

MARYLAND ENGINEERING CHALLENGES 2019



Future City - January 19
Wood Bridge - February 2
Paper Airplane - February 10
Safe Racer - March 9
Straw Bridge - March 16
Theme Park - March 16
Hovercraft - March 16
Cargo Ship - April 14
Robot - April 13 or 14

Sponsored by:

BGE - Northrop Grumman - KELVIN
Engineering Society of Baltimore
W.R. Grace Foundation

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

Wednesday, Nov. 14 | 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. 26 | 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.

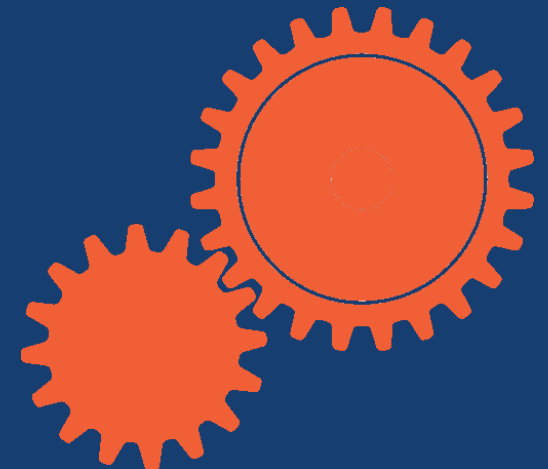
Free; attendance not required. Registration
required by Jan. 18. Email jkeffer@thebmi.org

BMI Baltimore Museum
OF Industry

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

Baltimore Museum
OF Industry

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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

ROBOT

Grades 6-8

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

HOVERCRAFT

Grades 6-8

Build the fastest hovercraft to travel across the "Chesapeake Bay."

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



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.