

# PASSPORT TO SAFETY





## PERSONAL INFORMATION

Name: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

Home Phone: \_\_\_\_\_

## I.C.E. NUMBERS (In Case of Emergency)

Coach Number: \_\_\_\_\_

Mentor Number: \_\_\_\_\_

Mentor Number: \_\_\_\_\_

Mentor Number: \_\_\_\_\_

Mentor Number: \_\_\_\_\_

## EMERGENCY NUMBERS

Police, Fire Department, Medical Services: 911


Poison Control: +1 (800)-222-1222

National Suicide Prevention Lifeline: 1-800-273-8255

**National Domestic Violence Hotline: 1-800-799-7233**

**National Sexual Assault Hotline: 1-800-656-4673**

Create your own Personal Emergency Card here:  
[team1676.com/pec](http://team1676.com/pec)

 <b>EMERGENCY CARD</b> The Pascack Pi-oneers FRC Team 1676 <a href="http://www.team1676.com">www.team1676.com</a>	NAME		
	BLOOD TYPE	DATE OF BIRTH	SEX
	ADDRESS		
	ALLERGIES		
	EMERGENCY CONTACT INFORMATION		

# WHAT IS SAFETY?

## SAFETY SUB-DIVISION

The Safety Sub-Division oversees team safety and enforces rules. The goal of Team 1676 is to operate in a safe manner through safety education, safety practices, and personal responsibility. The Safety Sub-Division is tasked with:

- Enforcing basic safety rules and proper safety practices
- Teaching team members how to safely use power tools
- Managing Tool Certifications
- Managing the team Safety Binder including: Safety Contracts, Machine Certification Chart, Injury Chart, Six Sigma integration, SDS (Safety Data Sheets), *FIRST* Safety Manual
- Instructing team members and mentors on steps to take in emergency situations
- Holding weekly Safety Sub-Division Meetings
- Maintaining First Aid Kits
- Advocating for safety in their school district, community, and *FIRST*



## **SAFETY CAPTAIN**

The Safety Captain is appointed by the team to manage and oversee all things related to safety at school and during competitions. Responsibilities include:

- Maintaining the team's Machine Certification Chart, Injury Chart, and the team's Safety Binder
- Developing the safety program and materials
- Maintaining the team's First Aid Kits, Bug-Out-Box, Bug-Out-Bag, and other First Aid supplies
- Overseeing Probation and Rehabilitation for safety infractions
- Developing and integrating Six Sigma methodology
- Maintaining an inclusive environment
- Updating the Pit Attack Plan
- Hosting safety meetings each week

## **SAFETY CO-CAPTAIN**

The Safety Co-Captain is appointed by the Safety Captain. In partnership with the Captain, the Co-Captain's responsibilities include upholding safety practices at all times, maintaining communication with the Safety Advisors, assuming Safety Captain duties when that person is not available, and aiding the Safety Captain with all duties.

## **SAFETY ADVISORS**

Safety Advisors are appointed by the Safety Captain and chosen from the different Sub-Divisions. They are responsible for enforcing and upholding safety practices within their Sub-Division.

# EDUCATION AND AWARENESS

## BASIC SAFETY PROCEDURES

- Always wear safety glasses
- Tie hair back in a bun
- Wear closed toed shoes with backs
- Do not wear loose or dangling clothing
- Do not have sweatshirt strings hanging out
- No jewelry or ties
- Uphold a clean working environment
- Wear earplugs when using the appropriate tools
- Gloves must be used when lifting the robot
- Be mindful of actions when working
- Uphold the 5S (Sort, Store, Shine, Standardize, and Sustain) when working

## PI-TECH ACADEMY

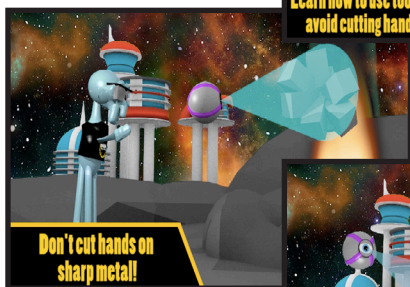
Pi-Tech Academy is a seven-week program of training sessions for team members prior to Build Season.

The Safety Captain gives a presentation discussing the team's safety curriculum to instruct students on proper safety practices. Potential members are tested on the information. Passing both written and practical exams earns one a place on the team. Also, during Pi-Tech, new team members are issued a pair of safety glasses and must sign a Safety Contract that outlines the safety rules.



