

Roller Coaster Score Sheet (Division B) rev: Jan 28 2013

School Name: _____ Team _____

Student Names: _____

Submittals at Impound

- 3b(i) Start Height (round up, min 50 cm) _____ Submitted? If Yes, 50 points _____
- 3b(ii) Time Target (30 or 60 seconds) _____ Submitted? If Yes, 50 points _____
- 3b(iii) Vert. Jump Hgt. 1 (round down, min 10 cm, otherwise 0) _____ Submitted? If Yes, 50 points _____
- 3b(iv) Vert. Jump Hgt. 2 (round down, min 5 cm, otherwise 0) _____ Submitted? If Yes, 50 points _____
- 3b(v) Does submittal have School, Team #, and Student Names?
If Yes, Add points for 3b(i)-3b(iv)+ 50 points, If No, then 0 points for entire Submittal section _____

Construction (Any violation = Tier 3)

- 5a Roller Coaster built on flat sturdy base _____
- 5b Base dimensions may not exceed 1.0 m x 0.6 m _____
- 5c The Roller Coaster track may not extend outside base perimeter _____
- 5d Height of Roller Coaster (excluding COASTER) may not exceed 1.0 m from top of base _____
- 5e Track must not be constructed from commercially available "track" _____
- 5f COASTER must be removable perpendicular to COASTER'S travel ("Removability Test") _____
- 5h IF there are jump obstacles, they must be individually built with flat, level tops that are parallel with the base and must not deform if collided with the COASTER _____
- 5k Roller Coaster must include an initial release mechanism _____
- 5l Electricity prohibited _____
- 5n Only gravity and magnetism used to propel COASTER _____
- 5o Funnels are prohibited _____
- 5p Track clearly labeled with "FINISH" line _____

Competition Penalties (Any violation = Tier 2)

- | | RUN 1 | RUN 2 |
|---|-------|-------|
| 6c Team provides sufficient notice to Event Supervisor before releasing COASTER | _____ | _____ |
| 6d Team release mechanism by hand without touching COASTER | _____ | _____ |

SCORING

Actual Time ("AT") in seconds

POINTS

- Start Height Score: $(100\text{cm} - \text{Start Height}) \times 5 = (100 - \text{_____}) \times 5 =$ _____ SHB
- Time Target Bonus: Time ("TT") = _____ seconds. If 60 sec., then 200 points = _____ TTB
- Time Accur. Penalty: If TT=30, Abs. Value of $(TT-AT) \times 100 = (\text{_____} - \text{_____}) \times 100 =$ _____ TAP at 30 OR
- Time Accur. Penalty: If TT=60, Abs. Value of $(TT-AT) \times 150 = (\text{_____} - \text{_____}) \times 150 =$ _____ TAP at 60
- Vertical Jump Bonus 1: Vertical Jump Height 1 cm x 10 = _____ x 10 = _____ VJH1B
- Vertical Jump Bonus 2: Vertical Jump Height 2 cm x 15 = _____ x 15 = _____ VJH2B
- Submittal Points (from above) _____ SIB

RUN SCORE = 4000 - SHB - TTB + TAP - VJH1B - VJH2B - SIB

RUN SCORE 1 = 4000 - _____ - _____ + _____ - _____ - _____ - _____ =

RUN SCORE 2 = 4000 - _____ - _____ + _____ - _____ - _____ - _____ =

Tiebreakers: Highest SHB, Lowest TAP

FINAL SCORE _____

TIER _____