

MARYLAND ENGINEERING CHALLENGES 2018



Future City - January 20
Wood Bridge - February 3
Paper Airplane - February 25
Cargo Airplane - March 4
Safe Racer - March 10
Theme Park - March 24
Robot - April 15
Straw Bridge - April 28
Cargo Ship - April 15
Hovercraft - April 14 @ MSU

Sponsored by:

BGE - Northrop Grumman - KELVIN
Engineering Society of Baltimore

Supported by:

Technology & Engineering Educators
Association of Maryland

Check individual Challenge
guides and participation
details at www.thebmi.org

OTHER IMPORTANT DATES

Coaches' Information Session

Thursday, Nov. 16 | 4-7 pm

Interested in the Challenges but not sure what to do? Drop in throughout the evening to meet the engineers who judge each Challenge. They will answer questions, demonstrate past projects, and explain requirements.

Free. Attendance not required. Registration encouraged. Email jkeffer@thebmi.org.

Coaches' Hands-on Workshop

Saturday, Jan. 27 | 10am-2pm

Work with engineers to explore the design and construction aspects of Challenges. Especially helpful for first-time coaches and/or those with little engineering experience.

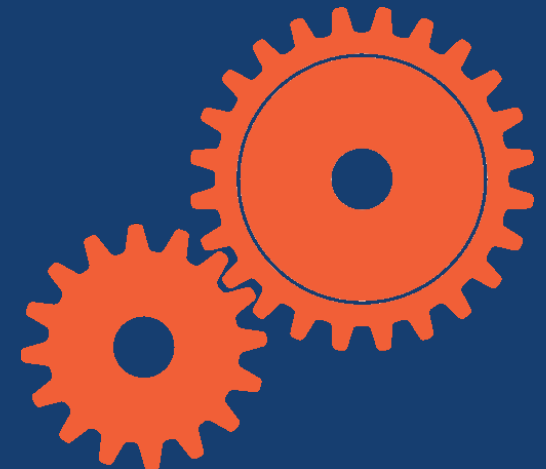
Free. Attendance not required. Registration required by 1/15. Email jkeffer@thebmi.org.

BMI Baltimore Museum
OF Industry

1415 Key Highway, Baltimore, MD 21230
www.thebmi.org | 410.727.4808

Baltimore Museum
OF Industry

MARYLAND ENGINEERING CHALLENGES 2018



BMI

ELEMENTARY SCHOOL LEVEL

PAPER AIRPLANE **Grades 1-5**

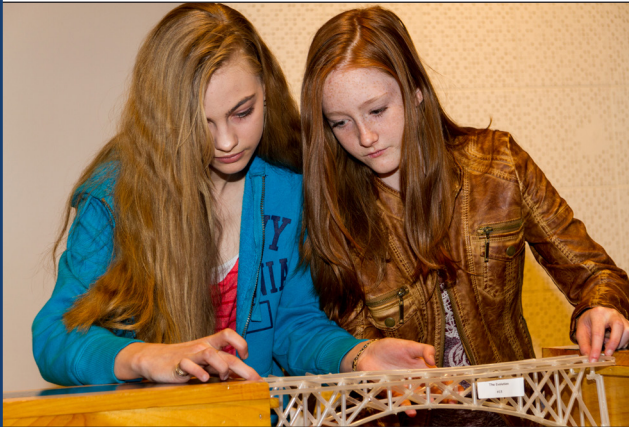
Design a paper airplane to safely fly a paper clip “passenger” as far and accurately as possible.

SAFE RACER **Grades 2-3**

Build a safe and speedy car to allow the “driver,” Eggbert(a), to survive a crash test and distance trial.

THEME PARK **Grades 4-5**

Construct a moving theme park ride, based on a literature curriculum reading.



MIDDLE SCHOOL LEVEL

CARGO AIRPLANE **Grades 6-8**

Construct an electric airplane to fly tethered flights with and without cargo.

HOVERCRAFT **Grades 6-8**

Build the fastest hovercraft to travel across the “Chesapeake Bay.” Takes place at Morgan State University.

STRAW BRIDGE **Grades 6-8**

Construct a plastic straw bridge to support a scale model truck for one minute.

FUTURE CITY **Grades 7-8**

Design a city of the future using SimCity software and create a model of one area.

HIGH SCHOOL LEVEL

CARGO AIRPLANE **Grades 9-12**

Construct an electric airplane to fly tethered flights with and without cargo.

ROBOT **Grades 9-12**

Construct a two or four leg robot to walk under direction over uneven terrain.

WOOD BRIDGE **Grades 9-12**

Design a structurally efficient bridge to hold the maximum load before breaking.

CARGO SHIP **Grades 9-12**

Design and demonstrate a ship to carry containerized cargo over a real water course.