## SAFETY ANIMATION

Each year the Safety Sub-Division and the Animation Sub-Division collaborate to create the Safety Animation. The Safety Animation covers different areas of safety such as transporting the robot or explaining basic safety rules. Each year's animation submission is played in the pit.



## SIX SIGMA

The Pi-oneers initiated Six Sigma; “sigma” represents the standard deviation of a process, and the “six” means there are six standard deviations. By making work habits more consistent, there will be less variation, better communication, and ultimately a safer workplace.

Team 1676 has begun to implement various Six Sigma tools and strategies. The Six Sigma methodology allows the team to operate in an organized fashion. All Sub-Divisions strive to maintain an efficient and safe work environment by utilizing techniques including sorting methods, mistake proofing, standardized work, visual controls, and diagrams.





# SAFETY PROCEDURES

## MACHINE CERTIFICATIONS

The Machine Certification Program was implemented to train team members on the safe and proper methods of using each tool and machine. Members of the Mechanical Division are trained on each power tool and are required to pass a test demonstrating competency. Certification is open to all members of the team. A colored tape corresponding with the certification is issued by the Safety Captain to be applied to team member's safety glasses. This visually indicates what tool a member is certified to use. All certifications are then recorded on the Machine Certification Chart.

Chop Saw: **Red**  
Bandsaw: **Blue**  
Drill Press: **Yellow**  
Sander/Grinder: **Green**



## REHABILITATION AND PROBATION

The Rehabilitation Program was developed to improve overall team safety. If a team member breaks a safety rule more than twice, they temporarily lose their certifications and must perform team service related to 5S. After finishing their rehabilitation, the team member enters the Probation period. During Probation, the team member is recertified by a mentor.

## SAFETY TALK

Every week of Build Season, the Safety Captain reviews safety topics with the team in order to ensure consistent compliance and reinforce safety practices.

## SAFETY POSTERS

Safety Posters are displayed throughout the workshop and next to the tools, reinforcing basic safety rules, specific tool information, the 5S, and a tape certification key.



## BANDSAW

- Always keep fingers 3 inches from the blade
- Never use your thumbs to push toward the blade
- Keep a two foot perimeter around the saw clear
- Keep the blade guard & guide only 1/4 inch above your stock
- Keep bystanders away from the right hand area of the saw. Broken blades have a tendency to fly out to the right.
- Always keep your fingers and hands away from the path of the blade
- Use push sticks or any other safety device when cutting small or short material
- Do not force a cut
- Cut relief cuts prior to cutting long or tight curves. The relief cuts will free the blade of the tension of the tight curve and the wood will fall away. The blade size will dictate the radius of the cut.
- If you need to back out of a cut, shut the machine off, and back out after blade stops. If a blade breaks, shut the machine off and stand clear until everything stops.
- When cutting with the table at an angle, clamp a block to the table to prevent your stock from slipping off the table
- Turn off the bandsaw and wait until it comes to a complete stop. Never stick an object into the blade to stop it more quickly. Let it stop on its own.

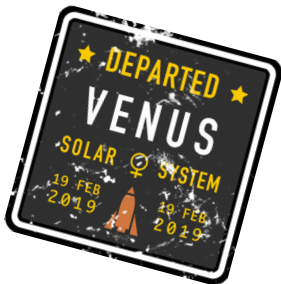


## **DRILL PRESS/HAND DRILL**

- Do not wear gloves or anything that could allow a hand, fingers or clothing to be wrapped around the revolving bit
- Keep a two foot perimeter around the drill press clear
- Ear protection is necessary in certain circumstances
- Make all drill press adjustments with the power shut off
- Center punch the drill-hole location into the stock. Insert bit into drill chuck and tighten with the chuck key. Remove chuck key from the drill chuck before starting the drill press.
- Use a clamp or vise to securely fasten the stock to the drill press table
- Never attempt to hand-hold stock while drilling
- Long stock should be drilled with the excess to the left of the operator
- Keep hands and fingers at least 3 inches from rotating drill bits
- When drilling deep holes, frequently raise the drill bit from the hole to remove cuttings and cool the bit
- If a drill bit binds, turn off the drill press and carefully turn drill chuck backward by hand to free the drill bit
- Don't touch the drill bit and shaving since they are hot immediately after drilling
- Always clean the drill press table and work area

