

NURTURING THE MIDDLE SCHOOL MATHEMATICAL MIND

WHO ARE MIDDLE SCHOOL STUDENTS?

INDEPENDENT

Support a strong sense of self. Value and leverage each student's unique prior knowledge and reasoning abilities to nurture confidence. Provide independent think time as students transfer critical thinking to new situations and contexts.



EMOTIONAL

Be aware of and learn to temper extremes. They often "love" or "hate" and are "good at" or "bad at" everything—including math. They are nervous and trying to cope with changes. Nurturing a growth mindset and connecting math to real life helps offset "all or nothing" attitudes.



SOCIAL

Make math part of being "in with the in crowd." It's all about being a valued part of the group. Engaging with peers and cultivating relationships in learning experiences helps create a true community of mathematicians.



"Neuroscientists say that the teenage brain is pretty weird; our prefrontal cortex is underdeveloped, but we actually have more neurons than adults, which is why we can be so creative, and impulsive, and moody, and get bummed out."

—13-year-old Logan LaPlante in his TED Talk, [Hack Schooling Makes Me Happy](#)

HOW DO THEY LEARN?

Students' Personal Access to Mobile Devices Grades 6–8

73% Use Smartphones
66% Use Laptops
61% Use Tablets
48% Use Digital Readers

Project Tomorrow 2014



COLLABORATIVELY

Honor, hear, and discuss every student's personal ideas, strategies, and contributions.



INDIVIDUALLY

Let them work at their own pace and learning style and take ownership of their learning.



TECHNOLOGICALLY

Leverage blended learning that takes advantage of new interfaces which encourage students to explore new ideas.



Of 100 middle school students, 93 want to go to college



Of those, 70 graduate from high school



Of the high school graduates, only 44 enroll in college



Of those enrolled in college, only 26 will successfully earn a college degree

Educational Policy Improvement Center

"The Bermuda triangle of education ... Hormones are flying all over the place."

—Former Louisiana Superintendent of Schools Cecil Picard's description of middle schools

HOW CAN YOU TEACH TO REACH THEM?

ENGAGEMENT

Try: Gamification

The evolution and expansion of educational software with game-like protocols and rewards capture the imagination and drive persistence.



CONNECTEDNESS

Try: Blended Learning and Community Conversations

A valuable approach for students to express challenges and problem solve together.



MOTIVATION

Try: Challenging with Difficult Problems

Provide unique challenges that are purposeful, personalized, and thought provoking. Build confidence by making sure every student's needs are met.



INDEPENDENCE

Try: An Adaptive Program

Build ownership while providing a supportive platform for guidance. Goal setting and progress monitoring support independent learning pathways and a sense of accomplishment.



Only 35% of 8th grade students are math proficient

National Assessment of Educational Progress, 2013



HOW CAN WE CHANGE THAT STATISTIC?

By building middle school mathematicians who are:

1. Critical thinkers with a **growth mindset** that enables them to tackle complex problems in unique and effective ways.
2. Students who are given learning opportunities for **authentic engagement** with content, development of conceptual understanding, and achievement of procedural fluency.
3. **Curious, self-directed learners** who persist through even the most challenging problems.

Read our white paper, [Nurturing the Middle School Mathematical Mind](#) and share this infographic.



For more on how DreamBox® Learning Math can help support your middle school students, visit: [dreambox.com/middle-school](#).

