



Grand Blanc High School Robotics Team



Initial Member Level Skills Challenge Deliverable – Operator and Driver

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Mentors to ask if you have questions about this Challenge: Brandi Bolinger or Clinton Bolinger

IMPORTANT NOTE: You must attend a competition that is offering official Skills Challenges or one of the designated Skills Challenge days in order to complete this challenge.

Gather the following Materials:

1. Your Engineering Notebook
2. Writing Utensils
3. A time-keeping device (stopwatch, wrist watch, phone, etc)
4. Instructions for current season Skills Challenge - VEX Robotics Competition Game (can be found at <https://www.vexrobotics.com/vexedr/competition/vrc-current-game> and scrolling near the bottom)

Before Starting this Challenge:

1. Read the instructions for the Robot Skills Challenge and familiarize yourself with the process of participating in a VEX Skills Challenge.
2. Pair up with a Student who is completing the “Advanced Level” portion of this Deliverable as a Drive Coach AND one other Initial-Level Student who is also completing this challenge.
 - a. If you cannot find an Advanced-Level to participate with, ask your Team Captain to help coach you.

Challenge Instructions

1. **You will need to complete this challenge TWICE – once as a driver, and once as an operator.**
2. NOTE: You will not be completing the Programming Skills Challenge for this deliverable; the Driver Skills Challenge will be used twice to complete this deliverable.
3. **THREE** people should be completing this challenge simultaneously- one as the OPERATOR, one as the DRIVER, and one as the DRIVE COACH.
4. If you are participating in one of the days offered at Premier - assign a person (who is NOT participating in this challenge as the Driver, Operator or Drive Coach) to be the time keeper.
5. Ensure that the field is set up in the fashion outlined in the instructions linked above.
6. Connect the robot to the field, and complete the Skills Challenge as per the instructions. Score your challenge.
7. Reset the field for the next group to use.
8. Repeat this challenge as necessary to allow you and your partner to complete as an OPERATOR and DRIVER.



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Engineering Notebook Entry Instructions:

Answer the following questions (using complete sentences) in your Engineering Notebook:

1. During a Skills Challenge Qualifier (only available at VEX competitions with more than 16 Teams, and a registered Skills Challenge event), what is the advantage of participating in Skills Challenges? *Note: This may take a little research, please do it yourself.*
2. Why is it important to maintain communication between the DRIVER, OPERATOR and DRIVE COACH before, during, and after a match?
3. What did you learn (that you previously hadn't realized) while completing this Skills Challenge as an OPERATOR?
4. What did you learn (that you previously hadn't realized) while completing this Skills Challenge as a DRIVER?
5. What was your score as an OPERATOR? Without changing anything on the robot, what could you do to improve your score?
6. What was your score as a DRIVER? Without changing anything on the robot, what could you do to improve your score?
7. After completing these Skills Challenges, do you think you would enjoy being on a VEX Drive Team (as a Driver or Operator)? Why or why not?
8. How have these Skills Challenges changed your impression of the roles, responsibilities, and emotions that come with being a member of the Drive Team?

To Complete Your Challenge:

1. Complete your Engineering Notebook Entry with COMPLETE SENTENCES.
2. Take your completed Engineering Notebook entry to Clinton or Brandi to have your deliverables checklist validated. *Please do not present your Engineering Notebook for approval during a VEX Event.*