



This *Biomechanics Education Activity* developed for the STEM Outreach Expo at the 40<sup>th</sup> Annual Meeting of the American Society of Biomechanics (ASB40)

**American Society of Biomechanics 40<sup>th</sup> Annual Meeting (ASB40)  
STEM Outreach Expo  
Call for Submission of Biomechanics Demos and Lab Activities**

- Do you have a great demonstration or lab activity to illustrate a biomechanical concept?
- Could your demonstration or lab activity be easily recreated in a classroom?
- Are you interested in a \$500 award to help with travel expenses to Raleigh, NC for ASB40?

If so, we at the American Society of Biomechanics (ASB) headquarters invite you to step up!

We are pleased to announce the initiation of a new NIH-supported, ASB educational outreach effort to compile and present 'hands-on' biomechanics demonstrations and lab activities. This is part of ASB's larger effort to get K-12 students excited about Science, Technology, Engineering and Mathematics (STEM) by showcasing the field of biomechanics to the general public.

We are calling on the ASB membership to submit lesson plans that could easily be recreated by teachers in a classroom describing a biomechanics demonstration, lab activity, or both. If chosen among the top 5 submissions, you and your team will get to roll out your lesson plan 'live' at this year's 40<sup>th</sup> annual meeting of ASB (ASB40).

Applicants will prepare a packet containing a description of a biomechanical concept along with step-by-step directions complete with list of materials/costs required to carry out a ~20 minute 'hands-on' demo or activity. Applicants will also prepare a short instructional video to be uploaded to YouTube demonstrating execution of the lesson plan contents.

**Submissions are due Monday, May 23<sup>rd</sup>. Click [here](#) to go to ASB40 website and download application instructions and materials.**

The top 5 submissions will be awarded a \$500 award to help defray the cost to travel to Raleigh, NC to attend ASB40. These 5 exemplar submissions will also be featured in the first annual ASB STEM Outreach Expo set to take place on the morning of the first day of the meeting (August 2, 2016) at the Hunt Library on NC State's Centennial Campus. This public event will be open to the general public, allowing for engagement between scientists and engineers (us!) and local students from school districts all around the greater Raleigh area. Following the Expo the selected submissions will be moved to a booth in the exhibit hall at the meeting site in the downtown Raleigh Convention Center and displayed for the ASB attendees to enjoy for the remainder of the conference. Funds will also be provided to cover the cost of supplies for the STEM Outreach Expo and exhibit hall displays.

Following ASB40, *all* applicants (winners and non-winners alike) will be given the option to make their lesson plans publically available on-line through a web-based archive of biomechanics educational materials hosted on the ASB webpage.



### **Biomechanics Demonstration/Lab Activity Directions**

1. Submissions can consist of a Classroom Demo, a Lab Activity, or both.
2. All submissions must include a YouTube video (max 3 minutes) and a written lesson plan on the provided template ([ASB40\\_Demo\\_Activity\\_Template.docx](#)).
3. Please include the names of authors, department, and institution in both the YouTube video and written lesson plan.
4. Lesson plans must be 12 pt. Times New Roman font.
5. The title of the YouTube video must begin with “ASB40:” and a link to the video must be included in the written lesson plan.  
(See example: [ASB40\\_Demo\\_Activity\\_YouTube\\_Example at https://youtu.be/QOvz5WpkE1Q](#)).
6. If you wish to submit a Demo and Lab Activity on different topics, you must complete a submission for each (separate YouTube videos and lesson plans).
7. If a Demo and Lab Activity are on the same topic, only one YouTube video and lesson plan are required (See example: [ASB40\\_Demo\\_Activity\\_Example.pdf](#)).
8. Please feel free to include figures or pictures as necessary.
9. Demos and lessons should be geared towards middle school students (grades 4-8).
10. Individual submissions are limited to a maximum of 3 pages.
11. Criteria for selection will include:
  - a. activity topic
  - b. clarity of description and video
  - c. cost and time required for the activity

Full criteria for judging can be found here: ([ASB40\\_Demo\\_Activity\\_Rubric.pdf](#))