



MARS

2014

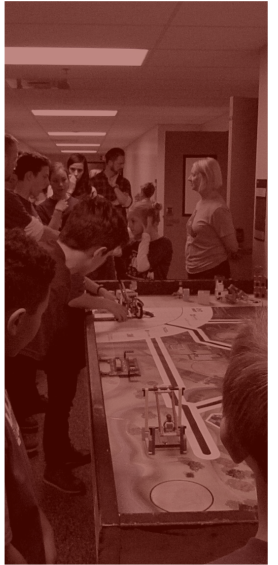
2019-2020

NON-TECHNICAL OVERVIEW



WE CAME TO
BE INSPIRED
WE STAY BECAUSE
WE ARE
WE WILL BECOME
THE INSPIRATION

We are
MARS



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EXECUTIVE SUMMARY

MOUNTAINEER AREA ROBOTICS (MARS), FIRST® TEAM 2614, WAS FOUNDED IN 2008 BY FIVE STUDENTS OF A FORMER FIRST LEGO® LEAGUE TEAM TO CONTINUE THE EXPLORATION OF SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) EDUCATION AFTER MOVING ON TO THEIR HIGH SCHOOL CAREERS. IN ADDITION, MARS SPONSORS AND MENTORS TEAMS IN FIRST TECH CHALLENGE (FTC), FOR THE AGES OF 12-18, FIRST LEGO LEAGUE (FLL), FOR THE AGES OF 9 - 14, AND TEAMS IN FIRST LEGO LEAGUE JR. (FLL JR.), FOR THE AGES OF 6 - 9.

THE MARS PROGRAM CONSISTS MAINLY OF YOUTH FROM NORTH-CENTRAL WEST VIRGINIA WHO DEDICATE THEMSELVES TO A RAPIDLY EXPANDING STATEWIDE ROBOTICS NETWORK. THROUGH CLOSE PARTNERSHIPS WITH WEST VIRGINIA UNIVERSITY, NASA'S KATHRINE JOHNSON IV&V FACILITY, 4-H, LOCAL SCHOOL SYSTEMS, AND NUMEROUS CORPORATE SPONSORS, MARS IS PROVIDING ENGAGING EDUCATIONAL OPPORTUNITIES AND SERVICES TO YOUTH THROUGHOUT THE STATE. USING ROBOTICS AS A FOUNDATION, MARS ENCOURAGES WEST VIRGINIAN STUDENTS TO PURSUE POST-SECONDARY EDUCATION. MAINTAINING THIS MISSION IS IMPORTANT BECAUSE CURRENTLY, ONLY 26.5% OF WEST VIRGINIAN HIGH SCHOOL STUDENTS WILL EARN AN ASSOCIATE OR BACCALAUREATE COLLEGE DEGREE. THIS IS CONSIDERABLY LESS THAN THE U.S. NATIONAL AVERAGE OF 43%. THE TEAM IS EXTREMELY PROUD THAT 100% OF MARS GRADUATES HAVE GONE ON TO PURSUE POST-SECONDARY EDUCATION, MANY WITH A FULL OR PARTIAL SCHOLARSHIP.



TEAM HISTORY

DURING THE TEAM'S FIRST TWO YEARS, MARS BEGAN ITS OUTREACH EFFORTS BY PARTICIPATING IN MANY COMMUNITY EVENTS, DEVELOPING AN INCLUSIVE MARKETING PLAN, AND BEGINNING A SUCCESSFUL FLL PROGRAM BY STARTING EIGHT AND SPONSORING TEN TEAMS. TO HELP OTHER FRC TEAMS, MARS DEVELOPED AN INFORMATIONAL MANUAL FOR ROOKIE TEAMS CALLED SEARCHING FOR ROOKIE TEAM INSPIRATION (SERTI).

