Agenda for Engineering Design Workshop at PSU-Schuylkill
December 2, 2017

Pre-workshop survey completion using personal phones or computers in workshop room.

Greetings and Introductions – (about 15 min)
>   Host greeting – Mike Gallis
>   Leader intro and greetings
>   Participant intros

Explanation of the role of Engineering Design in HS Science and connection to PA Standards (about 10 min)

Sail Activity (about 75 min)
- Introduce Sail Activity
- Participants use the Engineering Design Process to develop a sail to allow "boat" to traverse a distance with minimal wind in minimum amount of time using only the materials provided by workshop leaders. Sails are planned, designed, tested and revised.

Scribble Bot Activity (about 75 min)
- Introduce Scribble Bot Activity
- Participants use the Engineering Design Process to create a robot to meet the challenge offered using the materials provided by the workshop leaders. Bots are planned, designed, tested and revised.

Against the Wind Activity (about 75 min)
- Introduce Against the Wind Activity
- Participants gather data concerning motion of car with and without headwind.
- Participants use the Engineering Design Process to modify car so that it can again reach pre-wind stopping point, or at least improve performance using only materials provided by workshop leaders. Plans are made, cars redesigned, tested and revised.

Crash Barrier Activity (about 75 min)
- Introduce Crash Barrier Activity
- Participants determine the force exerted by Smart Car in collision without crash barrier.
- Participants use the Engineering Design Process to design crash barrier using minimal sheets of paper to decrease force to we can pick a fraction of the original force. Barriers are planned, designed, tested and revised.

Participant discussion of other ideas that they use or would like to use with their classes. (about 25 min)
>   Invitation to Spring workshop at University of Scranton

Post-workshop survey completion using personal phones or computers in workshop room.(about 10 min)
>   Certificates awarded.