Elementary students think with their hands in the STEAM Studio

This year, the STEAM Studio (**Science, Technology, Engineering, Art, and Mathematics**) was established as a one-year enrichment program for all students in grades 1 – 5 at the California School for the Deaf. The program aims to provide innovative and engaging learning experiences to excite and capture students' interests. Through weekly themes, students are exposed to math, science, and engineering practices (as called for in California's Common Core Math and Next Generation Science Standards) through fun, hands-on experiences and opportunities for academic language development. All the while, students are learning to think like scientists and engineers: asking questions and wondering, drawing diagrams, building models, doing "exploriments", comparing and looking for patterns, counting and measuring, tinkering, reading to find out new things, defining problems and challenges, planning, constructing explanations, engaging in argument from evidence, and communicating information. As the year progresses, students will also learn about Deaf scientists, inventors, and engineers.

In the course of 6 days, students rotate through six different stations, gaining independence and choice through the year. After 6 days, a new set of projects is presented:

1. **Construction Challenge**
    Students develop the ability to problem-solve, persevere, and collaborate while engaging in construction and engineering projects.
2. **Maker Space**
    Prompted with creative project menus, students plan, design, and use available materials.
3. **Observation Station**
    Students attend to detail and accuracy as they use their power of observation to create scientific illustrations.
4. **Reverse Engineering**
    By using tools to take things apart and put them back together again, students learn how things work, as well as attention to detail, and meticulousness.
5. **Scientific Communication**
    Through American Sign Language, English, and art, students practice expressing what they have learned, while learning vocabulary, constructing viable arguments, and appropriately critiquing the reasoning of others in their scientific notebooks and on-screen vlogs.
6. **Apps, Coding and Robotics**
    Students gain exposure to 21st century skills, including keyboarding, coding, virtual reality, robotics, and learning how to choose tech tools strategically.

This program could not have been possible without many dedicated staff. Sincere gratitude goes to:
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  Teacher Specialists
  for their vision and guidance in designing, setting up, and managing the program
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  Elementary and Special Needs Teaching Assistants
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  for creating all the signs and labels that empower students to do for themselves
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- *Elementary Secretary*
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- **Adele Ann Eberwein and Ryan Souza**
  Elementary Principal and Special Needs Principal
  for training the students so that they have a successful experience, in addition to their general leadership and their will to make the STEAM Studio become a reality at the California School for the Deaf.

The program has been going well this year. However, such a program requires a great deal of tending. If you wish to contribute materials or expertise, please contact Teacher Specialists Brenda Call bcall@csdf-cde.ca.gov or Kathleen Mockus kmockus@csdf-cde.ca.gov