



# Gear Rotation

FIRST Tech Challenge Team #18442



Dear Chair Wilkins, Vice Chair Feldmark, and other distinguished members of the Ways and Means Committee, Gear Rotation 18442 is an all-girls FTC team based in Howard County, Maryland, that frequently collaborates with the STEM and robotics community. Through these efforts, we have witnessed first-hand the positive effect robotics programs have had on students in our community. The FIRST Robotics program is one of many programs that foster a sustainable learning environment for students interested in exploring STEM. Being a part of the FIRST Robotics program allows us to learn and master skills through hands-on experiences that are not always available in regular school courses, especially in underserved areas. One of our own members, Victoria, has stated that “[she] came in with very little coding experience. Thanks to the resources, mentorship, and support from our community, I’ve learned so much. Not just on technical aspects, but important life skills, like how to present myself and network with professionals in our community.” These STEM and Robotics programs teach not only the hard skills necessary to prepare students to join the STEM workforce, but also soft skills used in everyday life. Similar to sports, skills such as teamwork, communication, and leadership are key takeaways from robotics programs that prepare students for their future. HB531 recognizes the need for more STEM engagement in our schools, giving all students the opportunity to discover their interests in STEM, no matter where they are from. By introducing these programs to schools and establishing it as its own sport, especially in underdeveloped areas, it allows students who didn’t even know they had the option to pursue a career in the STEM field. Statistics from The FIRST® Longitudinal Study show that 83% of students who participate in the FIRST Robotics program pursued a STEM major, which is a large difference compared to the 63% of the comparison group, who did not participate in this program.

As the impact of STEM grows in our world, the interest in this field grows as well. Establishing STEM and robotics programs in our schools would allow students to explore and make something of these interests. When it comes to these programs, the problem is not finding students that are interested, but providing the funding and support to schools, so that the vast amount of students interested in STEM have the opportunity to explore and pursue their interests. Without consistent state funding, school-based robotics teams are limited and don’t receive the necessary resources to provide for their students. As a result, these teams become heavily reliant on grants from private companies or local organizations to fund their team. The issue with this is that schools in underserved areas have trouble finding funding within their community, depriving their students of the opportunity to grow and learn. Delegate Wu’s initiative with the establishment of HB531 provides Maryland schools with the means to support students who are interested in exploring STEM, and invests in the very students who will become our future.

This bill is about giving every student, no matter where they’re from, the chance to explore STEM, learn new skills, and pursue a career in a field that is becoming increasingly prevalent and important in our world. On behalf of the Maryland Coalition for Equitable STEM and Robotics, consisting of 34 teams, we hope you will support this effort so more students can have the opportunity to build their own future.



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Teams in the Maryland Coalition for Equitable STEM and Robotics:

1. Gear Rotation 18442	District 9A
2. Equilibrium.exe 19458	District 17
3. Gear Freaks 4991	District 9A
4. Byteforce 27075	District 9A
5. Robo Lions 2991	District 42C
6. Mechanical Masterminds 30329	District 13
7. Lego Brainiacs 66255	District 9A
8. DadIT 71788	District 9A
9. Fierce Engineers 71786	District 9A
10. Artifact Monkeys! 71787	District 9A
11. SpinAllDaWay 30736	District 13
12. Solarstorm 27019	District 9A
13. CyberChaos 25780	District 4
14. Team Sonic Bots 01 31944	District 4
15. 47 Beavers 13100	District 39
16. Kettle 4 the Medal 17477	District 5
17. Apex 31811	District 9A
18. Stelark 31676	District 9A
19. Photon Phoenix 32086	District 14
20. Steel Serpent 32367	District 16
21. Redstone 19434	District 39
22. Owls.exe 27025	District 17
23. Overchargers 26886	District 15
24. Rocket Robotics 22565	District 17
25. Keter 27054	District 18
26. Spiderbits 17219	District 13
27. Spyderbyte 10216	District 13
28. Blu Cru 6417	District 17
29. Lionfish.exe 24028	District 15
30. Tactical Sheep 7	District 34A
31. N-1 19876	District 34A
32. Green Gang 24158	District 17
33. Orca Robotics 21587	District 15
34. Code Bricks 66902	District 9A

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