



# IDENTIFICATION OF NEWSWEEK'S 2020 TOP STEM HIGH SCHOOL RANKINGS

Understanding STEM In K-12 Schools Through  
Intelligent & Equitable Algorithms

## OVERVIEW



**Applying STEM To Better Understand it™**

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**Subject:** Methodology Comparison



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## **STEM.org Accredited™ Schools Oral Interview Process (+10% margin of error | Opt-In Only) 2012-2018**

*10 points +2 bonus; 100% scale w/ discretionary scoring ~ x 100 (12 possible = 120%) / Rubric-Based Methodology*

- **Standard 1: STEM Subjects (4 points; 40% weighted)**  
*The exemplar school provides AP / CTE courses in two or more science, technology, engineering and/or math subjects. Although two subjects are required, the organization should aim for all four STEM disciplines.*
- **Standard 2: 21st Century Skills (2 points; 20% weighted)**  
*Students have access to activities to strengthen their 21st Century Skills... These skills include media proficiency, creativity, environmental literacy and social / cross-cultural awareness.*
- **Standard 3: Content (1 point; 10% weighted)**  
*The school provides a degree of original STEM content to help parents / educators guide their children's / student's learning*
- **Standard 4: Diversity (1 point; 10% weighted)**  
*The program celebrates diversity and implements topics for a variety of learning needs*
- **Standard 5: Socialization (~1 point; 10% weighted)**  
*Opportunities are provided for participants to socialize and work with others during and after school*
- **Standard 6: Technology (~.5 point; 5% weighted)**  
*Technology is incorporated throughout the curriculum for which students can interact with... A reminder that technology can be, "any innovation or device created by people for the purpose of meeting a human need or want." (See Jolly, Anne, STEM by Design, 6)*
- **Standard 7: Hands-on Problem Solving (~.25 point; 2.5% weighted) / +1 point discretionary bonus**  
*All participants are actively engaged in STEM through hands-on activities and project-based learning*
- **Standard 8: STEM Career (~.25 point; 2.5% weighted) / +1 point discretionary bonus**  
*The exemplar site encourages students and children to pursue a STEM career through introductions or real-world challenges for them to solve.*

## **STEM.org Accredited™ Algorithmic Scoring (+/- 3% margin of error | All US High Schools) 2018-Present**

*Note: Rankings outlined below are independently verified for site & contact accuracy.*

### **Abstract:**

STEM.org Educational Research™ (SER) has developed a proprietary scoring logic utilizing the latest in regression analysis that takes into consideration a broad set of quantitative and qualitative data inputs, collected from Q2 2015 - Q3 2019. The purpose was to determine which primary/secondary institutions in America best offer students experiences in science, technology, engineering and mathematics (STEM) —as defined by the Congressional Research Service — while preparing them for post-secondary outcomes. Additional factors including custom affluence index were taken into consideration resulting in the latest Newsweek Top 5,000 STEM High School Rankings.

### **Sources:**

*STEM.org Educational Research Surveys (SERS)  
National Center for Education Statistics (NCES)  
School Attendance Boundary Survey (SABS) US  
Department of Education K-12 Data (Various)  
Private School Universe Survey (PSS)  
Privately Licensed Data (Various)  
Common Core Data (CCD)*

Cc: SER Advisory Board / George P. Butler III, Esq. / Paul Mersino, Esq. / Brian Wassom, Esq.



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