## MITER SAW (CHOP SAW)

- When using a sliding miter saw, start cutting with the blade closest to you, plunge downward, and then push the blade forward on its sliders as you cut
- Unplug or lockout power to the miter saw when making repairs or adjusting blades and guards
- Hands and fingers must be kept clear of the blade by at least 6 inches
- Wear ear plugs
- Do not wear gloves
- All guards must be in place and operating
- To avoid losing control or placing hands in the blade path, hold or clamp all material securely against the fence when cutting
- Never cut small pieces
- Long material should be supported at the same height as the saw table, in our case, held by a partner
- To avoid contact with a coasting blade, do not reach into the cutting area until the blade comes to a full stop
- After completing a cut, release the trigger switch and allow the blade to come to a complete stop, then raise the blade from the workplace



## SANDER/GRINDER

- Do not wear gloves
- Sand on the section of the disc from the center to the left edge
- Do not try to force the sander to remove material faster than the power that is available from the drive motor
- Be sure the table is locked in position before placing stock on it and that its front edge is within 1/16" or less of the disc or belt.



# WELLNESS INITIATIVE

In the 2018-2019 season, the Pi-oneers expanded the Wellness Initiative through several new programs. To help team members manage the stress of Build Season, Team 1676 has implemented different methods of reducing stress and anxiety including:

- LGBTQ+ Safe Space
- Calm.com- app for meditation and mindfulness
- Aromatherapy Saturdays
- Deep breathing graphic created by the Animation and Safety Sub-Divisions
- Wellness Initiative Mentor who is available for on-the-spot guidance and is responsible for the Pi-oneer Leadership Training Program, which includes training on Personality Typing and Color Languages.

## Relaxation Stations

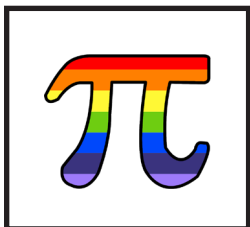
- Hot Tea Station
- Minute Movements and Yoga
- Mindfulness Meditations
- Tabletop Zen Sand Garden
- Acupressure Massager

The ultimate goal of the Safety Sub-Division is to work with the Guidance Departments and Wellness Centers from both schools to extend these programs to school leaders in other areas.



## LGBTQ+

Team 1676 recognizes and accepts students and mentors of all genders, ethnicities, races, and sexual orientations. Having a goal to instill a more inclusive environment, the Pi-oneers created LGBTQ+ inspired pins and a pit sign that establishes the pit as a safe space for everyone.





# COMPETITION SAFETY

The Pi-oneers maintain a comprehensive safety program at competitions that includes the following:

- Safety Review
- Emergency meeting spot
- I.C.E. Numbers
- Buddy System
- Safety Binder
- Pit Attack Plan
- Six Sigma
- Bug-Out-Box, Bug-Out-Bag, and First Aid Kits

## SAFETY PROTOCOL REVIEW FOR COMPETITIONS

Before entering the competition location, the Safety Captain delivers a Safety Speech to reinforce safety protocols.

## EMERGENCY MEETING SPOT

An emergency meeting point located outside the competition venue is announced for each competition.

## I.C.E. NUMBERS

All team members have the coaches cell phone numbers for I.C.E. circumstances.



# COMPETITION SAFETY

## BUDDY SYSTEM

The Pi-oneers enforce a strict buddy system, requiring team members to never travel alone anywhere during the competition for any reason at any time. This ensures teammates will always have someone they can rely on during certain situations, such as getting lost or hurt.



## SAFETY BINDER

The Safety Binder is brought to all competitions and is available for reference at all times. The binder includes:

- The FRC Safety Manual
- Safety Data Sheets (SDS)
- List of team members with any ailments or other necessary health information
- Safety contracts for Pit Crew
- Six Sigma information
- Before competition packing list
- Machine Certifications and Injury Chart

## **PIT SAFETY**

### **WELL-STOCKED PIT**

In the pit area, the team maintains a well-stocked First Aid Kit, a portable fire extinguisher, and two battery clean-up kits, complete with acid-resistant gloves. Extra gloves, hair ties, safety glasses, and earplugs are also available. The team's "Bug-Out-Box" is a portable First Aid Kit the team brings to all events and competitions. It contains materials used in any given emergency situation and is also available at all times in the pit.