IN THE 2019 SEASON, MARS PARTICIPATED IN THE 2019 MOUNTAIN STATE INVITATIONAL FLL EVENT AS REFEREES AND VOLUNTEERS, SERVING 62 TEAMS FROM 11 DIFFERENT COUNTRIES. MARS RAN THE ANNUAL MARS FLL SCRIMMAGE FOR THE 13TH YEAR IN A ROW, AS WELL AS THE MARS QUALIFIER FOR THE 6TH YEAR WITH HALF THE PARTICIPATING TEAMS ADVANCING ON TO COMPETE IN THE STATE TOURNAMENT. MARS ALSO ASSISTED IN THE FLL JR. EXPO AND THE FLL AND FTC STATE TOURNAMENT. THROUGH THESE EVENTS AND MANY OTHERS OVER THE COURSE OF THE OFF-SEASON, STUDENTS HAVE LOGGED OVER 2600 VOLUNTEER HOURS. MARS HAS ALSO REACHED MORE STUDENTS THROUGH FRC THAN EVER. MARS HELPED DARKSIDE ROBOTICS, ONE OF FOUR FRC TEAMS IN WV, BEGIN THEIR JOURNEY AS A TEAM AND HAD THE GREAT OPPORTUNITY TO WATCH THEM COMPETE IN THE WORLD CHAMPIONSHIP. MARS HAD THE IMMENSE PRIVILEGE OF TAKING PART IN THE KATHERINE JOHNSON IV&V FACILITY RENAMING CEREMONY, GIVING MARS THE OPPORTUNITY TO INTERACT WITH VARIOUS MAJOR FIGURES WITHIN THE COMMUNITY.



STUDENT LEADERSHIP

Student Leadership Council

ADMINISTRATOR



DIRECTOR OF
TECHNICAL AFFAIRS



PRESIDENT



DIRECTOR OF NON-
TECHNICAL AFFAIRS

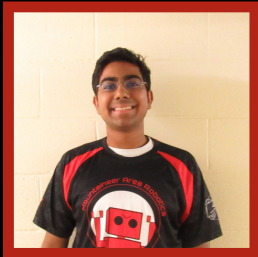


SECRETARY



Sub-Team Leads

PROGRAMMING



ELECTRICAL



MECHANICAL



OUTREACH AND
PUBLIC RELATIONS



Task Force Leads

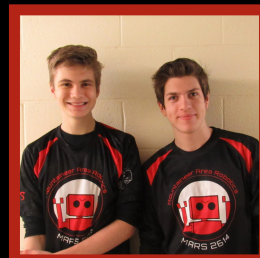
FLL JR.



FLL



FTC/VEX



FRC



CONTINUED...

Student Leadership Council

THE LEADERSHIP STRUCTURE OF MARS WAS CREATED IN THE 2016-2017 SEASON TO ENSURE PRODUCTIVITY AS WELL AS FACILITATE EFFECTIVE COMMUNICATION WITHIN THE TEAM. THIS ALSO PROVIDED A MORE OFFICIAL SYSTEM FOR DELEGATING NON-TECHNICAL TASKS. A FIVE-PERSON LEADERSHIP COUNCIL OVERSEES TECHNICAL AND NON-TECHNICAL SUB-TEAM LEADS AS WELL AS OUTREACH TASK FORCE LEADS. ALL LEADS ARE ELECTED FOR ONE FULL YEAR BY THEIR TEAMMATES. ADDITIONALLY, THE NEW STUDENT LEADERSHIP STRUCTURE PROVIDES A CHANNEL FOR COMMUNICATION BETWEEN THE TECHNICAL AND NON-TECHNICAL SIDES OF THE TEAM. THE STUDENT LEADERSHIP COUNCIL ALSO ENFORCES THE NEWLY-DEVELOPED CROSS TRAINING SYSTEM, WHICH WAS MADE TO EDUCATE ALL TEAM MEMBERS ABOUT THE IMPORTANT PARTS OF EACH SUB-TEAM'S WORK.

