

Safety in the Robotics Lab

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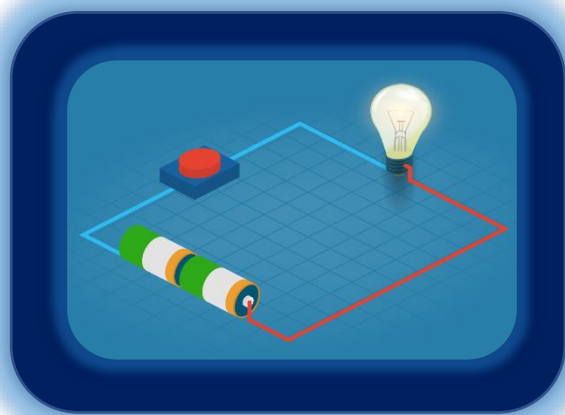
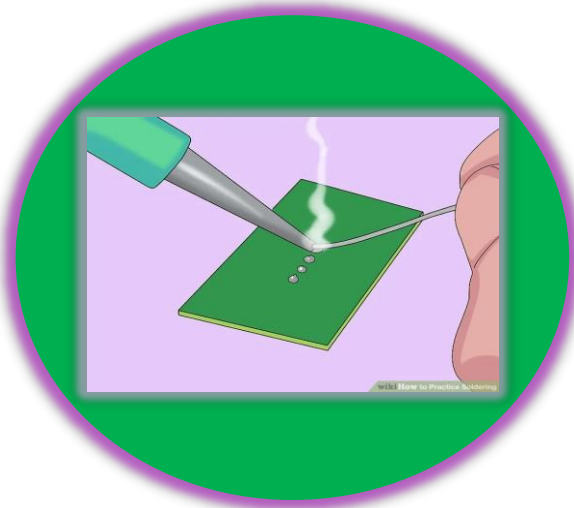
There are many safety precautions that must be observed in a robotics lab:

- To maintain orderliness/organization
- To ensure the safety for use of equipment and devices
 - To protect lab participants and prevent injury
 - To consider the needs/safety of the others

Order and Organization

1. Make sure while you are working your workstation is not cluttered. This may be a hazard because depending on what you are working with you may start a fire or injury yourself.
2. After you are done using a piece of equipment or using another object make sure you put it back where you found it when you are done with it.
3. If you make a mess, make sure to clean it up after.
4. No cords should be obstructing a walkway. This may lead to someone tripping or pulling something out of your hand.
5. You NEED to be able to identify problems because if you can't someone could get injured.
6. If you encounter a problem, try and trouble shoot and if you still can't figure it out ask your teacher for help.
7. If you are working in a group, make sure everyone is doing their part.
8. If you are working in a group and someone messes up help them. Don't just hover over while they are trying to fix it. Two or more heads is better than one.





Lab safety rule wordsearch

M C J Y R O T A R O B A L O E V H I D P T H Z M
 N L D E I N F W Z S D N A H R U O Y H S A W E H
 M E J E B O S V F S U C X W C K E M P C P T K E
 B A S B G I D K B D U J T C Y R O R P A M P U B
 O N Q G D T E W Y R B O P H K V M J J F A L M G
 Y W K Q R A D C L O S E D T O E S H O E S H B O
 N O V O A T K U G C V Y P E R M I T T E D H Q G
 O R P V N S V R X L D A Z U K T X R F S F F I G
 I K U R O H N P M A H T O K A C R L E D N T O L
 T A V N I S C N L C Q S E V O L G A H V V E N E
 C R O J T A H O G I S N O R P A N Y V P E L D S
 E E A Y C W A E H R J T D P L A N T S A F E T Y
 T A A P E E N A P T V E I U U F I W J G I T H W
 O R S W T Y I T M C P C C K G Y Z H G L J I Z Z
 R I E F O E M I A E E O S N T T Y N Y I D L S E
 P S I O R G A N E L R Y V F Q E N X D N J X K T
 L P S O P X L G C E M V D A C F A J Q M Q Y H J
 A P T V D K S I P E I S O J J A K P N A E T D L
 C A T V N Y A N Y M S P T I F S G L Y C H Y U K
 I F X X A W F L G N S L Y F V E A A Z X N Z X B
 M K P N H E E A Y S I H P F I P P S M V I X Z R
 E E F X A D T B E W O N T I E B A C K H A I R U
 H N M P C Y Y W S J N S T C E J B O P R A H S R
 C P Z E B P E Y E P R O T E C T I O N Z S I I B

