



Grand Blanc High School Robotics Team



Initial Member Level Deliverables Claw Bot Chassis Assembly

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Mentor(s) to ask if you have questions about, and may sign off on this challenge: Clinton Bolinger, Robin Barrie OR Cathy Fillwock

Before Beginning This Challenge:

1. Check the board in the conference room to see if a Clawbot Kit is available to check out.
2. Reference the Recommended Completion Schedule calendar (located on the board) to see if this Deliverable is featured for your Team this month:
 1. If your VEX Team is the featured Team, then proceed with the instructions below.
 2. If not, ask a Veteran Student Team Member to go with you to ask the Team Captain of the featured Team if they plan to use the materials at tonight's meeting:
 1. If the materials will NOT be used by that Team, then proceed with the instructions below.
 2. If the materials WILL be used tonight, please choose a different training to complete today.
3. Choose ONE person to work with on this project:
 1. You need to know who you're working with BEFORE you check out materials, so you can sign out the kit together.
 2. You must work TOGETHER on this challenge.
 3. You should NOT "divide and conquer" to have one person do all of the assembly work, while the other takes notes.
 4. BOTH students should work on the assembly, BOTH should take notes.
4. Follow the directions listed on the board in the Conference Room to check-out a Kit (if available):
 1. Check to ensure that you have all of the materials on the checklist (included in the kit).
 2. If any materials are missing, please inform one of the Mentors listed above BEFORE you get started with build.
 3. Visit www.team2337.com/checkout on an internet connected device (yours or the Team's).
5. If you are working at Premier, the wireless internet password is: 2337is1337

Challenge Instructions:

1. If you get stuck, ask one of the veteran members of your Team to assist you BEFORE you go to a Mentor.
2. You may build in the Wood Shop, Back Room, or Lunch Room.
3. Follow AND document the assembly process on pages 5, 6, 8 through 11 and 16
 - o NOTE: You will **NOT** be:
 - Building the Upper Structure OR
 - Completing Steps: 4-6, 12-13, and 18-27
4. PLEASE do not write on provided materials
5. The instruction manual can be found here, for your reference:

<http://content.vexrobotics.com/docs/instructions/276-2600-CLAWBOT-INST-0512.pdf>
6. At the end of the meeting, you MUST:
 - a. Clean your workspace AND the floor around you:
 - i. Check the floor for any parts (washers, nuts, bolts, etc.) or trash
 - ii. Wipe off tables
 - iii. Push in Chairs
 - iv. Sweep the floor
 - b. If you are NOT done with your training:
 - i. Return all materials to the designated bin, including anything that you've assembled.
 - ii. Write BOTH of the names of the Students who are working on this Deliverable on a post-it, and attach it to the outside the bin (over the laminated label).
 - iii. Return the bin to the shelf in the conference room, with the label facing outward.
 - iv. **DO NOT** complete the online check-in form!
 - v. This kit will be held for you for one additional meeting. If you do not show up for the next two meetings, your work will be disassembled and the kit will be given to someone else.



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- c. If you are done with your training AND have had BOTH of your Engineering Notebooks validated:
 - i. Disassemble the chassis completely,
 - ii. Return all structural pieces, fasteners, and components to the designated areas in the bin:
 - Cross-reference the checklist and ensure that all of the items on the list are included. If anything is missing, please inform Clinton or Cathy **BEFORE** you check the kit back in,
 - iii. Check the kit in using the online form, available at www.team2337.com/checkin
 - iv. Return the bin to the shelf in the Conference Room, with the label facing outward,
 - v. Erase both of your names from the sign-out board, using a tissue and hand sanitizer.

Engineering Notebook Entry Instructions:

1. You may work together to create your journal entries, but you must BOTH write an entry (not make one and photocopy it for the other person) OR you may choose to work independently on your journal entries.
2. Entries should be developed while you are building, and document some of the assembly process.
3. Please consider the following points when creating your entries:
 - a. It's best to complete your entries in blue or black ink
 - b. Entries should reflect learning and dedication to improvement.
 - c. If someone who hasn't read the instructions for this training is looking at your notebook, would they know what your task was? Have you accurately described what you're doing?
 - d. Judges will be looking at this notebook at competitions – have you represented yourself and our Team graciously and professionally? Could this entry help you win any awards?
 - e. Many colleges request a portfolio for application. Have you done enough of a quality job to include this in yours?
 - f. It's okay to dislike completing a task, or to suggest improvements to a task. As long as you are gracious, we will always listen to your suggestions. Continuous improvement is one of the ethos of the EngiNERDs!
4. Answer the following questions, using COMPLETE SENTENCES:
 - a. Did you enjoy putting together the ClawBot? Why or why not?
 - b. What has the ClawBot assembly taught you that will be helpful in prototyping and designing other robots?
 - c. What improvements would you make to the ClawBot Chassis to make it a better design and why?
 - d. Do you see yourself participating in the mechanical sub-section of the FRC Team? Why or why not?
 - e. *Feel free to add any additional details or professionally-stated opinions to your entry.*
5. Think about including:
 - a. Drawings or sketches
 - b. Diagrams with dimensions
 - c. Photos (print and tape/glue)

To Complete Your Challenge:

Once you have finished your training:

1. Ensure that your Engineering Notebook entry is complete,
2. Bring your assembled ClawBot to one of the Mentors listed above for inspection,
3. Ask the Mentor to approve BOTH of your Engineering Notebook entries and have your deliverables checklist validated,
4. Work with your partner to disassemble the ClawBot completely,
5. Follow the instructions above to clean up,
6. Follow the instructions above to check the materials back in.