IQ Robotics Checklist and Rubric

**Ping Pong Ball Challenge**

Checklist items to include in pre-build drawing

\_\_\_ - Strategy for completing the task written out

Wheel Base

 \_\_\_ - Basic design shown in notebook

 \_\_\_ - Number of motors used

Lifting mechanism

 \_\_\_ - How will it lift

 \_\_\_ - How high will it lift

 \_\_\_ - Gearing

 \_\_\_ - Number of motors

Grabbing mechanism

 \_\_\_ - How will it hold a ping pong ball, without dropping it

 \_\_\_ - Number of motors

 \_\_\_ - Include some design details

Robot

 \_\_\_- Where is Brain located

 \_\_\_ - Any other design requirements,

\_\_\_ - Instructor signature on design in notebook before building

**Rubric for grading**

**Ping Pong Challenge**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item Description** | **Poor (zero points)** | **Acceptable (1 – 2 points)** | **Exceptional (3 points)** | **Points** |
| Design | Actual robot does not resemble design | Robot is similar to design with small differences due to changes while building | Design was detailed and matches final robot  |  |
| Build quality | Parts fall off robot | Robot is basically strong | Robot is secure and can complete challenge without any parts falling off |  |
| Team Dynamics | Team members worked separately and did not show Christian unity or compromise | Team members generally worked together but all did not contribute to design or build | All members worked together and were equally involved in building |  |
| Operation | Team fights over who is controlling robot and is not ready to get timed | Robot is ready to compete | Team has practiced and is ready for timing |  |
| Creativity | Robot is basic | Team has strategy for the challenge | Team has unique strategy or design. Team includes fun element in robot |  |
| **Total Points** |  |