

Round Table Robotics

First® Robotics Competition Team 1792,
Oak Creek High School
Safety Book



FIRST
POWER
UP

2018



Table of Contents

Team Safety.....	5
Safety Briefings.....	5
Mentor Supervision.....	5
Carabiners.....	5
Mentor Carabiners.....	6
Trauma Kit Training.....	6
Outreach.....	6
Dead Battery Project.....	6
National Night Out.....	6
Demonstrations.....	7
Trauma Kits To Sponsors.....	7
Sharing With FLL.....	7
Team Forms and Records.....	7
Safety Incident Reports.....	7
Safety Binders.....	7
Attendance.....	8
Safety Satchel.....	8
Pit Safety.....	8
Must-Have Pit Items.....	8
Contact Arenas Before Arriving.....	8
Safety Handouts.....	9
Safety Footprints.....	9
Round Table Robotics Pit Rules.....	9
Proper Protection Equipment.....	9
Conclusion.....	10

Team Safety

Safety is RTR's top priority. We understand that without safety procedures and outreach, our team and the community would be worse off. This is why we have an entire Safety Component Design Team, or CDT. This CDT is run by our Safety Captain, who maintains and updates all of our safety protocols and organizes even more ways for us to spread our safety policies. All of the tremendous effort we have put into securing safety both in and beyond our shops has been noticed by both our community and other teams. This is shown through the safety peer awards, pit safety awards, and runner up safety awards we have earned.

Safety Briefings

At the beginning of every meeting, we hold a safety briefing, in which the safety captain introduces or reviews a safety-related topic. These topics can range from the proper Personal Protection Equipment, how to use a battery spill kit, tips on staying safe on slippery roads, our evacuation plans, and more. Safety briefings are a unique beginning to every meeting that makes sure RTR members remain knowledgeable about safety.



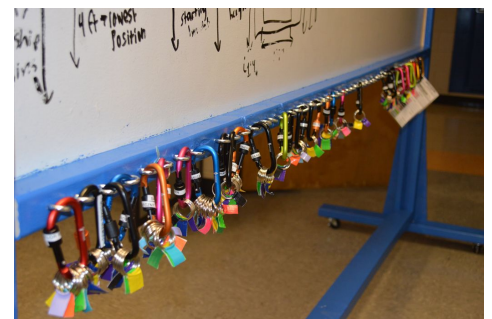
Mentor Supervision

In order to keep our facilities safe and secure, we have a policy that ensures safety through supervision. Students may not operate a machine without a mentor supervising. In addition, a student may not be in the shops without a mentor or any room without a mentor. This allows us to be comfortable and confident that students always have a mentor to go to if they have questions relating to machinery or tools.



Carabiners

While learning about all these new tools Round Table Robotics still makes it a priority that all students remain safe. We do this by keeping track of who is trained in which machines with our safety carabiners. When a member of RTR learns how to use a machine and shows sufficient knowledge of that machine to a mentor, they earn a flag on their carabiner. Each flag is a different color representing a different tool in all of our shops. All students are required to wear their carabiners in the shops so the mentors can see that that particular student is able to run that machine. And if a student does not have the correct flag, that mentor can help that student and help them on their way to earning that flag. This system keeps everyone in the shops safe while at the same time increases the teaching of new tools to our students.



Mentor Carabiners

In order to ensure that our mentors know who is trained in which machines, they wear carabiners that contain a small key to the safety carabiner color system.



Trauma Kit Training

Round Table Robotics (RTR) believes that any students should feel safe in school, so we took action. Every year, we pair with the Oak Creek Fire Department to teach every student on our team in the use of a trauma kit. A trauma kit, pictured to the right, is a package of medical equipment that stops intense bleeding, whether it be from an accident in the shops, or any unsafe incident. Teaching our students in the use of trauma kits means they will be able to save lives, in case an emergency ever did occur.



