

Student Name: \_\_\_\_\_

Date: \_\_\_\_\_

**PLANNING PHASE**

<b>PS.1</b>	<b>Problem Breakdown</b>
Does the student take a large problem and divide it into smaller, more manageable problems?	
	<input type="checkbox"/> Yes
<b>PS.2</b>	<b>Redefine problems</b>
Does the student redefine a problem such that it may be solved with available tools?	
	<input type="checkbox"/> Yes
<b>DP.1</b>	<b>Defining the Problem</b>
Does the student identify criteria for success, constraints, and resource limits for a given problem?	
	<input type="checkbox"/> Yes
<b>ID.1</b>	<b>Deliberate Planning</b>
Does the student develop a complete plan before he begins construction?	
	<input type="checkbox"/> Yes
<b>IN.1</b>	<b>Generating Multiple Solutions</b>
Does the student generate multiple design solutions before implementation?	
	<input type="checkbox"/> Yes
<b>IN.2</b>	<b>Solution Evaluation</b>
Does the student carefully consider the strengths and weaknesses of potential solutions against project constraints and success criteria before selecting a solution?	
	<input type="checkbox"/> Yes
<b>PR.1</b>	<b>Design for Construction</b>
Does the student carefully plan how each component will be constructed taking strengths and weaknesses of materials into consideration?	
	<input type="checkbox"/> Yes

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**BUILDING PHASE**

<b>IN.3</b>	<b>“Outside the Box”</b>
Does the student generate risky, innovative, or novel solutions to problems?	
	<input type="checkbox"/> Yes
<b>CO.1</b>	<b>Clear Communication of Ideas</b>
Does the student clearly communicate her design ideas to teammates, teachers and others?	
	<input type="checkbox"/> Yes
<b>ID.2</b>	<b>Following a Plan</b>
Does the student to follow it despite challenges, rather than changing plans haphazardly while building.	
	<input type="checkbox"/> Yes
<b>RT.2</b>	<b>Trade-offs Consideration</b>
Does the student prioritize goals and reduce features of lower importance in order to achieve more critical goals?	
	<input type="checkbox"/> Yes
<b>PR.2</b>	<b>Making It Real</b>
Does the student take an idea and create a carefully crafted and elegantly executed physical model which accurately reflects the original idea?	
	<input type="checkbox"/> Yes

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**PROGRAMMING PHASE**

<b>PS.3</b>	<b>Strategic decision-making</b>	
Does the student compare and weigh possible solutions and make justifiable choices?		<input type="checkbox"/> Yes
<b>AT.2</b>	<b>Incremental development and evaluation</b>	
Does the student solve complex challenges by breaking the problem into smaller manageable parts, solving each problem part and combining those into the full solutions?		<input type="checkbox"/> Yes
<b>AB.1</b>	<b>Modelling</b>	
Does the student create models or simulations which represent complex systems by representing key elements of the systems being modelled while ignoring superfluous detail?		<input type="checkbox"/> Yes
<b>AB.2</b>	<b>Pattern Recognition</b>	
Does the student consider multiple tasks and see the common features that the tasks share?		<input type="checkbox"/> Yes
<b>AB.3</b>	<b>Modularity</b>	
Does the student recognize which components are reusable for solving multiple problems and create solutions generalized to permit that reuse?		<input type="checkbox"/> Yes
<b>AT.1</b>	<b>Algorithm Design</b>	
Does the student identify the steps necessary to achieve a complex behavior? Does the student create those steps and combine them to create elaborate behaviors?		<input type="checkbox"/> Yes

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**TESTING**

<b>RT.1</b>	<b>Systematic Diagnosis</b>	
Does the student utilize a <u>methodical</u> process of elimination to determine the source of a problem?		<input type="checkbox"/> Yes
<b>RT.3</b>	<b>Thorough Testing</b>	
Does the student carefully test the functionality of each component of the robot and program against the goal?		<input type="checkbox"/> Yes

Notes:

**SHARED DISPOSITIONS**

<b>Disp.1</b>	<b>Confidence Dealing with Complexity</b>	
Does the student work to break down the problem into bit-size pieces that can each be dealt with in a reasonable time without being paralyzed by complexity?		<input type="checkbox"/> Yes
<b>Disp.2</b>	<b>Persistence in Working on Difficult Problems</b>	
Does the student demonstrate persistence when faced with difficult problems?		<input type="checkbox"/> Yes
<b>Disp.3</b>	<b>Flexibility</b>	
Does the student respond well to surprises and lessons learned during the project and use these to beneficially enhance their process in appropriate ways?		<input type="checkbox"/> Yes
<b>Disp.4</b>	<b>Tolerance for Ambiguity</b>	
Does the student, when faced with an ambiguous problem, define a goal and chart a path to success on her own?		<input type="checkbox"/> Yes

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