

## MATH STRATEGIES FOR GEN Z

by:

**Warren A. Malang**

*Teacher I, Roosevelt National High School*

Gen Z has unique learning styles influenced by their exposure to technology, collaboration, and fast-paced environments. Here's how these styles manifest in math learning:

### 1. Tech-Integrated Learning

**Preference for Digital Tools:** Gen Z thrives with apps like Photo math, Desmos, and Khan Academy, which provide instant feedback and interactive learning experiences.

**Interactive Platforms:** They engage with virtual whiteboards, simulation software, and graphing calculators that allow for hands-on exploration of math concepts.

### 2. Visual and Interactive Learning

**Visualization Over Memorization:** Tools like GeoGebra and dynamic graphing calculators help them understand abstract concepts through visuals and animations.

**Videos and Tutorials:** Short, engaging YouTube videos (e.g., by 3Blue1Brown or Numberphile) resonate well because they combine visuals with storytelling.

### 3. Collaborative and Social Learning

**Group Work:** Gen Z often prefers learning in groups, using platforms like Discord or Zoom to discuss problems and share solutions.

**Peer Feedback:** They rely on peer support through social media, study forums, or apps like StudyStream.

## 4. Gamification

Game-Based Learning: Math apps that use gamification (e.g., Prodigy or Math Blaster) tap into their love for competition and rewards.

Challenges: TikTok math challenges or competitive puzzle-solving apps motivate them to engage with math in fun, non-traditional ways.

## 5. Self-Directed Learning

Microlearning: Gen Z prefers bite-sized lessons, such as step-by-step problem-solving or short video explanations.

On-Demand Resources: They seek out help independently, using tools like YouTube, WolframAlpha, or even AI tutors like ChatGPT for instant assistance.

## 6. Real-World Connections

Practical Application: Gen Z values learning math concepts they can see in action, such as budgeting, coding, or designing.

STEM Careers: Showing how math links to exciting careers in AI, gaming, or tech keeps them motivated.

## 7. Flexible and Personalized Learning

Adaptive Learning: AI-powered platforms that adapt to their pace and weaknesses (e.g., Brilliant.org or Mathspace) cater to their need for personalization.

Choice in Learning: Offering multiple ways to approach a problem or concept helps them find a method that resonates best.

## 8. Emphasis on Feedback

Instant Results: They prefer immediate feedback to understand mistakes and improve quickly.

Iterative Process: Platforms that let them redo problems (e.g., Khan Academy mastery points) support their focus on continuous improvement.

## 9. Entertaining and Humorous Content

Math Memes and social media: Humor and relatable content make math feel less intimidating.

Edutainment: Learning through entertaining formats like podcasts or engaging TikTok videos works well.

## 10. Focus on Mental Health and Well-Being

Stress Management: Math anxiety is common, so Gen Z appreciates mindfulness techniques and encouraging environments.

Growth Mindset: They thrive with teachers and resources that emphasize effort and progress over perfection.

By combining tech-savviness, interactive content, and real-world relevance, math education can be aligned with Gen Z's learning preferences to make it more effective and engaging.

### *References:*

Teaching Gen Z. (2019). Math Giraffe.  
<https://www.mathgiraffe.com/blog/teaching-generation-z>

Marin, K. A., & White, S. J. (2023). Generation Z goes to math class: How the effective mathematics teaching practices can support a new generation of learners. *School Science and Mathematics*, 123(1), 31-37. <https://doi.org/10.1111/ssm.12565>