Outreach

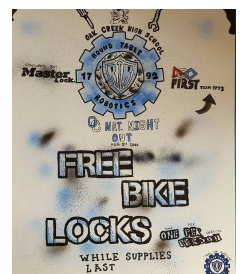
Dead Battery Project

At every competition we attend, such as the Milwaukee regional and Detroit championship, we spread the word to all women about sexual harassment by furthering the Dead Battery Project. This project spreads the word that if any woman is in a situation she feels uncomfortable in, she can go up to another female and say "My battery is about to die." This is a code word amongst women that means someone needs help getting out of an unwanted situation. In order to spread the projects, we put cards and stickers in the bathroom. Our goal is to help every girl feel safe in STEM, due to this industry being very male dominated. Women being outnumbered in STEM can often make it difficult for women and young girls to speak up, and we feel that spreading the Dead Battery Project will better the situation, one sticker at a time.



National Night Out

In the year of 2016, we demonstrated at Oak Creek "National Night Out." This is a city event in which we worked with our sponsor Master Lock and handed out over 400 bike locks. This not only helped keep members of our community belongings safe but also increased the general public's interest in our safety program and allowed us to share more about our team's safety policy.



Demonstrations

RTR averages ten sponsor demonstrations every year. Every sponsor demonstration we go to includes an entire slide on our safety routine, including trauma kits, carabiners, safety briefings, and more. This helps us spread our safety procedures into legitimate businesses.

Trauma Kits To Sponsors

In order to help other business be prepared for any situation, we have connected two of our sponsors, Nucor and Master Lock, with the Oak Creek Fire Department in order to secure trauma kits in their facilities. These businesses are production facilities that work with large machinery, and owning and understanding these kits could be vital in case of an emergency.

Sharing With FLL

We also make it a priority that we share our safety program with all of the seven FLL teams that we mentor. This includes ensuring that each team has emergency evacuation plans, as well as explaining why maintaining those procedures are important. This allows younger students to be exposed to how important it is to be safe, as well as always having a plan.



Team Forms and Records

Safety Incident Reports

Safety incident reports are forms RTR fills out when someone injures themselves at meetings or at competitions. This allows us to see the history of our team's injuries and see the common issues, if any, therefore allowing us to fix the problem. It also lets us know what we can teach our students in upcoming safety briefings based upon what is happening in the shops. Thanks to our thorough safety protocols and practices, we have had to fill out zero forms this season, but keeping logs just in case is a good practice to take part in.

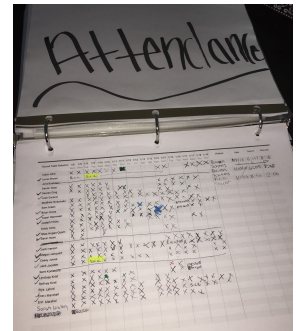
A photograph of a 'First Report of Injury Form'. The form is titled 'First Report of Injury Form' and includes a subtitle 'Complete this form if an injury requires medical assistance'. It contains various fields for recording incident information, including checkboxes for 'Injury' and 'Illness', and sections for 'Reporting Person's Name', 'Date of Incident', 'Time of Incident', 'Location of Incident', 'Witnesses', and 'Reporting Person's Signature'. There are also checkboxes for 'First Aid' and 'Medical Attention'.

Safety Binders

In order to keep track of all our forms and records, RTR has made safety binders that contain a list of each student and mentor on our team and what they're trained in. They also hold the FIRST safety manual, and our team procedures. This makes certain that all of our needed information remains in one consistent spot.

Attendance

Constantly keeping track of who is at each meeting is very important due to the necessity of knowing who was in attendance if an emergency were to ever happen. This would especially help us if we ever had to evacuate for any reason. To ensure we stay safe and prepared, we have an attendance binder in which we track who is at what meetings and when. When students walk through the door they sign in, and when they walk out they sign out. This is an extremely smooth process that works well for RTR.



