



“Rube Goldberg” Competition

2021 Rules and Regulations

March 6th, 2021

speedcouncil.org/e-expo

Virtually

Elementary School Division: K - 5th

Middle School Division: 6th - 8th

High School Division: 9th - 12th

Contact Information:

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TO PARTICIPATE IN THE RUBE GOLDBERG MACHINE CONTEST:

1. Start a team (or participate individually)
2. Register for the Rube Goldberg competition
 - Go to speedcouncil.org
 - Hover over the “E-Days” tab to see the drop down
 - Click on the “E-Expo” tab
 - Find the registration link/button
 - Complete the google form for a “K-12 attendee”
 - Complete the registration for your team, noting the amount of people participating per submission, the primary contact for each submission, and the name of the submission.
3. Design and build a machine
 - The objective for this year’s competition is to make a machine that features the four of the **six simple machines**.
 - The six simple machines include the **inclined plane, lever, wedge, wheel and axle, pulley, and screw**.
 - The inclined plane is a sloped surface, usually used for lifting heavy objects.
 - A lever is a simple bar that is supported by a focal point and can lift an object.

- A wedge is any object with a taper leading to a thin edge, and is used for creating forces.
- A wheel and axle consists of a “wheel” or circular frame that revolves on a rod or “axle”.
- A pulley is a circular frame that supports a cable.
- A screw is a cylinder with a helical groove alongside the outer surface.
- For more information about simple machines, please visit <https://www.britannica.com/technology/simple-machine>
- The more simple machines included, the more points your whole machine can get! The effectiveness of each simple machine will be judged, so make sure each machine functions well and contributes to the overall Rube Goldberg.
- Participants can have more than 4 of the simple machines, but make sure each one functions correctly.
- Participants can come up with their own “end goal” of the Rube Goldberg machine. The more creative the “end goal”, the better! *Special consideration will be given to those Rube Goldbergs that have an end result relating to the field of energy, such as starting a motor, turning a windmill, generating power, etc.*

4. Compete!

- E-Expo will be held virtually on **March 6th, 2020, with more information being on the website, speedcouncil.org/e-expo**
- Participants are asked to submit videos of their Rube Goldberg machine, going through a complete cycle. Please point out each of the simple machines used, and briefly explain its function in the overall Rube Goldberg. Please explain the end result of the Rube Goldberg machine. **The deadline to submit videos is March 3rd, by 11:59pm.** There will be a form on the website available for video submissions closer to E-Expo. If your video is ready to submit after the deadline, please email evp@speedcouncil.org.

COMPETITION RULES

Specification	Value
Objective	Participants can be creative in their objective, with special consideration given to those relating to generating energy.
Group size	1-5 students (in same age group)
Minimum number of steps	5
Maximum machine volume	3' x 3' x 3'
Video Submission Criteria	Show one full run, briefly explaining each part of the Rube Goldberg machine.
Maximum time video time	12 min

JUDGING CRITERIA

Video submissions of the Rube Goldberg machine are due at **11:59pm on Wednesday, March 3rd**. All judging will be completed prior to the competition on March 6th, 2020. Presentation of awards will be given after the keynote speech to top students in each division. Students must be present at E-Expo on March 6th to win their award.

Rube Goldberg Judging Form

Judge use only

Group/Individual Student Name:

Group: Elementary Middle High

Successfulness

1 2 3 4 5 6 7 8 9 10 _____

Complexity

1 2 3 4 5 6 7 8 9 10 _____

Aesthetics/Design

1 2 3 4 5 6 7 8 9 10 _____

Presentation/Discussion

1 2 3 4 5 6 7 8 9 10 _____

Bonus (Judge's Discretion) _____

Total _____