Sub-Teams

EACH SUB-TEAM HAS A STUDENT LEAD WHO ORGANIZES TASKS. THIS SYSTEM HAS PROVEN VERY BENEFICIAL FOR MORE ORGANIZED AND EFFICIENT TASK MANAGEMENT. MARS IS DIVIDED INTO TWO MAJOR SUBSETS: TECHNICAL AND NON-TECHNICAL. THE TECHNICAL HALF OF THE TEAM IS COMPRISED OF THE MECHANICAL, ELECTRICAL, AND PROGRAMMING SUB-TEAMS. THE NON-TECHNICAL HALF OF THE TEAM CONSISTS OF THE OUTREACH AND PUBLIC RELATIONS TEAM. EACH SUB-TEAM IS LED BY ADULT AND COLLEGE MENTORS WHO HELP GUIDE STUDENTS TO ACHIEVE MUTUAL GOALS. EACH SUB-TEAM ALSO HAS A STUDENT LEAD WHO HELPS KEEP THE TEAM ON TRACK DURING THE SEASON. FURTHERMORE, STUDENTS FROM ALL OF THESE SUB-TEAMS JOIN TOGETHER TO FORM "COMPETITION TEAMS" AT REGIONAL EVENTS.

Task Forces

EACH MEMBER OF MARS IS PLACED ONTO AT LEAST ONE OUTREACH TASK FORCE OF THEIR PREFERENCE. THESE GROUPS MEET WHEN NECESSARY TO DISCUSS AND ORGANIZE PROJECTS REGARDING THE DIFFERENT LEVELS OF FIRST. THE FACILITATORS OF THESE MEETINGS, TASK FORCE LEADS, ARE STUDENTS DESIGNATED BY THE STUDENT LEADERSHIP COUNCIL BASED ON MERIT AND EXPERIENCE IN EACH PARTICULAR AREA.

- FIRST LEGO LEAGUE JUNIOR TASK FORCE
- FIRST LEGO LEAGUE TASK FORCE
- FIRST TECH CHALLENGE/VEX ROBOTICS TASK FORCE
- FIRST ROBOTICS COMPETITION TASK FORCE



TUCKER TEAMS

No Robot Left Behind:

IN HONOR OF OUR LATE MENTOR PHIL TUCKER, TUCKER TEAMS ARE COMPRISED OF STUDENTS FROM DIFFERENT PARTS OF OUR ORGANIZATION. INSPIRED BY THE TUCKER TEAMS MOTTO: "NO ROBOT LEFT BEHIND," THEY ACTIVELY WORK DURING FRC COMPETITIONS TO PROVIDE OTHER TEAMS WITH HELP AND INSTRUCTION AND ENSURE ALL TEAMS ARE PLAYING TO THE BEST OF THEIR ABILITIES. THEY SERVE AS THE MAIN OUTREACH TEAM DURING COMPETITIONS.

THIS PROGRAM OFFERS MECHANICAL, ELECTRICAL, AND PROGRAMMING ASSISTANCE, AS WELL AS SPARE PARTS AND MATERIALS TO ANY TEAM IN NEED. IN THE PROCESS OF GETTING TEAMS THROUGH INSPECTION AND ON THE FIELD, OUR TEAM MEMBERS BUILD LASTING BONDS WITH STUDENTS AND OTHER FRC TEAMS. THIS BUILDS STRONG CONNECTIONS BETWEEN TEAMS, AND MEMORIES OF WHAT FIRST IS FOR YEARS TO COME.

TUCKER TEAMS ARE NOT ISOLATED TO MARS. WE SPREAD TUCKER TEAMS ACROSS FIRST, CONTACTING REGIONAL DIRECTORS AND EDUCATING OTHER TEAMS ON THE BENEFITS OF TUCKER TEAMING AND HOW THEY CAN IMPLEMENT IT INTO THEIR TEAM STRUCTURE THROUGH OUR HOSTED TALKS OR DIRECT COMMUNICATION.





