

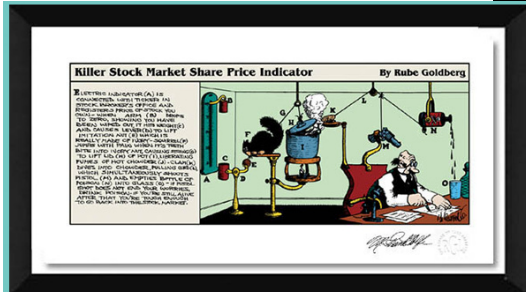
<http://web.mit.edu/invent/index.html>

<http://www.glenbrook.k12.il.us/gbssci/phys/projects/q2/rgrub.html>

<http://www.uwm.edu/CEAS/rube/>

<http://www.uwm.edu/CEAS/rube/>

The ISBN number is 0-684-86724-9. **RUBE GOLDBERG'S INVENTIONS**



Rube Goldberg's
**"Killer Stock Market
Share Price Indicator"**
Limited-Edition Giclée Print
General Edition Size: 250
Image Size: 10" x 20"
Framed Size: 14" x 24"

**BUY NOW!
Only \$250**

RUBE GOLDBERG INFORMATION

The Internet offers a number of Rube Goldberg sites. Check RUBE GOLDBERG through, for example Yahoo, Google or Alta Vista.

Web sites on the Internet to check are:

Argonne National Laboratory Educational Programs at:

<http://www.anl.gov/OPA/rube/index.html>

A "National Contest" for high schools for 2004 will be hosted by the Milwaukee Colleges of Engineering and Technology Partnership: Marquette University College of Engineering, Milwaukee Area Technical College, Milwaukee School of Engineering, and University of Wisconsin - Milwaukee College of Engineering and Applied Science. For further information schools should contact Dr. E. Johnson at ebj@uwm.edu.

<http://www.ceas.uwm.edu/rube>

Purdue University with links to many other source sites at:

<http://www.uns.purdue.edu/UNS/rube/rube.index.html>

Theta Tau who organize and run the Purdue University local and national contest:

ETP 2005 – Mel Klingenberg

This material is based upon work supported by the National Science Foundation under Grant No. 0402616. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the view of the National Science Foundation (NSF).

<http://www.rubemachine.com/>

and The National Cartoonist Society:

<http://www.reuben.org>

Animated Animations for the Rube Goldberg Inventions Collection of Limited - Edition Estate
Sealed Giclee Prints:

<http://www.animatedanimations.com/index.htm?rube>

Your project will be graded based on the following scoring rubric.

Outcomes w/criteria					Score
<p>1. Purpose</p> <p>Did they understand the problem, write a proper purpose and involve at least 5 transformations of energy?</p>	<p>0</p> <p>Didn't understand the problem and didn't successfully utilize any transformations of energy.</p>	<p>1</p> <p>Vaguely understood the problem and/or utilized less than 5 transformations of energy.</p>	<p>3</p> <p>Mostly understood the problem and/or successfully utilized at least 5 transformations of energy.</p>	<p>5</p> <p>Completely understood the problem and successfully utilized at least 5 transformations of energy.</p>	_____
<p>2. Literature Search-</p> <p>Did they produce an informative and accurate summary of their literature search?</p>	<p>0</p> <p>Did not do a literature search using at least 1 type of literature and finding 1 source per type.</p>	<p>1</p> <p>Did a partial literature search using at least 1 type of literature and finding 1 source per type.</p>	<p>3</p> <p>Did a good literature search using at least 2 different types of literature and finding 1 sources per type.</p>	<p>5</p> <p>Did a thorough literature search using at least 2 different types of literature and finding 2 sources per type.</p>	_____
<p>3. Physical Model</p>	<p>0</p> <p>Didn't model and/or describe</p>	<p>1</p> <p>Partially modeled and</p>	<p>3</p> <p>Adequately modeled and</p>	<p>5</p> <p>Exceptionally modeled and</p>	_____

ETP 2005 – Mel Klingenberg

This material is based upon work supported by the National Science Foundation under Grant No. 0402616. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the view of the National Science Foundation (NSF).

Did they correctly and completely describe the device and how it functions?	the device from an energy standpoint.	described the device from an energy standpoint.	described the device from an energy standpoint.	described the device from an energy standpoint.	
4. Explanation Did they effectively account for the energy transformations in detail and include an analysis of external work done on the system?	0 Didn't present the energy considerations and the external work done on the devices.	1 Very few of the energy considerations and the external work done on the devices were outlined.	3 All of the energy considerations and the external work done on the devices were not totally outlined.	5 All of the energy considerations and the external work done on the devices were outlined in detail.	_____
5. Record of Construction Did they produce a running record of the construction process?	0 They failed to produce any log of the construction in process from start to finish.	1 They produced an incoherent log of the construction in process from start to finish including intermediate results.	3 They produced an incomplete log of the construction in process from start to finish including intermediate results.	5 They produced a complete log of the construction in process from start to finish including intermediate results.	_____
6. Reliability Did they discuss possible problems concerning reliability of the device, workmanship and possible energy losses over time?	0 They did not include a discussion of the feasibility that the design would work consistently over time.	1 They included an incomplete discussion of the feasibility that the design would work consistently over time.	3 They included an incomplete discussion of the feasibility that the design would work consistently over time.	5 They included a complete discussion of the feasibility that the design would work consistently over time.	_____

ETP 2005 – Mel Klingenberg

This material is based upon work supported by the National Science Foundation under Grant No. 0402616. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the view of the National Science Foundation (NSF).

7. Product	0	1	3	5	
Did they produce a workable device that reflected their design?	The device doesn't work and the desired outcome is not obtainable without severe alterations.	The device could actually work and complete the desired outcome with a few major alterations.	The device could actually work and complete the desired outcome with a few alterations.	The device produced actually worked and completed the desired outcome.	_____
Comments :					TOTAL _____ (out of 35)

Your score is ____/35; which is scaled to a _____%.

The competition will give each army 10 attempts to knock down the castle wall. Using a marshmallow, each "hurl" will be from a minimum distance determined at testing. The wall will be a soda can wall 4 courses high.

	5	3	1
Trebuchet Model (x4)	completed & tested	built, not tested	not completed
Research/ Outline	completed, good content, typed	lacks good content on topic, and/or hand-written,	not completed, messy
quiz (x2)	>85%	70-84%	<70%
Competition	first or second	competed	did not enter
Cooperation (x2)	helps team in all ways	works 70% of time	works less than 70%

A 42-50 B 34-41 C 25-33 D 19-24 F <19

[top](#)

ETP 2005 – Mel Klingenberg

This material is based upon work supported by the National Science Foundation under Grant No. 0402616. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the view of the National Science Foundation (NSF).

Extra rubric for Hovercrafts & Blimps:

replace the competition row above with:

H/C, Blimps	neat	messy	not finished
--------------------	------	-------	--------------

ETP 2005 – Mel Klingenberg

This material is based upon work supported by the National Science Foundation under Grant No. 0402616. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the view of the National Science Foundation (NSF).