

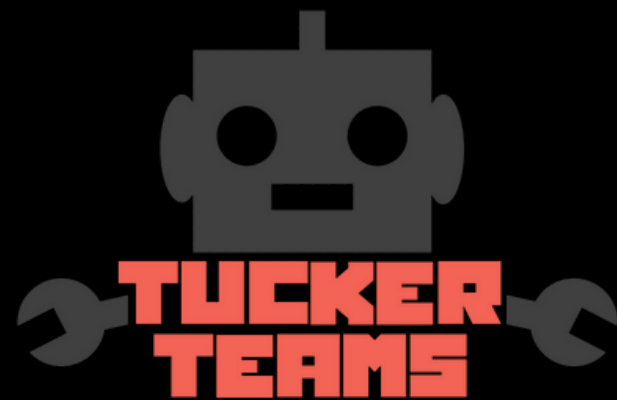
FIRST

Tucker Teams, WVROX,
Leaders & Innovators, Rebuilding FLL



TUCKER TEAMS

THROUGH TUCKER TEAMS, STARTED IN MEMORY OF MARS FOUNDER PHIL TUCKER, MARS STUDENTS PROVIDE HANDS-ON TECHNICAL HELP AND RESOURCES SUCH AS ESSENTIAL SPARE PARTS AND COMPUTER CODE TO TEAMS AT FRC COMPETITIONS SO THAT NO ROBOT IS "LEFT BEHIND." MARS STUDENTS ASSISTED MORE THAN 135 TEAMS DURING THE PREVIOUS COMPETITION SEASON.



IN 2021, MARS IMPLEMENTED AN ONLINE HELP DESK TO ANSWER TECHNICAL QUESTIONS AND EXPAND ASSISTANCE IN NON-TECHNICAL AREAS SUCH AS GRANT WRITING AND AWARD SUBMISSION. THIS ASSISTANCE IS OFFERED THROUGH VIRTUAL MEETINGS YEAR-ROUND.

