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| **AREA** | **NOT PROFICIENT** | **PROGRESSING** | **PROFICIENT** | **MASTERY** |
| **Presentation**Did the student(s) demonstrate a solid understanding of all design elements of the project? | No understanding of the elements which make up the project. | Some understanding of the elements which make up the project. | Competence in understanding the elements which make up the project.  | Mastery in understanding all of the elements which make up the project.  |
| **Documentation**Did the student document non-student produced materials? | No required permissions present. | Some required permissions included, but not all. | Most required permissions included. | **ALL** required permissions present **OR** no permissions needed. |
| **Software Design**Was the software design efficient and focused on solving the stated task? | No part of the software was focused on the stated task. | Some of the software used was appropriate for the project. | Software used was appropriate and enhanced the project. | Mastery in the choice and use of software to enhance the project. |
| **Hardware Design**Were all the parts of the design focused on solving the stated task in an efficient manner? | No part of the machine is focused on solving the stated task. | Project has many non-functional parts or parts that have nothing to do with solving the stated task. | Project has some non-functional parts or parts that have nothing to do with solving the stated task. | Entire machine presented a focused and efficient solution for the stated task. |
| **Performance**Does the machine perform the stated task in an efficient manner? | Project does not perform the stated task or makes many mistakes. | Project performs but makes few mistakes. | Project performs the stated or intended task flawlessly. | Project performs the stated or intended task flawlessly and thinks outside the box on the task to take into account changes. |
| **Autonomous**Did machine perform task without any human interaction? | Human interaction and /or remote control required to operate machine to start. | Some human interaction needed for machine to accomplish stated task. | Little human interaction needed for machine to accomplish stated task. | No human interaction or remote control required to operate the machine once started.  |
| **Comments:**  |

Projects may be constructed from kits or published drawings, modified from other devices to create new applications or constructed from the student’s own concepts and designs. All entries must be a working and functional piece of electro-mechanical hardware in which movement and intent is controlled through student created programming. Examples of commercially available kits or robotic “arms” or robot movers, Lego and K’Nex style building kits, Capsella, VEX and Technics style robotics kids. Devices controlled through direct, real time remote control by the student are not appropriate (ie: remote controlled cars). Once started, the robotics project should operate as a standalone independent machine with human interaction.