

Learning Goals and Scales
2015-2016

Unit: Building a Tank Drive Robot

Learning Goals:

In this unit:

1. *Students will demonstrate teamwork, knowledge and skills to safely fabricate a Tank Drive Robot chasis*
2. *Students will be able to connect electrical compononets and program Labview to control the Tank Drive Build*

Rigorous Learning Goal/Scale 1

Course:	Robotics – Tank Drive Build
Score 4 Additional Success with the complex content and concepts—inferences, novel applications	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. <ul style="list-style-type: none"> <i>Student demonstrates knowledge/skills for how to build the tank drive system so that parts are square/aligned for most efficient performance and can explain to other students how to do so in a leadership role.</i> Student makes no major errors or omissions regarding the score 4 content
Score 3 Mastery of complex content and concepts of learning goal	TARGET LEARNING GOAL: The student will <ul style="list-style-type: none"> <i>be able to form teams, plan task and use knowledge and skills to safely fabricate a Tank Drive Robot chasis</i> Student makes no major errors or omissions regarding the score 3 content
Score 2 Success with simpler content—vocabulary, foundational skills	The student will recognize or recall specific vocabulary or basic content, such as: <ul style="list-style-type: none"> <i>Cim motor, Cim box, PD board, Robo-Crio, Breaker, Talon</i> The student will perform basic skills or process, such as: <ul style="list-style-type: none"> <i>Team work/planning, CAD plans, , Fabricate frame parts, Wire Electrical Circuits</i> <i>Student makes no major errors or omissions regarding the score 2 content</i>
Score 1 Partial success with help	With help, student achieves partial success at score 2 content and/or score 3 content
Score 0 No success even with help	Even with help, no success

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Rigorous Learning Goal/Scale 2

Course:	Robotics – Tank Drive Program
Score 4 Additional Success with the complex content and concepts—inferences, novel applications	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. <ul style="list-style-type: none"> <i>Student can design/create a Labview program and customize/trouble shoot it to achieve various robot task.</i> Student makes no major errors or omissions regarding the score 4 content
Score 3 Mastery of complex content and concepts of learning goal	TARGET LEARNING GOAL: The student will <ul style="list-style-type: none"> <i>be able to install/connect electrical components and program Labview to control the Tank Drive Build</i> Student makes no major errors or omissions regarding the score 3 content
Score 2 Success with simpler content—vocabulary, foundational skills	The student will recognize or recall specific vocabulary or basic content, such as: <ul style="list-style-type: none"> <i>LabView basic programming vocabulary</i> The student will perform basic skills or process, such as: <ul style="list-style-type: none"> Team work/planning, Wire Electrical Circuits, Trouble-shoot Student makes no major errors or omissions regarding the score 2 content
Score 1 Partial success with help	With help, student achieves partial success at score 2 content and/or score 3 content
Score 0 No success even with help	Even with help, no success