Safety Satchel

The Safety Captain is in charge of wearing something called a safety satchel as a part of their uniform. This contains simple first aid supplies along with a trauma kit. The safety satchel, along with the safety captain, goes everywhere with the robot to ensure that we are safe no matter which location we move to. The safety satchel is a fun way to make sure we are still safe when we are on the move. Additionally, when at competition, the safety satchel is available to other teams if they need something from a first aid kit quickly.



Pit Safety

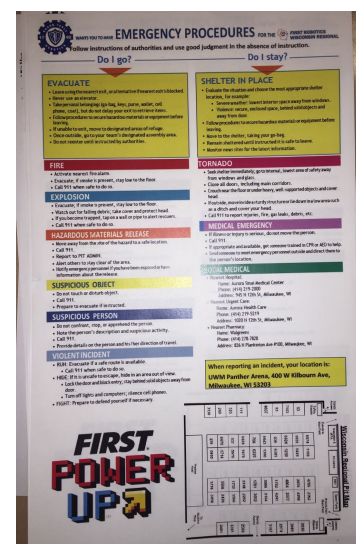
Must-Have Pit Items

We have a checklist of safety items that we constantly have in our pits. These are:

- Fire Extinguisher
- Fire Blanket
- Battery Spill Kit
- First Aid Kit
- Trauma Kit
- Eye Wash Station
- Extra Safety Glasses
- Earplugs
- Our safety binders. These include our MSDS sheets.

Contact Arenas Before Arriving

Round Table Robotics makes sure to contact every arena that competitions are held at prior to going. This allows us to figure out the evacuation plans and procedures ahead of time. Additionally, this practice of planning ahead not only benefits our teams, but other



teams as well. In the event of an emergency, RTR would be able to help with safely evacuating everybody due to us contacting the arenas before arriving.

Safety Handouts

The information we collect by calling arenas ahead of time is then put into a safety handout. RTR then passes out this Emergency Procedures sheet to every other team at competition. RTR goes through all this extra work to make sure no matter what happens, everybody knows what to do and where to go.

Safety Footprints

Another action we have taken to confirm safety in the pit area is to minimize. RTR has created “safety footprints” at one competition, and distributed them demonstrate the rule against running.

Round Table Robotics Pit Rules

Authorized Access:

We make it a priority to keep our pit controlled. We do this by having a maximum of 6 people in the pits at all times, with the exception of short periods of time when additional team members need to work on the robot. Additionally, if everybody has to leave our pit for any reason, we put up a rope as a blocking system to avoid anybody entering a dangerous or unsupervised area.



Safety Glasses:

Students are not allowed in the pit area without safety glasses. RTR enforces this rule among our team. This is a regulation we enforce in our own shops as well. Due to this, RTR always keeps numerous extra pairs of safety glasses in our pit, as well as in the safety satchel. RTR also enforces always wearing Proper Protection Equipment. More on our PPE can be found below.

Hazardous items:

One of Round Table Robotics’ pit rules include constantly keeping our eyes out for hazardous items. These hazardous items include tools on the floor, machinery out of place, or sharp edges. RTR is constantly on the lookout for these hazardous items to ensure that we can keep everything safe.

Proper Protection Equipment

It’s required for members of RTR to wear proper protective equipment while working in the shops or at competition. These are all kept in abundant supply in our shops to make sure everyone has the supplies to be safe. These supplies and requirements include:

Eye and Face Protection: Safety glasses at all times. In addition, welding helmets when necessary.

Hearing Protection: Earbuds or ear muffs when working with loud machines or in loud stands at competition.

Hand Protection: Correct gloves for the task at hand, such as using chemical resistant gloves with chemicals or welding gloves when working with metal.

Foot Protection: Closed toed shoes with a heel are required at all times. Toe guards or safety shoes are used if needed.

Other Preventatives: We make sure not wear any dangling items such as a tie, necklaces, or any loose clothing. Also, we tie our hair back and out of the way of anything.

Conclusion

Round Table Robotics strives for a safe workplace, and due to our constant and consistent efforts, the safety program is growing. We have started to share the program with our sponsors, FLL teams, and at numerous demonstrations in the community, and plan to expand our outreach more and more every year.