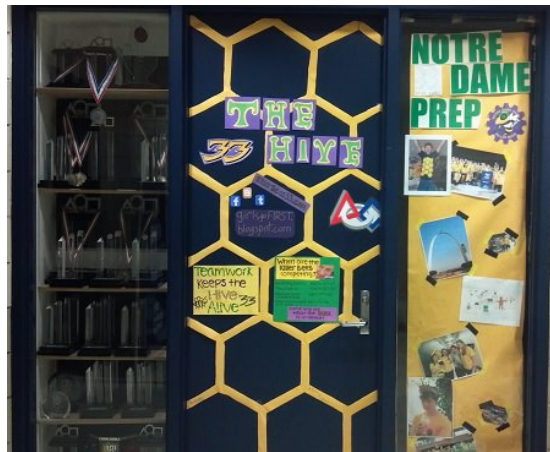




Welcome to the Killer Bees!

Freshman year, or your first year of robotics, can both be very hectic. Fortunately, we're here to help! This booklet will provide key information to learning basic shop rules, team structure, leadership opportunities, and how we do what we do.

The Killer Bees work in Chrysler Technical Center (CTC). Inside CTC, we have our very own shop and CAD room, as well as a shared conference room.



Computer Room

The CAD room is a room immediately outside the conference rooms across from the restrooms. In the CAD room, we store cool awards, competition supplies, enormous quantities of antenna, and food. There are multiple desktop computers that can be used for various things, as well as laptops that can be used for CAD, programming, and website design. The CAD room is the living room of the Killer Bees, so we try to keep it as tidy as possible! However, staying in the CAD room strictly to socialize is not recommended. Many times, people are trying to write submissions, brainstorm ideas, or take a quick break from working in the shop. Push your comfort zone and see what else you can learn.





Conference Room

The conference room is our team rendezvous at the beginning and end of meetings. On the Killer Bees, we use the time at the beginning of meetings to eat a snack, find out what's been going on with the team from mentors and students, and find out what tasks are on our plate for the day. Mentors usually ask who wants to do certain activities, such as taking apart an old practice bot, cleaning the shop, or writing articles for the website. Every task we do on team 33 is important, so volunteer and see what you can learn! Upperclassmen and mentors usually lead these groups and are very focused on helping our newBees learn, so you won't be put in a situation where you feel incompetent. At the end of the meeting, we all meet up for what we call "wrap up." Regardless of what you're doing, leave it for the last 15 minutes and come back to finish up. At wrap up, we recap what happened at the meeting. During build season, it is especially important to stay up to date on what other build groups are doing. Don't be afraid to contribute! We love to hear what you learned and did at the meeting.

Shop

The shop is usually the scariest area for new team members. You'll probably see lots of violent-looking machines that you don't know how to use, but don't be afraid. The shop is divided into two halves: one with workbenches (Tim's, Steve's, and Jim's) and one with a row of workbenches surrounded by the shop tools. The halves are separated by shelves and closets we use for storing materials.

****Important:** When you're on the side of the shop with shop tools, it is mandatory the you wear safety glasses** It may take awhile to get your lay of the land in the shop, but helpful mentors and students are always around.



Mentors

Mentors are a key part of our team. If they seem scary at first, just remember that these people are here to help you learn- not to terrify you. In fact, they'll probably strike you as a bit odd, but that's the way they are. Who else would want to stay after work to teach some teenagers how to build a robot? While our mentors teach us things, they're not our teachers. We all respect each other, but just because they're adults doesn't mean they can't have fun. Their knowledge, organization, and talents always help us on the team, and they're hilarious as well.



Student Leadership Opportunities

Mentors aren't the only people who lead our team. Student leadership is an integral part of the Bees. There are two types of student leadership titles: Presentation Teams and Competition Teams. While these are the only positions, everyone on the Killer Bees is expected to be a leader and act this way. Like Woodie Flowers says, pretend your grandmother is watching!



Presentation Teams

- Chairman's Presentation: Present prestigious Chairman's Award at competitions
- Engineering Inspiration: Present to judges; emphasize continuity and impact of team, alumni, and engineering
- Pit Presenters: Must be knowledgeable about the robot, explain to pit judges. Must also know about team organization and outreach
- Sponsor Presentation: Speak to executives of companies and others to secure sponsorship for the team

Competition Teams:

- Drive Team: Driver, Operator, Human Player; Drive and compete with the robot at competitions
- Pit Crew: Help prep, fix, and present the robot at competition.
- Media/Video: In charge of taping match video and the cameras at competition
- Scouting: Watch matches and record comments about other teams at the competition to help the team create a pick list for elimination rounds
- Pit Scouting: Records important information about other robots, takes pictures of each robot at the competition



During Build Season, we work in build groups encompassing **chassis, end effector(s), programming/electrical, scoring mechanisms, and endgame device**. These groups usually have a head mentor and several seasoned upperclassmen to teach rookies.



