

New Mexico Science Olympiad Mission Possible February 26, 2005

High School, **Div C** School Name: _____ Table # ____ Pic # ____

- 12th Grade Participants Pass Safety Inspection & 14v Limit & Fuse Safety Goggles
 Magnet trigger Fits Overall Max Dimensions (50 x 50 x 80 cm)

Setup start time: _____ Setup end time: _____ . Task Completion Time (m:ss) ____ : ____ = _____ sec

Judge Name/s: _____ The device was run at: _____ MST

ACHIEVEMENTS (additions to score)	Qty	Multiplier	Points
30 Minute set-up awarded if team is absolutely ready to go in 30 min.	0 or 1	50	
Energy Transfer List on-time and uses EXACT format specified	0 or 1	75	
Energy Transfer List 100% accurate documentation of device operation	0 or 1	25	
Successful Task Completion if conditions met: <input type="checkbox"/> Time ≤ 180 sec <input type="checkbox"/> Ball launched <input type="checkbox"/> Crosses top plane <input type="checkbox"/> Re-enters & remains inside	0 or 1	100	
Time optimization Bonus: Enter qty of seconds (60 Max) If time>60 enter 60 If no task completion enter 0		2	
Energy Transfers to Mechanical (maximum 3)		10	
Energy Transfers to Chemical (maximum 3)		10	
Energy Transfers to Electrical (maximum 3)		10	
Energy Transfers to Thermal (maximum 3)		10	
Energy Transfers to Electromagnetic Spectrum (maximum 3)		10	
BONUS: 15 pts each for first energy transfer to demonstrate: <input type="checkbox"/> Mechanical Hydraulics <input type="checkbox"/> Transfer caused by Increasing Heat <input type="checkbox"/> Mechanical Pneumatics <input type="checkbox"/> Transfer caused by Decreasing Heat <input type="checkbox"/> Chemical Precipitation <input type="checkbox"/> Energy released from spring <input type="checkbox"/> Homemade Battery <input type="checkbox"/> Homemade Electromagnet		15	
BONUS: 30 pts each for first energy transfer to demonstrate: <input type="checkbox"/> Electric current passed thru transformer <input type="checkbox"/> Bernouli principle <input type="checkbox"/> Shake baby rattle ≥10 sec (dead end ok) <input type="checkbox"/> Piezoelectric effect <input type="checkbox"/> Energy stored (not released) in a spring (dead end ok)		30	
BONUS: Count boxes checked <input type="checkbox"/> Single light src dist by fiberoptics 4all EMS transfers elig for tx pts <input type="checkbox"/> Single elec src 4all electric transfers (exc homemd batt & piezoelec) <input type="checkbox"/> School name announcement – clearly audible		50	
Additions Sub-Total			

PENALTIES (subtractions from score)	Qty	Multiplier	Points
Size Violation	0 or 1	-50	
Restarts/Touches/Adjustments: Qty = <input type="checkbox"/> 10 + <input type="checkbox"/> 20 + <input type="checkbox"/> 30 + (____ x 40)		-1	
Parallel design or dead-end path, per-occurrence		-100	
Object leaving the device boundary, one-time penalty	0 or 1	-50	
Labeling: If each transfer is not properly labeled on device by ETL #.	0 or 1	-25	
Time optimization penalty: Over 60 Sec: Qty = [(completion time) - 60] If < 0 enter 0, (120 max) If no task completion enter 0		-1	
Subtractions Sub-Total			

TOTAL SCORE		
(Additions) – (Subtractions)		

Tie Breakers: ① Least penalty pts ② Closest to 60 sec ③ Device which most demonstrates the spirit of RGM