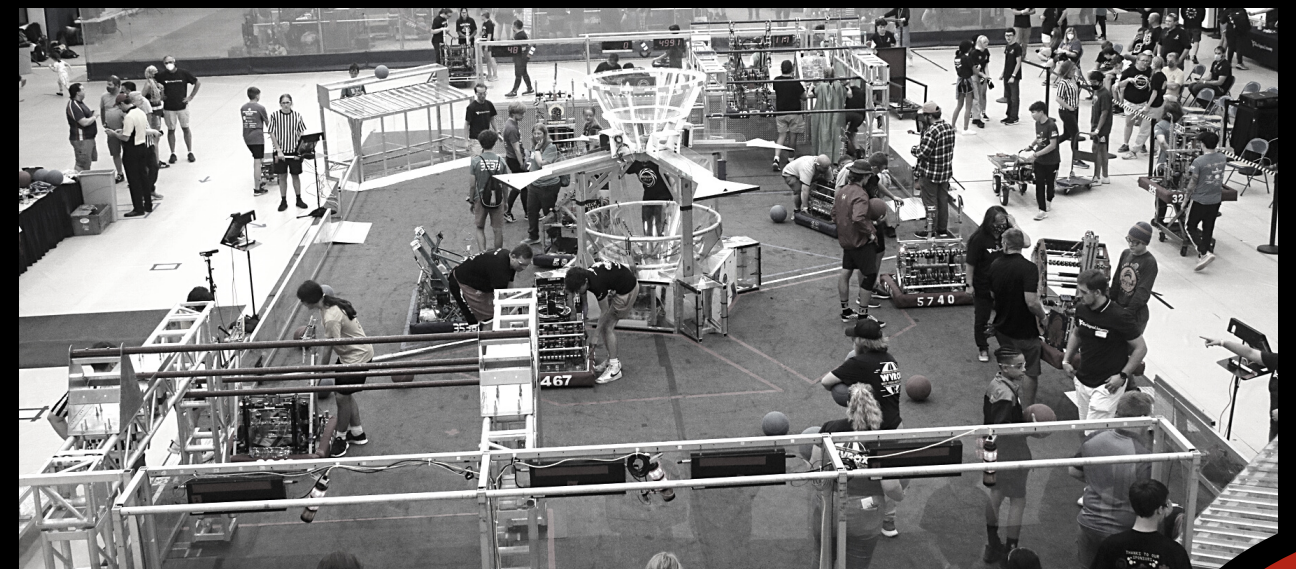
WVROX

MARS HOSTS A BIENNIAL OFF-SEASON FRC EVENT, WEST VIRGINIA ROBOTICS EXTREME (WVROX), THE WORLD'S ONLY ROBOTICS ENDURANCE EVENT. IT IS A 26-HOUR AND 14-MINUTE LONG EVENT THAT FEATURES SPECIAL MATCHES, LIKE OUR "LIGHTS OUT" AND HUMAN-PLAYER ONLY ROUNDS. WE HOST THIS EVENT WITH WEST VIRGINIA UNIVERSITY AND INVITE MANY LOCAL FRC TEAMS TO PARTICIPATE, ALLOWING THE REGION MORE STEM OPPORTUNITIES. WVROX IS OPEN TO THE PUBLIC AND MEDIA IS INVITED TO OBSERVE THE EVENT, SHOWING OUR COMMUNITY WHAT STEM HAS TO OFFER.

24
TEAMS IN
ATTENDANCE

104
QUALIFICATION
MATCHES

1,274
MARS
WORK-HOURS





WE ARE

MARS

2023

LEADERS & INNOVATORS



Henry Cerbone

HENRY IS A SENIOR AT HARVARD UNIVERSITY PURSUING SPECIAL BA/MS DEGREES ACROSS FIVE FIELDS INCLUDING ROBOTICS AND COMPUTER SCIENCE. HE WAS NAMED A 2023 RHODES SCHOLAR FOR HIS ACADEMIC AND EXTRACURRICULAR ACHIEVEMENTS.



Maggie Raque

MAGGIE WAS THE ELECTRICAL SUBTEAM LEAD WHILE ON MARS. SHE GRADUATED FROM WORCESTER POLYTECHNIC INSTITUTE IN 2021 WITH A BS DEGREE IN ROBOTICS ENGINEERING. SHE IS CURRENTLY WORKING FOR CORNING, INC. AS AN AUTOMATION ENGINEER.



Luke Scime

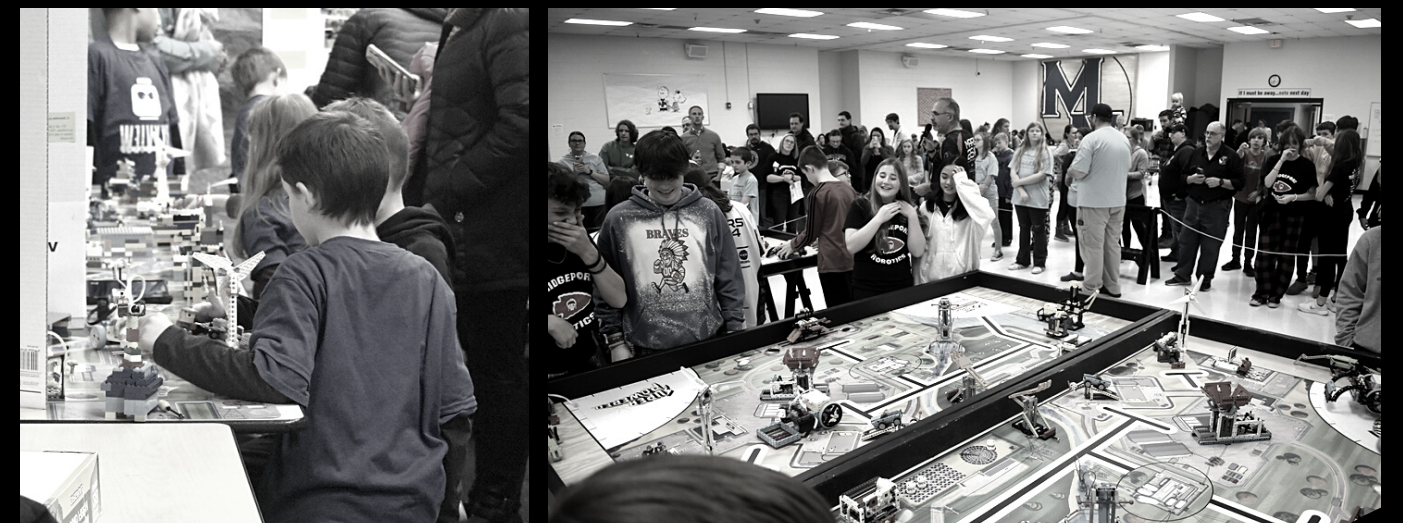
LUKE RECEIVED HIS PHD IN MECHANICAL ENGINEERING FROM CARNEGIE MELLON UNIVERSITY AND WORKS AT OAK RIDGE NATIONAL LAB. HE COACHES FRC TEAM 4265, THE SECRET CITY WILDBOTS, AND IS A 2021 WOODIE FLOWERS REGIONAL AWARD WINNER.