### **PIT ATTACK PLAN**

The team maintains a "Pit Attack Plan". All Pit members have assigned duties to carry out in case of an emergency, and must check in and out of the Pit when leaving the area. Everyone is assigned a job to do in this order:

- 1. TAKE CONTROL:** This person will tell everyone what to do if there is an emergency and make sure the area is secured to provide care for the injured person.
- 2. GO FOR HELP:** This person will find a Pit Admin, EMT, or mentor.
- 3. SECURE THE AREA AND BACK IT UP:** These people will back up the situation and square off the area.
- 4. PERFORM COMPRESSIONS:** A person who is CPR/AED certified is in charge of giving compressions.
- 5. RETRIEVE BUG-OUT-BOX:** This person will have the First Aid Kit and other essentials for any situation.
- 6. RETRIEVE BATTERY SPILL KIT:** This person will retrieve the battery spill kit that contains baking soda, gloves, bags, and paper towels.

# BUG-OUT-BOX & BUG-OUT-BAG

The team's Bug-Out-Box and Bug-Out-Bag are portable First Aid Kits that are brought to all events and competitions, and are stocked with a variety of emergency medical supplies. They are available at all times in the pit area and in the stands.

## THE BUG-OUT-BOX IS SUPPLIED WITH:

- 4x4 and 2x2 gauze pads
- 4.5x9.3 inch bandage roll
- Instant heat and ice pack
- Assortment of creams (itch stopping cream, skin calming cream, Vaseline, Neosporin, pain relieving cleansing spray, wound wash, disinfectant spray, and hydrogen peroxide)
- Assortment of Medications
- iPhone charger and charging cube
- Notebook and Sharpies
- Multi-tool and flashlight
- Nitrile Gloves
- Tweezers
- Antacid tablets
- Wrapping
- Alcohol wipes
- Band-aids



## THE BUG-OUT-BAG IS SUPPLIED WITH:

- A variety of bandages
- Alka-Seltzer
- Alcohol swaps
- Android and iPhone Chargers
- Anti-Bacterial wipes
- Anti-Bacterial ointment
- Baby wipes
- Benadryl
- Candy and Mint gum
- Cleansing Solution
- Cold Medicine
- Compression Wrap
- Cortisone Cream
- Cotton-tip Applicator
- Cough Drops
- Crisis food for Hypoglycemia
- Dental Picks
- Duct Tape
- Feminine Hygiene Products
- Flashlights
- Gauze Sponges
- Hair ties
- Hand warmers
- Hydrogen peroxide
- Ibuprofen
- Ice Pack
- Notebook
- Paper Towels
- Pepto-Bismol
- Petroleum Jelly
- Plastic bags
- Roll Cling
- Rubber bands
- Safety Glasses
- Saline
- Scissors
- Sewing Kit
- Skin Prep
- String
- Thermometer
- Tissues
- Tums



# HOW TO TREAT INJURIES

## INJURY CHART

The Injury Chart is used to track and prevent injuries. In the event of an unfortunate injury, the incident is documented in the team's Injury Chart. It states the date of the injury, the name of the student and their Sub-Division, an explanation of the injury and the surrounding circumstances, as well as ways to prevent the injury in the future. Since the implementation of the Injury Chart, the number of overall team injuries has decreased, creating a safer working environment.

**\*\*Before treating any injuries remember to put on gloves.**

## ANAPHYLAXIS (ALLERGIC REACTION)

- If someone is having an anaphylactic reaction, immediately give them an epinephrine shot as soon as possible in the thigh area.
- When giving an epinephrine shot hold the epinephrine pen firmly against the thigh for 3 seconds.

## BLEEDING

1. **Stop the bleeding! Apply pressure to the wound with a clean cloth or tissue.**
2. **Clean it! Gently clean with soap and warm water, rinse soap out completely to prevent irritation.**
3. **Call a doctor if wound: Is deep or edges are jagged or gaping open, is on the person's face, has dirt or debris inside that will not come out, shows signs of infection (redness, tenderness, thick discharge, or fever), or the area around the wound feels numb.**

## **BLOODY NOSE**

Tilt the person's head forward and then firmly pinch the bridge of the nose with the thumb and index finger and apply pressure for 5 minutes.

## **BURNS**

In the event someone gets burned, follow these steps:

1. Rinse the burn with cool water to prevent the burn from worsening.
2. Clean the burned area with water. Make sure to wash hands before doing this, as any blisters can easily become infected with bacteria from your hands.
3. Bandage the burn if the skin or blisters have been broken to keep out bacteria.