VISION & MISSION

Vision:

MARS STRIVES TO PROVIDE A PURPOSE-DRIVEN, CREATIVE OUTLET FOR ITS STUDENTS THROUGH FRC, WHILE INSPIRING A CHANGE OF CULTURE IN RURAL COMMUNITIES THROUGH OUTREACH WITH FIRST AND STEM PROGRAMS.

Mission:

BY UTILIZING STEM PROGRAMS THROUGH THE MARS PLAN, IT IS THE MISSION OF MARS TO INSPIRE YOUTH IN RURAL AND UNDER SERVED AREAS IN WEST VIRGINIA AND AROUND THE WORLD TO PURSUE THEIR CREATIVE AND INTELLECTUAL PASSIONS. MARS DOES THIS THROUGH COMMUNITY OUTREACH AND DEVELOPMENT OF TECHNICAL PROGRAMS DESIGNED TO INSTILL SUPERIOR PRACTICAL LIFE SKILLS IN STUDENTS, INCLUDING: **GRACIOUS PROFESSIONALISM®**, **TEAMWORK, LEADERSHIP, AND COOPERTITION®**.

MARS MEMBERS ALSO DEVELOP EXCEPTIONAL PERSONAL PRODUCTIVITY SKILLS SUCH AS: **A STRONG WORK ETHIC, TIME MANAGEMENT TECHNIQUES, SUPERIOR DEDICATION, COMMITMENT TO TEAM AND COMMUNITY, AS WELL AS HIGHLY DEVELOPED ORGANIZATIONAL SKILLS.**

Diversity, Equity, and Inclusion Statement:

MARS WELCOMES ALL PEOPLE WITHOUT REGARD TO RACE, ETHNICITY, RELIGION, NATIONAL ORIGIN, SEX, GENDER IDENTITY, SEXUAL ORIENTATION, COLOR ANCESTRY, ABILITIES, ECONOMIC OR FAMILY STATUS, LIFE SITUATION, VETERAN STATUS, OR PHILOSOPHY. MARS STRIVES TO BE AN INCLUSIVE ENVIRONMENT FOR ALL INDIVIDUALS BY ADVOCATING FOR AND PROVIDING EQUAL TREATMENT TO ALL.



GIVING BACK

Go Baby Go:

MARS FREQUENTLY LOOKS FOR OPPORTUNITIES TO INVOLVE THE COMMUNITY. IN THE 2018 OFF-SEASON, MARS STUDENTS FOLLOWED THE EXAMPLE OF A 2012 DELAWARE BASED PROJECT ENTITLED "GO BABY GO" AND MECHANICALLY ALTERED A TOY CAR'S SEATING AND STEERING WHEEL TO GIFT TO A YOUNG CHILD WITH DISABILITIES. JUST MONTHS LATER, WE VOLUNTEERED TO BUILD A TOY ELEVATOR TO HELP A CHILD WITH DISABILITIES AND A FASCINATION WITH ELEVATORS GET EXCITED ABOUT LEARNING. WE ARE CURRENTLY GOING THROUGH THE PROCESS OF BECOMING A WV GO BABY GO CHAPTER AND RESOURCE.

Chairman's Exchange:

THE CHAIRMAN'S EXCHANGE IS AN INITIATIVE STARTED BY TEAM 2486, THE COCONUTS. IN 2016, MARS TOOK INSPIRATION FROM THEIR EFFORTS TO ASSIST TEAMS THAT COMPETE FOR CHAIRMAN'S. MARS ORGANIZED AND HOSTED EVENTS AT BOTH THE 2018 PALMETTO AND SMOKY MOUNTAIN REGIONAL COMPETITIONS. AT MARS' CHAIRMAN'S EXCHANGE, TEAMS DISCUSSED AND PRACTICED THEIR PRESENTATIONS. THE EVENTS GAVE THE TEAMS THE OPPORTUNITY TO RECEIVE ADVICE AND ASSISTANCE FROM EACH OTHER AS WELL AS A HALL OF FAME TEAM.

