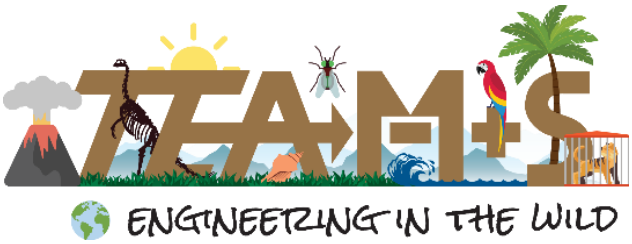
ARE YOU LOOKING FOR MATH-SCIENCE CO-CURRICULAR OPPORTUNITIES AND CONTESTS? CARROLL HAS THEM!

TEAMS (coached by Mrs. Fuhr, Science Dept, and Mrs. Ollier, Math Dept)



Tests of Engineering Aptitude, Mathematics, and Science (TEAMS) is an annual STEM learning competition for middle and high school students designed to help them discover their potential for engineering. During this competition, students apply math and science knowledge in practical, creative ways to solve real-world engineering challenges.

The three-part TEAMS competition includes:

- **Design/Build** – Teams design and build a solution to an engineering challenge.
- **Multiple Choice** - Teams use math and science skills to solve real-world engineering challenges that address current topics.
- **Essay** – Teams research and write an in-depth essay submitted electronically prior to their competition day.

Focused on a theme each year, original academic and innovative concepts are developed for the TEAMS competition based on the National Academy of Engineering *Grand Challenges*. The 2020 TEAMS competition theme was *Engineering in the Wild.* *(adapted from www.teams.tsaweb.org 10/2017)*

Science Olympiad (coached by Dr. O'Malley and Ms. Mulligan, Science Dept)

Science Olympiad competitions are like academic track meets, consisting of a series of 23 team events in each division. Each year, a portion of the events are rotated to reflect the ever-changing nature of genetics, earth science, chemistry, anatomy, physics, geology, mechanical engineering and technology. By combining events from all disciplines, Science Olympiad encourages a wide cross-section of students to get involved. Emphasis is placed on active, hands-on group participation. Through Science Olympiad, students, teachers, parents, principals and business leaders bond together and work toward a shared goal.

SCIENCE OLYMPIAD
Exploring the World of Science

Teamwork is a required skill in most scientific careers today, and Science Olympiad encourages group learning by designing events that forge alliances. In Elevated Bridge, an engineering whiz and a kid from wood shop can become gold medalists. Similarly, a talented builder and a student with a good science vocabulary can excel in Write It Do It, one of Science Olympiad's most popular events. *(excerpted from www.soinc.org/info 10/2017)*

Ohio Math League (moderated by Mrs. Emser, Math Dept)

Ohio Math League gives students an educationally enriching opportunity to participate in an academically-oriented activity and to gain recognition for mathematical achievement. Each contest (6 per year) covers topics that enrich the high school mathematics curriculum. The OML questions are varied in difficulty and involve topics of interest to students of all levels. Participation in OML encourages students to enjoy a challenge and to learn from it to find problem-solving discussions stimulating.
(info from www.mathleague.com, 10/2017)

American Math Competition

The AMC 10 and AMC 12 are both 25-question, 75-minute, multiple choice examinations in high school mathematics designed to promote the development and enhancement of problem-solving skills. The AMC 10/12 provides an opportunity for high school students to develop positive attitudes towards analytical thinking and mathematics that can assist in future careers. The AMC 10/12 is the first in a series of competitions that eventually lead all the way to the International Mathematical Olympiad. At Carroll, ALL students in Honors-level math classes have the opportunity to participate in the AMC 10/12 each year during a scheduled school day.

(info from https://www.maa.org/math-competitions 10/2017)

Math Club (moderated by Mrs. Ollier, Math Dept) Begun in 2018-2019 and re-invigorated in 2020-21, Math Club is student-led and meets about twice a month. This club is informal, fun and focused on 'interesting' ideas and mathematical topics. The purpose of Math Club is to expand students' understanding of mathematics and prepare students for a variety of math competitions.

Math Madness

Entering its fifth season, Math Madness is a one-of-a-kind, fun, team-based tournament-style mathematics event that puts hundreds of high school teams nationwide in head-to-head online competition with each other. After the first few weeks of round robin play, each school's Math Madness team is placed in a 64-team single elimination tournament bracket to determine the mathematical national champions.

Moody's Mega Math (M3) Challenge

The Math Modeling Challenge, sponsored by the Society for Industrial and Applied Mathematics (SIAM), is the nation's most prestigious national math modeling competition. Through participation, 11th and 12th grade students experience what it's like to work as a team to tackle a real-world problem under time and resource constraints, akin to those faced by professional mathematicians working in industry. The 2020 Challenge, *Keep on Trucking: U.S. Big Rigs Turnover from Diesel to Electric*, focused on the trucking industry and challenged students to predict what percentage of semi-trucks will be electric in the near future. (more info at https://m3challenge.siam.org/challenge)

OCTM State Tournament of Mathematics

The tournament, held on a Saturday in February each year, is sponsored by the Ohio Council of Teachers of Mathematics for the purpose of promoting student interest in mathematics and to recognize outstanding Ohio students and high school math programs with monetary and achievement awards. Top scoring students and teams may qualify for invitation to the Ohio High School Mathematics Invitational Olympiad (OHMIO). The OHMIO competition challenges students individually, in teams, and in a ciphering format. (info from www.octmtournament.org 10/2017)

University of Dayton Annual High School Math Contest

Sponsored by the UD Math Club, the UD HS Math Contest is a favorite among Carroll students and students from other area high schools. Working in teams of three, competitors have two hours to move in and out of ten different classrooms, each with the theme of a different area of mathematics. In each room, students work together to solve one of the problems worth 25, 50, or 100 points. At the end of the contest, team papers are scored, points are totaled, and medals and plaques are awarded to top scoring teams.

For information about any of these math opportunities and competitions, see your math teacher or contact Mrs. Mary Ollier (mollier@carrollhs.org) in room 104.