## **CHOKING**

1. Give the victim back blows! You must give up to 5 blows between the shoulder blades with the heel of your hand.
2. Abdominal Thrusts: Stand behind the person and wrap your arms around their waist, place your clenched fist just above the person's navel, grab your fist with your other hand. Quickly pull inward and upward as if trying to lift the person up, then perform a total of 5 abdominal thrusts.
3. If the object is not dislodged, continue cycles of 5 back blows and 5 abdominal thrusts until the object is coughed up or the person starts to breathe or cough.
4. Take the object out of his mouth only if you can see it.
5. Never do a finger sweep unless you can see the object in the person's mouth.

# HOW TO TREAT INJURIES

## CPR

1. Make sure the scene is safe.
2. Clearly ask the person, "ARE YOU OKAY?"
3. Ask a bystander to call 911 for assistance and ask another person to get an AED (Automated External Defibrillator).
4. Open the airway: With the person lying on his or her back, tilt their head back slightly to lift the chin.
5. Check for breathing: Listen carefully, for no more than 10 seconds, for sounds of breathing. Occasional gasping sounds do not equate to breathing, if there is no breathing begin CPR.
6. Give compressions: Place your hands, one on top of the other, in the middle of the chest, then push hard, push fast. Do 30 compressions at the rate of 120 per minute before the next step.
7. Deliver rescue breaths: Tilt the person's head back slightly and with the chin lifted, pinch the nose shut and place your mouth over the person's mouth to make a complete seal, blow into the person's mouth to make the chest rise. Deliver two rescue breaths, then continue compressions.
8. Continue CPR steps until an EMT or AED becomes available.
9. After 5 cycles of CPR, switch with another person.



## CUTS

1. CLEAN IT!
2. CREAM IT!
3. COVER IT!



## DIABETIC SHOCK (AKA INSULIN SHOCK)

If you or someone near you begins to experience insulin shock, take these steps:

1. Call 911, particularly if the person is unconscious.
2. Get sugar into the body immediately.
3. Do not give an unconscious person something to swallow as they may choke on it.

## FAINTING

### If you feel faint:

Lie down or sit down. To reduce the chance of fainting again, don't get up too quickly. Place your head between your knees if you are seated.



# HOW TO TREAT INJURIES

## FAINTING

### **If someone faints:**

- Position the person on their back and elevate their legs by 12 inches to get blood flow back into their brain.
- Loosen constricting clothing.
- If the person doesn't regain consciousness or starts breathing within one minute, call 911 or your local emergency number.
- Check the person's airway to be sure it's clear. Watch for vomiting.
- Check for signs of circulation (breathing, coughing, or movement). If absent, begin CPR.
- Continue CPR until help arrives or the person responds and begins to breathe.

## FRACTURES

1. Call 911.
2. Stabilize the bone until the paramedics arrive at the scene.

## SEIZURE

1. Call 911.
2. Loosen clothing around the person's neck to prevent choking.
3. Roll the person onto their LEFT side to keep the airway open. Do not put anything into the person's mouth.
4. Protect from injury: Move sharp objects away, and ask bystanders to give the person space.
5. Stay with the person until emergency help arrives.

## **SOFT-TISSUE INJURIES**

Acute soft-tissue injuries vary in type and severity.  
When an injury occurs, remember **R.I.C.E.!**

### **REST, ICE, COMPRESSION, ELEVATION!**

#### **REST**

Break from the activity that caused the injury.  
Avoid putting weight on the injured area.

#### **ICE**

Use ice for 20 minutes at a time, several times a day.

#### **COMPRESSION**

Prevent additional swelling and blood loss.

#### **ELEVATE**

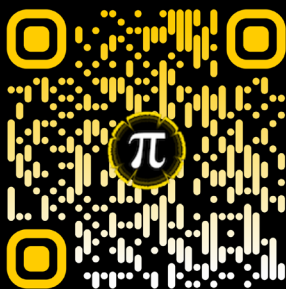
Reduce swelling by elevating the injury higher than your heart when resting.

- **GRADE 1 SPRAIN:** Slight stretching and some damage to the fibers of the ligament.
- **GRADE 2 SPRAIN:** Partial tearing of the ligament. There is abnormal looseness in the joint when it is moved in certain ways.
- **GRADE 3 SPRAIN:** A complete tear of the ligament. This causes significant instability and makes the joint nonfunctional.

## **FIRE**

- If there is a fire, call 911, crawl, and stay below the smoke.
- Do not go after personal belongings.
- If you or your clothes catch fire:

**STOP, DROP, AND ROLL!**



[team1676.com/apps/hunt](https://team1676.com/apps/hunt)

**The Pascack Pi-oneers**  
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