

FIRST Tech Challenge

Class Pack 2021 - 2022

Demo Course

Performance Assessment

Below you will find a scenario for assessing your workforce skills. To record the results of your assessment for tracking growth, take screenshots of the last two slides. You will submit your reflection on the learning management system.

Workforce

Career Ready

Developing workforce skills will help you open doors for a career path that is rewarding. FIRST™ Core Values set the foundation for developing workforce skills. Enter your name in the box, this will allow you to report and track your progress throughout the course.

The areas where you will develop these skills include:

- Showing responsibility through *Gracious Professionalism*
- Applying interpersonal communication skills
- Using inclusion during teamwork
- Demonstrating creativity and innovation

Enter Your Name

Motor Use and Performance

Converting electrical energy to mechanical energy efficiently is a fundamental skill needed when building a robot. Which best describes how you chose the motors to be used for each robot system.

Applications on the robot consider torque, moments, and speed for analysis using power, stall torque, and maximum torque to maximize motor efficiency.

Applications on the robot consider maximum torque, moments, and function.

Applications on the robot designed to achieve maximum torque.

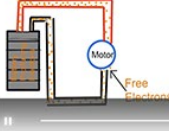
Building and Programming a Basic Robot

- ▾ BUILDING A ROBOT
 - Robots and the Workforce
 - Chassis and Drive System
 - Electrical Wiring and Wireless Configurations

How does electrical theory help prevent errors in the communication p

Electrons

Higher voltage and amps can interfere with lower voltage and amp wires.



Kinks in wires, loose connections, and lack of grounding can cause resistance and electrostatic discharge (ESD). This can affect the amps delivered to the motor, and sense.

Assessments to help guide student awareness of skill-building, Rubrics for performance assessments, Knowledge and progress checks, Student self-assessment and engineering notebook

To Register for access to the demo course use this [link](#) or go to <https://mythinkscape.com/register/C73D7DF1>