Plant safety	wash your hands	no eating in lab	safety
electrical cords	eyewash station	clean work area	tie back hair
aprons	animal safety	laboratory	permission
closed toe shoes	gloves	goggles	sharp objects
permitted	chemical protection	hand protection	eye protection

Equipment Safety:

1. Make sure you know how to use a piece of equipment before you use it.
2. Don't fool around with equipment
3. If you break a piece of equipment, make sure to tell the teacher because damaged equipment is a hazard.
4. Make sure all equipment is turned off and unplugged after use.
5. Make sure you use the equipment for its intended purpose.
6. Do NOT make short circuits, as it could lead to fire or explosion.
7. If electrical device begins to smoke cut it from power source and inform teacher.
8. Unplug electrical devices before sanitizing because it may cause a short circuit.
9. Check all equipment for damages before use.

NOTE: If you damage equipment intentionally you will be charged!



Personal Safety:

1. If you get injured inform the teacher immediately.
2. Always use proper safety equipment.
3. Be aware of your surroundings when working with equipment and even when not working with equipment.
4. Know where all the emergency stations are.
5. NEVER use damaged equipment.
6. Know where the nearest med kit and AED are located.
7. If you see a possible hazard, try and eliminate the hazard. If you can't on your own inform the teacher.
8. NEVER touch end of soldering iron even if unplugged.
9. If you don't know how to do something, ask for help as you may injure yourself.
10. Be able to identify hazards.



MOST
Effective
Reliable
Sustainable

HIERARCHY OF CONTROLS



LEAST
Effective
Reliable
Sustainable

Elimination

Eliminate or remove the hazard from the workplace.

Substitution

Replace with less hazardous condition, practice or process.

Engineering Controls

Physical change that reduces exposure, isolates worker from hazard.

Administrative Controls

Improvements in the way work is done.

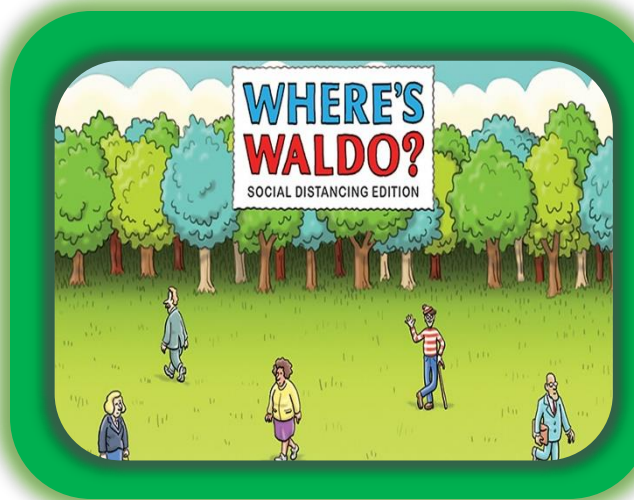
PPE

Protect worker with Personal Protective Equipment.

Safety of Others:

Covid-19 has had an impact on all of us. Our goal is to slow the spread and keep everyone healthy.

1. Make sure you are wearing a mask properly.
2. If you can try and avoid close contact with people.
3. If you are in a group, make sure you are wearing gloves or wash and disinfect your hands.
4. After you use something be sure to disinfect it with the wipes provided by your teacher.
5. If you are feeling sick at all, please stay home. Even if it's just the sniffles.
6. Monitor your health daily.
7. Practice hand washing regularly.
8. Moving on from Covid-19, don't distract others while they are working or using equipment.
9. If you see someone is using the equipment incorrectly make sure to correct them in a nice manner.
10. If you see someone using damaged equipment, make sure to stop them and inform your teacher.



Emergency Stations:

1. The fire extinguisher is located near the instructor's desk by the 3D printer.
2. A Pail of sand is located under the counter beneath the 3D printer to hold anything on fire (i.e. lipo batteries).
3. The eyewash station is available in the IA room down the hall.
4. Wipes for Sanitizing an area are located on the teacher's desk.
5. Ask the teacher if you need gloves.
6. You have been provided with a pair of safety glasses. Use them.

Make sure to tell your teacher about any accidents!

