivered by the AlgebridgeSC Team (site based)
  - 1 day of follow up professional development delivered by the AlgebridgeSC Team – date TBD, (optional to schools)
- For the **S<sup>2</sup>MART Center Regional Support Specialist:**
  - Attendance at 1 PLT meeting per month

### The Year 2 and Year 3 Commitments:

- For the **School Feeder System Team:**
  - 2 days of professional development (site-based)
  - 2 days of follow up professional development – one per semester (optional to schools)
  - PLT meetings (2 per month, approximately 2 hours in duration)
- For the **AlgebridgeSC Team:**
  - 2 initial days of professional development (site-based) or school teams
  - 2 days of follow up professional development – one per semester (optional to schools)
- For the **S<sup>2</sup>MART Center Regional Support Specialist:**
  - Virtual and/or on-site support for 1 PLT meeting per month

## Roles and Responsibilities of the Teams

The work of the School/District Team is to develop the instructional capacity and professional learning of Algebra I teachers, Math for the Technologies 1 and 2 teachers, and middle school mathematics teachers from the same feeder system.

### The teachers in the PLT will:

- Meet regularly in PLTs (2 times per month/approximately 2 hours in duration);
- Be prepared for PLT meetings with data collected, student work, materials, notes, etc.;
- Actively participate in all PLT meetings;
- Provide the S<sup>2</sup>MART Center AlgebridgeSC Team with data as needed (i.e. minutes of the PLT meetings, school data, classroom data, etc.).

### District/School Administrators will:

- Structure the time for the required PLT meetings;
- Provide the space and resources necessary for PLT meetings;
- Honor scheduled PLT meetings;
- Ensure teacher attendance and participation in PLT meetings;
- Provide the S<sup>2</sup>MART Center AlgebridgeSC Team with data as needed (i.e. school data, district data, etc.);
- Provide support for necessary travel expenses (mileage) to any PLT or off-site professional development training.

### The AlgebridgeSC team will:

- Provide timely and accurate information to the participating educators, school, and district;
- Monitor and assess the effective engagement of the participants;
- Provide the training, leadership, and coordination needed for the participating schools and districts to develop capacity for self-supported instructional improvement;
- Provide feedback on data collection and assist with data analysis as needed.

### The S<sup>2</sup>MART Center Regional Support Specialist will:

- Provide virtual and/or on-site support;
- Assist the PLT through the process of analyzing student work for the purpose of differentiating instruction.

## Financial Obligations

Funding for AlgebridgeSC comes from South Carolina's Coalition for Mathematics and Science (SCCMS) through grants and contracts from the SC Department of Education.