US/UK Collaborative Initiative: *Electronic Sentences*©

To: Interested Colleagues, Teachers and Current & Prospective Engineering by
                Design (*EbD™)* Trainers

From: the US/UK Design, Engineering and Technology Collaborative Team

RE: Electronic Sentences© -- *New Hands-on Pre-Coding & Digital Control*
         Materials for engaging K-3 Pupils in Practical 'Designing & Doing' Activities

Some Background: The Electronic Sentences© system (ES©) is the newest addition to our set of resources — a *Family of Tools and Materials* (FT&M) — to support Integrative STEM teaching and learning in elementary K-3 classrooms. The FT&M support design, engineering and technology (DE&T) as a hands-on and integrative approach to STEM learning. *(We have found teachers to be receptive to approaches that Integrate instruction, especially when they are expected to implement STEM programs.)*

The ES© Initiative: Interested teachers and trainers are being invited to participate in piloting a professional development (PD), no-cost workshop on Tuesday, July 19 at William Annin Middle School, 70 Quincy Rd, Basking Ridge, NJ 07920.

Additional offerings of the PD workshop, improved through the piloting process, are planned for the coming school year and beyond. Collaborating with NJTEEA, TSA and ITEEA in providing these workshop sessions, represents an important step toward a state-wide effort to support Integrative STEM learning. This initiative will take advantage of our earlier work that helped launch the ongoing Children's Engineering initiative in Virginia, and to use that experience to enhance the efforts of the NJTEEA to address the Standards for Technology and Engineering Literacy (STEL) and support STEM-related plans of the NJ Department of Education.

The ES Workshop: The workshop will prepare teachers to engage elementary children in using ES© to solve selected, real-life problems *(an example is shown in the Workshop document)*. The solutions to these problems provide examples of 'physical computing' deemed important in computer science learning, while also providing an age-appropriate introduction to the concepts of systems and control important for Integrative STEM teaching and learning.

The ES© workshop will consist of 6 contact hours (on July 19) and two, follow-up, after-school Zoom sessions, starting in October). *(Specific dates and times for these sessions will set in collaboration with the workshop participants.)* Please complete and submit the survey. If you have questions, send them to Dr. Ron Todd, Coordinator of the US/UK DE&T Collaborative Team, at <rdtodd1@mac.com>.

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