



CHALLENGE

OCTOBER LEARNING CHALLENGE

WELCOME TO THE LEARNING PHASE OF IT-ADVENTURES ROBOTICS VENUE. SOME OF YOU WHO HAVE ALREADY COMPETED MAY KNOW SOME OR ALL OF THIS, BUT PLEASE LOOK THROUGH IT JUST TO MAKE SURE EVERYONE IS ON THE SAME PAGE AS WE PROGRESS THROUGH THE YEAR.

THINGS TO DO

- IF YOU HAVE NOT ALREADY DONE SO - INSTALL THE LEGO MINDSTORMS SOFTWARE YOU HAVE RECEIVED WITH FROM US. IF YOU HAVE NOT RECEIVED THE 2.0 SOFTWARE, YOU SHOULD RECEIVE IT IN THE NEXT WEEK OR TWO.
- IF YOU ARE NEW TO THE ROBOTICS VENUE OR SIMPLY WANT TO REFRESH YOUR MEMORY, GO THROUGH THE ROBOT EDUCATOR TUTORIALS INSIDE THE SOFTWARE.
- GO THROUGH THE INTRODUCTION TO THE LEGO MINDSTORMS BRICK PDF (ALSO AVAILABLE ON THE [IT-ADVENTURES WEB SITE](#)) TO HELP YOU SET UP YOUR BRICK AND UPDATE THE FIRMWARE. IT ALSO INCLUDES INFORMATION ON MEMORY MANAGEMENT FOR UPDATING FIRMWARE IF YOU DON'T WANT TO LOSE FILES ALREADY SAVED ON THE NXT. THIS DOCUMENT WILL ALSO BE A GOOD REFERENCE AS WE PROGRESS THROUGH THE YEAR.

CHALLENGES

GO TO [HTTP://WWW.NXTPROGRAMS.COM/INDEX1.HTML](http://www.nxtprograms.com/index1.html). BEYOND THE PROJECTS WE WILL DO AS A PART OF THESE CHALLENGES, YOU MAY ENJOY JUST GOING THROUGH SOME OF THESE TO SEE WHAT ELSE THE MINDSTORMS ARE CAPABLE OF BECOMING. THESE PROGRAMS ALSO SHOW GOOD DOCUMENTATION AND TECHNIQUES.

FOR OUR CHALLENGE GO THROUGH AND COMPLETE THE STEERING ROVER PROJECT. AS A TEAM, GO THROUGH THE CHALLENGES GIVEN AT THE END, FOCUSING ON THE OPTIMIZATION CHALLENGES TO SEE IF YOU CAN MAKE THE DESIGN AND PROGRAM BETTER. I WOULD ALSO LIKE YOU TO WRITE DOWN WHAT THINGS YOU WOULD DO/DID TO MAKE IT BETTER. THIS CAN BE AS DETAILED AS YOU LIKE, BUT PLEASE KEEP IT UNDER ONE PAGE.

THIS IS GOING TO BEGIN THE FEEDBACK PORTION OF THE LEARNING CHALLENGES. FOR ANY TEAM WILLING TO COME UP WITH IDEAS, YOU MAY E-MAIL THEM TO AGRIEME@IASTATE.EDU FOR FEEDBACK, AS WELL AS E-MAILING ANY ROBOTICS SPECIFIC QUESTIONS (PROGRAMMING, YOU MAY HAVE. THIS WILL ENABLE ME TO START A FAQ AS WELL AS PREPARE MORE RESOURCES FOR YOU.

FOR ANY OTHER IT-ADVENTURES QUESTIONS SHOULD BE DIRECTED TO INFO@IT-ADVENTURES.ORG.