Students who need more support

In every classroom, there are students who struggle to experience success with learning the way other students do. Whether students have special needs, are foster youth, or are living in poverty, many are not afforded access to rich and rigorous science and engineering instruction. Unlike other programs, we won't settle for some students just scratching the surface. That's why Amplify Science features respectful and responsive teaching strategies that ensure all students experience success.

How does the program directly support struggling students or those with special needs?

Planning is key to supporting struggling students and those with disabilities so that they may effectively engage in lesson and assessment tasks, and have equitable opportunities to learn and demonstrate what they have learned. We help busy middle school teachers do just that with lesson-specific guidance that is responsive to the needs of students requiring more support. Some examples of these strategies include, but are not limited to:

- **Additional scaffolds and teacher modeling:** Teachers are encouraged to offer students more modeling and support as they complete various tasks within the hands-on investigations, modeling tools, and digital simulations.

- **Grouping strategies:** Teachers are encouraged to strategically choose partners in order to create positive and supportive student partnerships, a crucial first step in developing a classroom culture in which students feel confident and comfortable sharing their thinking.

- **Prompts and sentence stems:** Phrases like "I notice/observe…," "I wonder…," and "I think this is important because…" support students who are less comfortable with speaking in class or who need support with focusing their ideas.

- **Graphic organizers:** Anticipation guides and note-takers guide student thinking, help students focus on critical science content knowledge, and support them as they visually interpret relationships between concepts, ideas, and facts—all of which enhances their meaning-making and ability to express themselves effectively.

- **Partner work:** One example of partner work appears before writing activities, when teachers are encouraged to provide students with adequate time to discuss and compose their ideas in pairs or small groups, rather than alone, so that they can first talk with others about how they will phrase these ideas in writing.

- **Setting attainable reading goals:** Some students might feel overwhelmed by the length of the articles or the cognitive load involved in having to read an entire article and record questions and connections about it. These students should be encouraged to focus on the visual representations embedded in each text; read captions, single paragraphs, or core passages; think as they read and annotate by coming up with at least one question they have about the article; and read in pairs or in a small group.

- **Alternate means of expressing ideas:** For students who struggle to engage in partner or whole-class discussions, teachers are encouraged to provide an alternate method for sharing ideas. For example, students can write or draw simple diagrams to illustrate their ideas in response to the Investigation Question.

- **Extended thinking and response time:** In addition to giving students more time to respond verbally or in writing, teachers are also encouraged to provide students additional time to reflect on concepts and questions, especially those that are more complex and abstract.