REBUILDING FLL

IN 2019, MORE THAN 125 FLL-C TEAMS OPERATED IN WEST VIRGINIA. AFTER COVID, THIS NUMBER WAS NEAR 0. NOW, MARS IS REBUILDING FLL AND HAS SINCE SEEDED AND SUPPORTED 5 NEW FLL-C TEAMS, PROVIDING REGISTRATION, ROBOT KITS, AND A WORKSPACE. IN 2022, MARS HOSTED 4 MENTORING SESSIONS AND 2 SCRIMMAGES WITH 21 FLL-C AND 14 FLL-E TEAMS. MARS CONDUCTS WEEKLY FLL-C PRACTICES WITH OVER 200 HOURS OF MENTORING FROM MARS STUDENTS, MANY WHICH ARE FLL ALUMNI.

2022-2023 FLL Stats

| | |
|----------------------------|----|
| First Lego League Events: | 13 |
| In-House FLL-C Teams: | 3 |
| In-House FLL-C Practices: | 71 |
| Number of Student Mentors: | 9 |



WEST VIRGINIA

Outreach, Hybrid Model,
Innovation Building, Drone Team



OUTREACH

MARS PROVIDES FOR STEM EDUCATION IN OUR COMMUNITY BY ATTENDING REGIONAL STEM FAIRS, FESTIVALS, SCHOOL STEM NIGHTS AND MANY OTHER PUBLIC EVENTS.

STEMcrafts

MARS DESIGNED STEM CRAFTS TO INSPIRE INDIVIDUALS BY TEACHING THEM BASIC STEM CONCEPTS IN A FUN AND ENGAGING WAY. THESE STEM CRAFTS CURRENTLY INCLUDE BRUSHBOTS, LIGHTSICLES, AND PLAY-DOH CIRCUITRY. ALONGSIDE THIS, WE PROVIDE STEM CRAFTS TO CLASSROOMS AND LOCAL ORGANIZATIONS EVEN AT EVENTS WE CANNOT ATTEND THROUGH THE USE OF THE HYBRID MODEL OF OUTREACH.



Story Books

MARS HAS DONATED COPIES OF "MARVIN'S MIGHTY MISSION", OUR CHILDREN'S STORYBOOK TO MORE THAN 10 ORGANIZATIONS RANGING FROM SCHOOLS TO CHILDREN'S HOSPITALS.

INSPIRED BY THE SUCCESS OF MARVIN'S "MIGHTY MISSION", WE ARE CURRENTLY PRODUCING A NEW COMIC BOOK, WHICH INSTILLS FIRST CORE VALUES AND INCLUDES A NONBINARY MAIN CHARACTER, REPRESENTING MARS' BROADER EFFORT TOWARD INCLUSION.

HYBRID MODEL

WHEN IN-PERSON EVENTS WERE CANCELED DUE TO THE COVID-19 PANDEMIC, MARS PIONEERED THE HYBRID MODEL OF OUTREACH USING TECHNOLOGY TO SAFELY CONNECT WITH OUR COMMUNITY. SINCE THEN, BY INTEGRATING IN-PERSON AND DIGITAL METHODS, VIA THE DISTRIBUTION OF STEM CRAFT KITS ALONGSIDE "HOW TO" VIDEOS, THE CREATION OF STORYBOOK READ ALOUD VIDEOS, AND THE EXPANSION OF OUR PRESENCE ON SOCIAL MEDIA, WE BROADENED THE ACCESSIBILITY OF OUR PROGRAMS. THE SUCCESS OF THIS MODEL IS EVIDENT IN THE FOLLOWING STATS:

