TALKING PAPER FOR AIAA
AT
THE UNIVERSITY OF TENNESSEE, KNOXVILLE

To grow the field of engineering and inspire innovation within our community, the student chapter of AIAA at the University of Tennessee, Knoxville has developed an educational workbook to share with local Knox County Elementary Schools. The goal of this program is to develop enjoyable activities for young students to help learn basic engineering skills and concepts while piquing their interests of a career in STEM.

Tasks taken to complete this workbook include:

1) Organizing student help workshops to brainstorm and test ideas.
   a) Early tests and proof of concepts for these workbook activities came at the attendance of multiple STEM Nights. Here, members interacted with teachers and students to provide a positive and fun learning experience.

2) Collaborating with the university to earn service hours for student contributions.
   a) This was done through the Clay and Debbie Jones Center for Leadership, allowing students to earn service hours to complete other societal / honors requirements.

3) Communicating with STEM educators to cater activities to their professional expertise.
   a) Teachers and administrators were given updates on our progress and given the opportunity to provide feedback on early workbook renditions, enabling us to cater the final copy to the needs of their students.

4) Improving and compiling activities into one cohesive workbook.
   a) Some examples of these activities include:
      o Build your own Stomp Rocket
      o Intro to Aerodynamics with Paper Airplanes
      o Baking Soda Combustion
      o How Robots Draw
      o Construct a Mechanical Arm
      o How Hubble Works
      o Along with other activities…

5) Distributing workbook copies to local schools throughout Knox County.

Final Thoughts:

With this experience, our members were able to produce high value impacts within our local community. We provided local schools with resources to incorporate STEM activities into their lessons and inspire a new generation of young engineers.

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