



Use this tracking tool for the Robotics Merit Badge / STEM Exploration during Cyber Summer Camp

SCOUT / VENTURER NAME: \_\_\_\_\_

Activity	Campground Area	Completed?
<p>Explain the most likely hazards you may encounter while working with robots and what you should do to anticipate, mitigate and prevent, and respond to these hazards. Describe the appropriate safety gear and clothing that should be used when working with robotics.</p>	<p>The Lab Robotics</p>	<input type="checkbox"/>
<p>Learn about first aid and prevention for the types of injuries that could occur while participating in robotics activities and competitions, including cuts, eye injuries, and burns (chemical or heat).</p>	<p>The Lab Robotics</p>	<input type="checkbox"/>
<p>Learn about the kinds of things robots can do and how robots are best used today. Including: the similarities and differences between remote-control vehicles, telerobots, and autonomous robots, and the three different methods robots can use to move themselves other than wheels or tracks. Describe when it would be appropriate to use each method.</p>	<p>Launch Pad Robotics</p>	<input type="checkbox"/>
<p>Learn about three of the five major fields of robotics (human-robot interface, mobility, manipulation, programming, sensors) and their importance to robotics development.</p>	<p>Launch Pad Robotics</p>	<input type="checkbox"/>
<p>Choose a task for the robot or robotic subsystem that you plan to build. Include sensor feedback and programming in the task. Document this information in your robot engineering notebook. Design your robot. The robot design should use sensors and programming and have at least 2 degrees of freedom. Document the design in your robot engineering notebook using drawings and a written description.</p>	<p>The Lab Robotics</p>	<input type="checkbox"/>
<p>Build a robot or robotic subsystem of your original design to accomplish the task you chose. Then do one of the following:</p> <ul style="list-style-type: none"> <li>• Program your robot to perform the task you chose for your robot</li> <li>• Prepare a flowchart of the desired steps to program your robot for accomplishing the task.</li> </ul>	<p>The Lab Robotics</p>	<input type="checkbox"/>



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Test your robot and record the results. Take photos of your robot to show!	The Lab Robotics	<input type="checkbox"/>
Demonstrate the robot you built in requirement and determine how well your robot accomplished the task, the improvements you would make in your next design, and what you learned about the design process.	The Lab Robotics	<input type="checkbox"/>
Learn about three youth robotics competitions, including the type of competition, time commitment, age of the participants, and how many teams are involved.	Launch Pad Robotics	<input type="checkbox"/>
Name three career opportunities in robotics. Pick one and find out the education, training, and experience required for this profession. Explain why this profession might interest you	Launch Pad Career Exploration	<input type="checkbox"/>
Meet with a Robotics Counselor	Zoom Meeting or on own*	<input type="checkbox"/>

Scouts are encouraged to find a local merit badge and Nova counselor to fulfill the requirements of meeting with a counselor. However, we recognize that may be a challenge, so we are offering virtual counseling sessions for all Scouts who cannot find a local merit badge or Nova counselor.