

# RUBE GOLDBERG CHALLENGE 2019-20



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## HCPSS Strategic Call to Action

# Learning and Leading with Equity The Fierce Urgency of Now

### Vision

Every student and staff member embraces diversity and possesses the skills, knowledge and confidence to positively influence the larger community.



### Mission

HCPSS ensures academic success and social-emotional well-being for each student in an inclusive and nurturing environment that closes opportunity gaps.

## Four Overarching Commitments

### VALUE

Every HCPSS stakeholder feels happy and rewarded in their roles and takes pride in cultivating the learning community.

### ACHIEVE

An individualized focus supports every person in reaching milestones for success.

### CONNECT

Students and staff thrive in a safe, nurturing and inclusive culture that embraces diversity.

### EMPOWER

Schools, families and the community are mutually invested in student achievement and well-being.

# A+ PARTNERS IN EDUCATION

*RUBE GOLDBERG*

**10<sup>th</sup> year of this challenge!**

Information about the challenge, HCLS  
website:

<http://hclibrary.org/a-students-teachers/rube-go-ldberg-challenge/>

Questions about the challenge, email “Rube”

[rube@hclibrary.org](mailto:rube@hclibrary.org)

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**The goal for this year's challenge is...**

**Mark and Cast an  
Election Ballot!**

# BALLOT

**Vote for one**

Reuben Garrett Lucius Goldberg

Fazlur Rahman Khan

Mae C. Jemison

Leonardo da Vinci

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## THE 2018-2019 CHALLENGE:

The goal for this year's challenge is...

### *Mark and Cast an Election Ballot*

**What does this mean? Time for consensus...**

*Turn to the people near you and in small groups, brainstorm:*

- *What does this mean to you?*
- *What questions do you have?*
- *What parameters do you feel should be set?*

*Be prepared to share out and discuss*

## GROUP BRAINSTORM:

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### WHAT DOES THE CHALLENGE ACTUALLY MEAN?

Advisors discussed and decided upon the following:

- Must mark a box (mark in a box) *quality of mark or placement on paper will weigh judges decisions.*
- Stamp, hole punch, or marker/pencil
- Can be one or two steps to mark and cast
- All will use ½ sheet size ballot
- Can use any type of paper (typing, cardstock, construction/cardboard taped to back, etc.)
- Ballot box is created by students - any design they choose
- Ballot box **MUST** be labeled for video
- Ballot can be marked at any point in the machine, but must be marked **BY** the machine not by a student as step

## NOTES FROM LAST YEAR'S ADVISOR TRAINING:

- Amy to discuss with HCLS if **winning essay can be read instead of video shown.**
- Discussion to get team of advisors together (over summer) interested in changing the focus of the essay to be around engineering design process and science, not STEM.
- **Time change for ceremony - 6-6:30 board display; begin awards at 6:30pm**
- **Medals from HCLS donors, for every student on a team that completes machine and is nominated for award.**
- HCLS will make nice printed cert for each teacher to write student name on (instead of teacher having to print it).
- **Each team may only be nominated in ONE category (if a school has only one team, then they will only be nominated in one category)** \* teams may only win in one category



## Reminders: RULES / REGULATIONS...

### PROCEDURE REMINDERS:

- **WRITING** guidelines – STEM should be **ONE** complete essay
  - Double spaced, increased amount: **600 words or less**
  - Rubric and resources

### • **VIDEO TIME:**

Videos must be no more than **2 min. 30 sec. (150 seconds max.)**. You may still do a “2 min.” video, but this allows for flexibility if your time goes over a few seconds, or if students need a few more seconds to explain their machine complexity.

## Reminders: RULES / REGULATIONS...

### Video submission:

- Upload video to HCLibrary YouTube channel- specific directions for this will come in spring
- Don't forget to follow copyright laws!
- **Do NOT include student last names! No name should be associated with a face, at all.** Only first names can be listed at the end or beg of the video - not associated with a particular student (image or role played).
- Video length is now a maximum of **2 min. 30 sec.**
- Advisors decided no “skits” - not the intent of the video. Video is to highlight the machine and the

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## 2018-19 DEADLINES / EVENT TIMELINE

### TIMELINE – Part 1:

- *Working on Engineering Workshop Session at HCLibrary*
- Teams registration opens: **Oct 31**
- Registration CLOSES: **Dec. 20** (day before winter break)

