

Team Member Names _____

Final Performance Task: Spool Racer Assessment

	Approaching Proficiency (1)	Proficiency (2)	Exceeding Proficiency (3)	Evidence/ Feedback that Supports Teacher Rating
5-point scale: 10-point scale:	2-3 7-8	3.1- 3.9 8.1-9.4	4.0-5 9.5-10.0	
1. Engineering Design and Re-design based on all 3 criteria (speed, distance, up an incline) Demonstrates the ability to correctly read instructions and build a basic spool racer then modify it to adjust performance criteria.	Student designs one spool racer using a spool, washer, rubber band, toothpick, tape, and pencil but does not test the racer and does not then think about how they might re-design it to meet the three criteria.	Student designs one spool racer using a spool, washer, rubber band, toothpick, tape, and pencil, tests the racer and then thinks about how they would re-design it to meet the selected criterion by, for example, choosing different materials, to improve it (evidence is drawing of the re-design) but is unable to fully complete the second design.	Student designs one spool racer using a spool, washer, rubber band, toothpick, tape, and pencil, tests the racer, thinks about how they would re-design it to meet the selected criterion, and implements those design changes to build either an entirely new spool racer or makes modifications to their original spool racer.	Score: /10
2. Use of data sheet to draw and label Design 1 & Design 2: Demonstrates design 1 and either a 2 nd design or modifications to the 1 st design to meet the three criteria.	Student fills in one design sheet for only one spool racer.	Student fills in one design sheet for one spool racer and then lists a few modifications in materials and design for a 2 nd spool racer.	Student completely fills in both design sheets 1 and 2.	Score: /5
3. Completion of distance data table for 3 trial spool	Student fills in less than half of the data sheet correctly.	Student fills in more than 50% of the data sheet correctly.	Student correctly completes the data sheet.	

racers runs & calculation of mean distance over the 3 trials: Demonstrates the ability to correctly and fully complete the lab data sheet.			<i>Example: Student completes the entire data sheet with 100% accuracy.</i>	Score: /5
4. Graph of the 3 trials and distance for each trial: Demonstrates the correct graphical representation of the distance the spool racer traveled for each of the 3 trials	Student constructs a partially complete graph that is missing important data.	Student constructs an accurate graphical representation of the three trial runs but is missing axis labels and/or a graph title and/or the average speed calculation.	Student constructs an accurate graphical representation of the three trial runs, including distance the spool racer travels for each trial. The graph also includes proper axis labels and a graph title.	Score: /10
5. Gallery Walk: Demonstrates the ability to explain the spool racer design, the graphed results, and the role kinetic and potential energy plays in the movement of the spool racer.	Student describes one of the three items with accuracy: spool racer design and why particular materials were selected OR the graphed results OR the role of kinetic and potential energy in the movement of the spool racer.	Student describes two of the three items with accuracy: spool racer design and why particular materials were selected AND/OR the graphed results AND/OR the role of kinetic and potential energy in the movement of the spool racer.	Student accurately describes design of the spool racer including why they selected this particular spool, washer, and rubber band; accurately describes graphed results; and accurately describes the role kinetic and potential play in the movement of the spool racer.	Score: /5
TOTAL:				/35