While the Killer Bees love to learn and our mentors love to teach, there are some topics best introduced in your own personal free time or in the offseason. For example, someone would love to help you understand CAD, but that time is NOT immediately after Kickoff. We offer the following student licenses:

- CAD (Computer Aided Design): Autodesk Inventor
- Programming: Licenses available for RobotC, LabVIEW, EasyC

If you are interested in getting started with CAD or programming, ask a mentor to sign out a Killer Bee laptop, which have the necessary programs loaded onto them. Another useful website is www.chiefdelphi.com, which is a forum for FIRST and OCCRA teams.

Offseason Opportunities:

Offseason opportunities are great ways to keep your skills in shape, transition from year to year, and learn new roles or skills. The Killer Bees typically meet year round every Monday at CTC from 4:30 to 6:30, and all students are welcome! (The offseason is any time period that isn't January to May, or Build and Comp Season) Current offseason opportunities include:

- Offseason events: MARC (Michigan Advanced Robotics Competition), IRI (Indiana Robotics Invitational), and Kettering Kickoff
- VEX (small robots)
- OCCRA (Oakland County Competitive Robotics Association)
- mentoring FIRST LEGO League teams (Marist, Holy Family especially)
- helping at demonstrations- including Maker Faire
- coming to offseason meetings
- working with the Purple Alliance (collaborative outreach with other teams)
- Sponsor Presentation Team*
- Chairman's Submission Team*
- Website Team*
- Video Submission Team*

*Note that all of the asterisked teams complete most of their work in the offseason. If you are interested in contributing to these groups, some form of participation in the offseason is necessary.

Team Spirit:

Part of being a Killer Bee is having a TON of team spirit. Not only does being positive make you more fun to be around, it also contributes to the atmosphere at our team both at Chrysler and at competitions. We break out the team mascot suit, the face paint, the flags and banners, the cheers, and the whole nine yards at competitions. We get as rowdy as we can be while being graciously professional, and it's fun that way.



Dress Code/What to Wear

While our mentors may not be teachers, our team does have a dress code for the sake of professionalism and safety.

For Meetings:

- DO's
 - Wear safety glasses
 - Wear comfortable clothes that you can work in/get dirty
 - Girls: Bring extra hair ties (no loose clothing or long hair down)
 - Wear comfortable and close-toed shoes
- DON'T
 - Wear a skirt to build a robot- it's a safety measure
 - Wear loose clothing or sweatshirts with strings
 - Wear your hair down
 - Wear open-toed shoes

Remember that we represent our team AND school at Chrysler. Dress appropriately, modestly, and comfortably.

For Competitions/Uniform Events:

- Killer Bee shirt WITH sponsors on the back
- BLACK pants; can be black jeans or black dress pants (**no yoga pants**)
- BLACK shorts of APPROPRIATE length WITH Killer Bee striped tights
 - www.welovecolors.com gold and black tights. (I recommend buying more than one pair. They're super awesome, and on days before competitions girls are allowed to wear them with their uniform skirt and KB shirt.
- MANDATORY antenna
 - on hats
 - on headbands
 - on safety glasses
 - in your ears
 - SOMEWHERE
- your own pair of safety glasses (required in the pits and on competition field)



Recommended Items to Bring

For Meetings:

- cell phone (cell service is very spotty in Chrysler. Mentor and Shop phone numbers can be found at the end of the packet.)
- homework- upperclassmen are always around to help before meetings, and if you're



swamped with work, feel free to take a break in the conference room. Part of bee-ing a Killer Bee is keeping up our grades

- Notebook and writing utensils- recording what happens during discussion is an important job!
- A positive attitude- you get as much out of the team as you put into it.

For Competitions:

- KB provided drawstring bag with name on it
- cash for concessions
- water bottle
- cell phone and spare battery pack
- headband and hair ties
- deodorant (nobody likes smelly freshmen. Watch out, we have Febreze and we're not afraid to use it!)
- safety glasses
- cameras
- Advil/Tums
- headphones
- Bee Pillow Pets!
- notebook and pencil/pen

This booklet is comprised of what older and more experienced Bees think would be useful to know as a freshman and what they think would help newBees adapt better. Keep in mind that this is not a manual or rule booklet- just helpful tips and tricks to navigating as a Killer Bee. In closing, a list of their individual thoughts is below:

- Chrysler is one big road. Avoid standing in the middle and blocking traffic.
- Ask as many questions as possible. It's the only surefire way to know how to learn.
- Measure twice, cut once.
- If you're uncomfortable with making a part well, always ask a mentor or upperclassmen for help. Ruining a piece and having to remake it is a pain that can be prevented.
- Don't sit in the shop and gossip, especially when others are trying to work.
- Reach out of your comfort zone; don't just stay in the CAD room and make antenna, try to learn something new. Try to work in pairs with upperclassmen; they're knowledgeable and willing to help.
- Bring your homework to meetings or the media center before meetings! Upperclassmen can always help with homework
- Be respectful of the fact that we are working in a professional workspace, and that our presence is a privilege, especially in places that aren't ours such as the NVH lab, the basement, the conference room, and the hallways. We need to keep these areas clean and professional.
- Know the shop phone number!

And most importantly...



KILLER BEES 33

TEAMWORK KEEPS THE HIVE ALIVE!

