Judges Form for 2021 Roller Coaster Competition

Team: _____ School (if applicable): _____-_____.

Technical (Maximum - 70 points)

Technical Score Maximum (70 points)	The technical score judges the accuracy and reliability of the roller coaster. One run should be included in the video submitted.		
Travel Time Score Doubled if 30 sec. +/- 3 sec.	Up to 35 points will be awarded for a roller coaster that operates for at least 20 seconds traveling the path. The technical score will be doubled (up to 70 points) if the travel time is between 27 and 33 seconds and the Rube Goldberg challenge is achieved.		
Start/End	The mechanisms in the Rube Goldberg machine are able to start/end the course without assistance: 5 points	Not achieved: 0 points	
Rube Goldberg Final Challenge	Rube Goldberg Final Challenge Achieved: 10 points	Not achieved: 0 points	
Tricks	Each unique trick completed is awarded 2 points up to a maximum of 20 points. Tricks may be repeated, but no additional points are awarded for the repeated tricks.		
Trick examples	Means of propulsion	Gravity, spring, rubber band, mousetrap, etc. Each type is counted as a separate trick	Points awarded:
	Simple machine	Pulley, lever, wheel and axle. Each type is counted as a separate trick	Points awarded:
	Magnet	Magnet causes a reaction in a mechanism	Points awarded:
	Lift	A lift is implemented during the run	Points awarded:
	Corkscrew	A mechanism follows a corkscrew motion (horizontal loop)	Points awarded:
	Chain Reaction	A chain reaction takes place during the run	Points awarded:
	Airborne	An object on the course becomes airborne by a mechanism	Points awarded:
	Loop	An object transverses an upside-down loop without falling off	Points awarded:
	Finish high	The final mechanism finishes higher than it starts	Points awarded:
	Other	Other unique tricks not mentioned above	Points awarded:
	Other		Points awarded:
	Other		Points awarded:
	Other		Points awarded:
	Other		Points awarded:

Time Multiplier: (1,2)	Start/End Points:	Rube Goldberg Points	Trick points:	Total Points:

General Technical Score Checklist:

Does the roller coaster: use a specified beginning and ending point?__ not use prefabricated toys except for decoration?___ not use electrical, chemical or nuclear energy?___ no use of water?___

(if these requirements are met, the roller coaster is eligible for a technical award)

Presentation (Maximum - 20 points)

Does the oral presentation accurately identify and describe the tricks of the roller coaster?___/**0-5 points**

Are the Physics concepts that the tricks are related to correctly identified?___/**0-5 points**

Do all members of the team participate in the presentation?___/**0-4 points**

Do the team members talk confidently about their experience?___/**0- 2 points**

Are the team members knowledgeable about what they learned?___/**0-2   pts**

Do team members act enthusiastic about the project?___/**0-2 points**

Theme (Maximum - 30 points)

Does the coaster have a theme?___/**0-6 points**

Is the theme carried throughout and well integrated into the coaster and the presentation?___/**0-8 points**

Is the theme creative?___/**0-8 points**

How well crafted is the roller coaster: (is it appealing to the eye, is the construction of the theme and the coaster well done)?___/**0-8   points**