- Register teams with Advisor and student names:  
<https://forms.gle/54fCFHqPXANcx bq i8>

*\*Must have Advisor and student names to complete registration info online*

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## 2018-19 DEADLINES / EVENT TIMELINE

### TIMELINE – Part 2:

- **WINDOW for submission: APRIL 20 - 24**
- **DEADLINE - Projects Due April 24 by 5pm**
  - paperwork uploaded in Google by 5pm
  - videos uploaded to HCLibrary link by 5pm
- Display Boards will be delivered to schools in March/April
- **APRIL 30** – Judging
- **MAY 4 - 8** - Community voting will occur (12am - 12pm)
- **Tues. MAY 12 -- Rube Celebration at HAMMOND HS**
  - Display Boards on display from 6-6:30pm
  - Awards Ceremony from 6:30-8pm

# JUDGING AND CELEBRATION

- **Who are the judges?**
  - HCLS staff, related HCPSS staff, Community Partners
- **Who is invited to the celebration?**
  - Teams, advisors, admin, parents
  - More info to come in early spring
  - Email invitation will be sent out in April
- **What happens at the celebration?**
  - Display boards from ALL teams - all students
  - Awards announced - videos played - pictures taken

# AWARDS

We are working on making THREE levels of recognition for the Rube Goldberg Challenge:

- **LEVEL 1: DISPLAY BOARDS / CERTIFICATES** - to recognize the participation of all students. Students will get to highlight/share their mistakes, learning, and accomplishments, and will receive certificates of participation.
- **LEVEL 2: MEDALS** - all students on teams that complete the challenge and have successful machines will receive a medal the night of the celebration!
- **LEVEL 3: AWARDS** - there will be 1st, 2nd and 3rd place awards given to those teams that are placed in categories of competition by their schools, based on judges' decisions.

## **TEACHER ADVISOR EXPECTATIONS:**

- Coordinate teams and adult support
- **\*Be present with student groups while work is being conducted and videotaping done\***
- Approve design before work is done
- School groups are expected to work at school - may not be at a home for work and/or video without prior approval from

*Amy Reese*



# AWARD CATEGORIES: Questions and Clarification

- **Most Humorous** category has been a challenge to find...how do we feel about changing it to most creative or most surprising?
- **Change the structure of entries?**...each team would only be nominated in ONE category, but in the best suited category, instead of one team for each category (so one school could potentially have 5? All teams can enter one category? But would then compete against themselves?
- Clarify differences between the categories and help explain the difference between **complex** and **complicated**.

## AWARD CATEGORIES

- \* First, second, and third place awards are given in the following category: (*Total of eighteen awards*)

### Most SURPRISING

The winning entry will demonstrate the **witty use of non-traditional items sequenced** to incorporate the element of surprise and/or include an entertaining action (not performance).

- Surprise could be for the team themselves, and/or for the viewers

## AWARD CATEGORIES

- \* First, second, and third place awards are given in the following category: *(Total of eighteen awards)*

### **Most Complex**

The winning entries will incorporate a minimum of eight steps and be judged on the complexity of the design (e.g., number of steps, variety of machines).

## AWARD CATEGORIES

- \* First, second, and third place awards are given in the following category: (*Total of eighteen awards*)

### **Most Complicated System**

The winning entry will incorporate a complicated, interconnected use of simple machines within their machine system (e.g., travel upwards, travel backwards, not only using gravity as the force necessary for movement).

## AWARD CATEGORIES

- \* First, second, and third place awards are given in the following category: (*Total of eighteen awards*)

### Most Green

The winning entry will utilize the most **variety and/or number of** everyday recycled materials and items, based on a master list included in the documentation of recyclable materials based on [Howard County's Recycling Guide for County Collections](#).

\* **changed description to include # as well as variety, but MUST be items from the HC Recycling guide (linked above - give to**

## AWARD CATEGORIES

- \* First, second, and third place awards are given in the following category: *(Total of eighteen awards)*

### Most Scientific

The winning entries will most effectively communicate in writing how their simple machines function and connect to STEM.