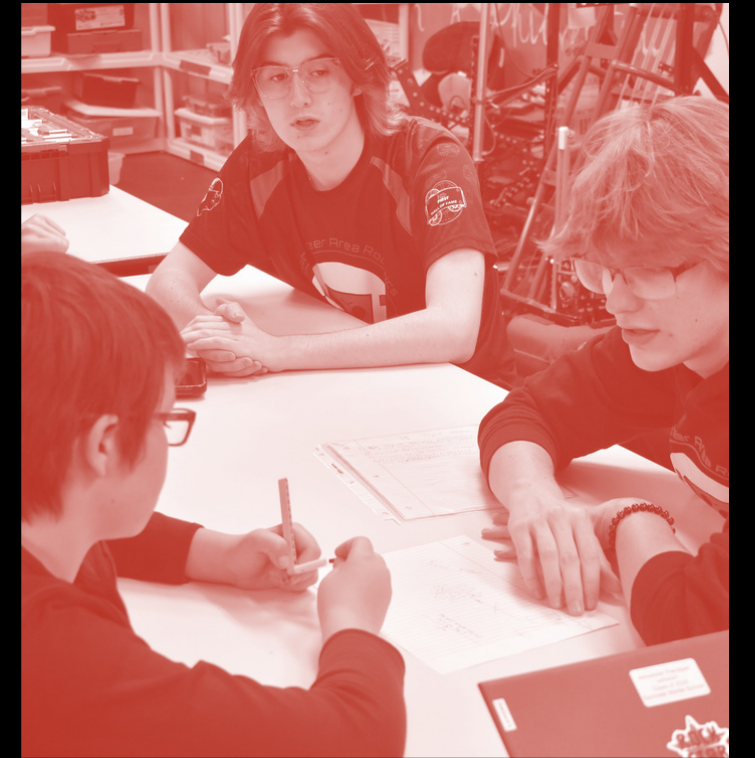


18,543
PEOPLE REACHED
WITH HYBRID MODEL

2,291
STEMCRAFTS
DISTRIBUTED

84
TOTAL EVENTS
WITH HYBRID MODEL





INNOVATION BUILDING

WE TRANSFORMED OUR PRACTICE AND STORAGE FACILITY INTO THE MARS INNOVATION BUILDING, INCREASING OUR ABILITY TO PROVIDE STEM EDUCATION TO OUR COMMUNITY. THE BUILDING IS NOW A DYNAMIC SPACE WITH 2 FLL-C FIELDS, A DRONE FIELD, A FRC FIELD, A CONSTRUCTION WORKSPACE, AND AREAS FOR OUTREACH AND TEAM ACTIVITIES.

THE MARS INNOVATION BUILDING IS A KEY FACTOR IN THE SUCCESS OF MARS' LONG-TERM STEM INITIATIVES THROUGH PROVIDING SPACE FOR WEEKLY 4 FLL-C PRACTICES AND A WEEKLY DRONE TEAM PRACTICE. ADDITIONALLY, THE BUILDING WAS USED FOR 4 FLL-C MENTORING SESSIONS, 1 FLL-E COMPETITION, AND 20 OUTREACH EVENTS IN JUST THE PAST 6 MONTHS.



DRONE TEAM

THIS SEASON, MARS ESTABLISHED A DRONE TEAM TO INCLUDE YOUNGER STUDENTS INTERESTED IN MARS, ACTING AS A MIDDLE-GROUND BETWEEN FLL-C AND FRC. THIS TEAM TEACHES VALUABLE SKILLS IN PROGRAMMING, FLIGHT PRINCIPLES, AND DOCUMENTATION. STUDENTS PROGRAM DRONES TO FLY AND COMPLETE MISSIONS TO EARN POINTS IN AN EXCITING 2V2 FORMAT.



Team Pluto

WORKING OUT OF THE MARS INNOVATION BUILDING, TEAM PLUTO PLACED SECOND IN PILOTING AND FOURTH IN AUTONOMOUS PLAY AT THEIR FIRST AERIAL DRONE COMPETITION.



DEDICATED TO



PHIL TUCKER
1962 - 2015

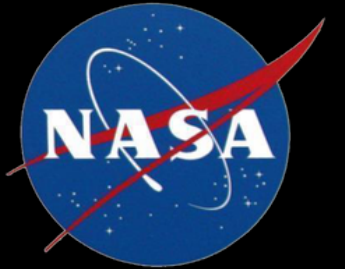
WOODIE FLOWERS
1943 - 2019



"Everything is theoretically impossible until it is done." - Robert A. Heinlein.

MARS 2614

2023 SPONSORS



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