**Rubric for Final Artifact**

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| **Learning Outcomes** | **Missing or Unacceptable** | **Needs Improvement** | **Meets Expectations** |
| Compute the derivative of a function | 0 | 1 | 2 |
| Determine the position at various velocities and acceleration for a function of time. | 0 | 1 | 2 |
| Graph the function for speed, velocity, and acceleration of a chosen function | 0 | 1 | 2 |
| Calculate potential and kinetic energy at various points | 0 | 1 | 2 |
| Fully label a free-body diagram | 0 | 1 | 2 |
| Calculate frictional force using mass and frictional coefficient | 0 | 1 | 2 |
| Overall Score of Roller Coaster from Roller Coaster Rubric  | 0(0-45 total points) | 1(46-56 total points) | 2(57-80 total points) |