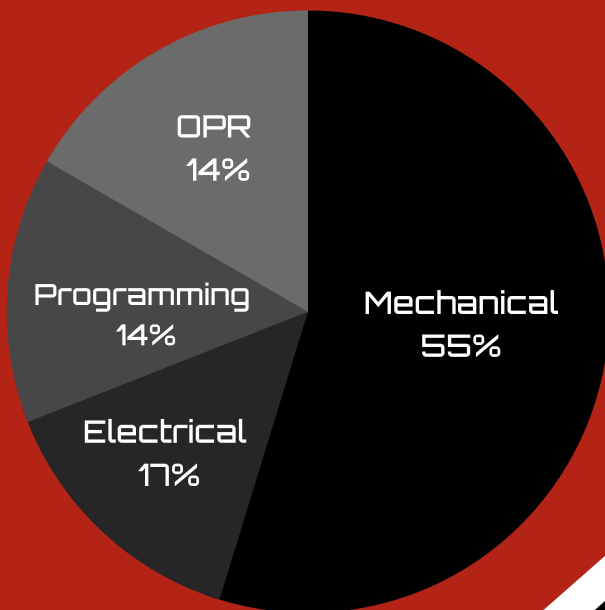
Play-Doh Circuitry:

IN MARS' TWELFTH SEASON (2019), THE TEAM PRODUCED THE "PLAY-DOH® CIRCUITRY" INITIATIVE BOX. THE BOX CONTAINS EVERYTHING A GROUP WOULD NEED TO COORDINATE THE ACTIVITY ON THEIR OWN; PLAY-DOH®, BATTERIES AND THEIR WIRE CONNECTORS, LEDS, AN EXPLANATORY HANDOUT DESCRIBING THE ACTIVITY, A SHORT PAGE ON BATTERY SAFETY, THE MARS MISSION AND VISION DOCUMENT, AND A MARS BUSINESS CARD IN CASE OF QUESTIONS. MARS THEN DONATED THIS BOX TO ELEMENTARY SCHOOLS, LIBRARIES, AND THE LOCAL CHILDREN'S HOSPITAL, AS WELL AS DISTRIBUTING THE MARVIN'S MIGHTY MISSION STORYBOOK TO DOCTOR'S OFFICES, LIBRARIES, AND OTHER ORGANIZATIONS.

VITAL STATISTICS

84
MARS
Alumni
2020

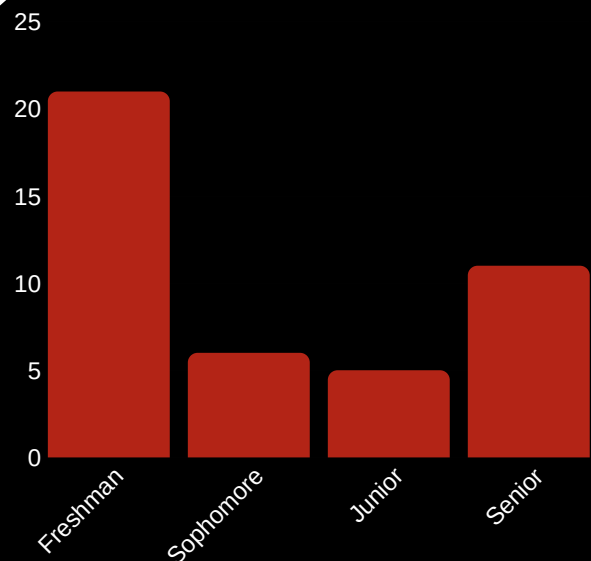
SUBTEAM BREAKDOWN



2600
OUTREACH
MAN HOURS

INDUCTED INTO
THE HALL OF
FAME IN 2017

GRADE SEPARATION



11,035 INDIVIDUALS
REACHED

2,021 MILES
OF OUTREACH
TRAVEL