\* **increased to 600 word limit to allow for more detail in essay.**

## AWARD CATEGORIES

- \* First, second, and third place awards are given in the following category:

### COMMUNITY FAVORITE

The community will vote online for a period of 5 days. Once the votes come in, they will be ranked in order. The first three teams, that have not won any other award, will receive awards in this category.

\* A note will be made on the program and on the website to clarify that only one award per team is granted.

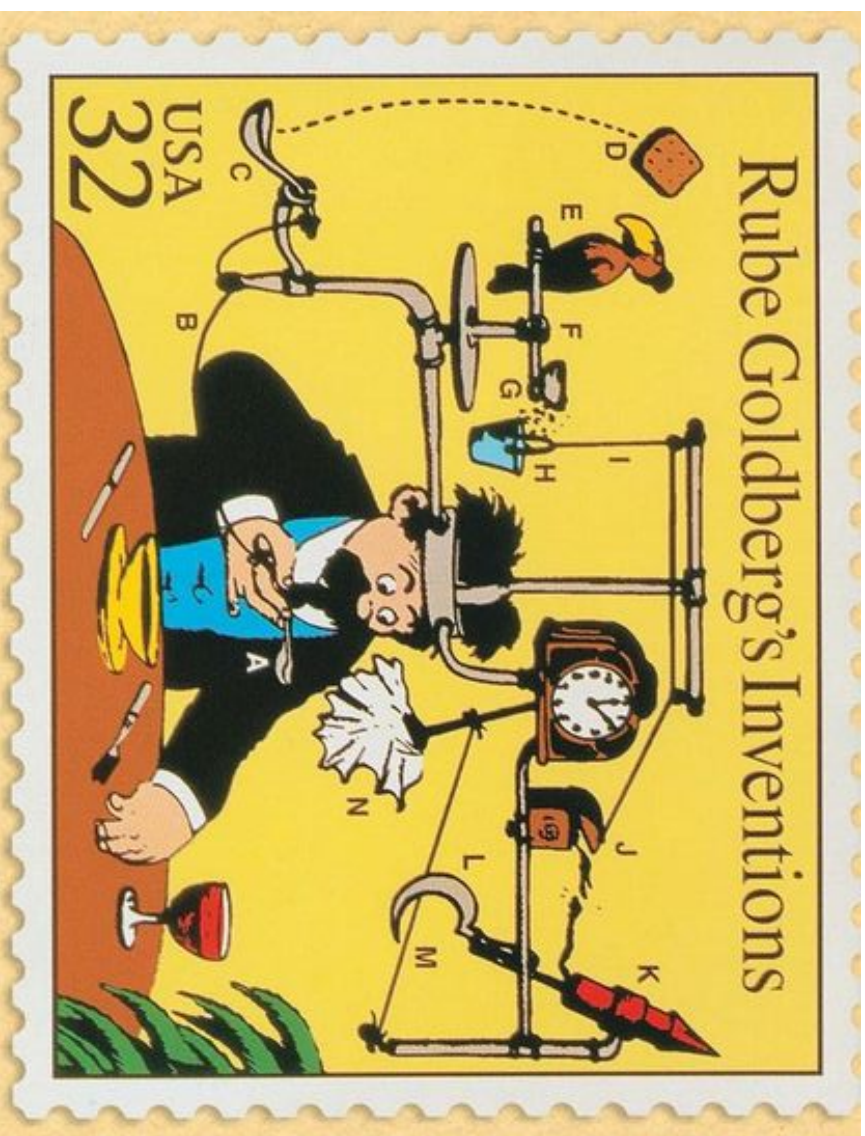
**Returning Advisors may leave :)**

**This is now time to work with new folks and  
share more about the challenge...**



Who was Rube?

<http://www.rubegoldberg.com/about>



# WHAT STRUCTURE DO YOU USE TO MEET WITH TEAMS?

- Recess Club
- After school activity
- Reading Specialist group
- GT seminar
- Other ideas?

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**LAST YEAR'S CHALLENGE ENTRIES:**

*Zip a Zipper*

<http://hcnlibrary.org/rubegoldbergvideo>

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Any questions about the challenge, email  
“Rube”

[rube@hclibrary.org](mailto:rube@hclibrary.org)

This email goes to Elementary Science Office  
as well as the HCLS staff, to ensure  
someone gets back to you promptly and we  
are all part of the conversation for  
consistency.