

RUBBERBANDCONTEST
FOR YOUNG INVENTORS

Are you America's next great inventor? The Rubber Division of the American Chemical Society (ACS), The Akron Global Polymer Academy, and The University of Akron are hosting the second annual Rubber Band Contest for Young Inventors to encourage students in grades 5-8 to demonstrate their creativity and ingenuity by creating an invention that incorporates the use of rubber bands. This year there will be two separate divisions of competition – Arts & Leisure and Science & Engineering. Four finalists will be brought to Akron, Ohio, where the first place winner and runner-up in each division, will be announced at an Awards Ceremony on May 1, 2010. The first place winner in each division will receive a \$5,000 savings bond, while the runner-up in each division will receive a \$2,500 savings bonds* respectively. The top 8 semi-finalists who are not chosen as finalists will each receive a \$50 gift card. The teacher/mentor of each first place winner will receive a \$400 gift card, and the teacher/mentor of each runner-up will receive a \$200 gift card.

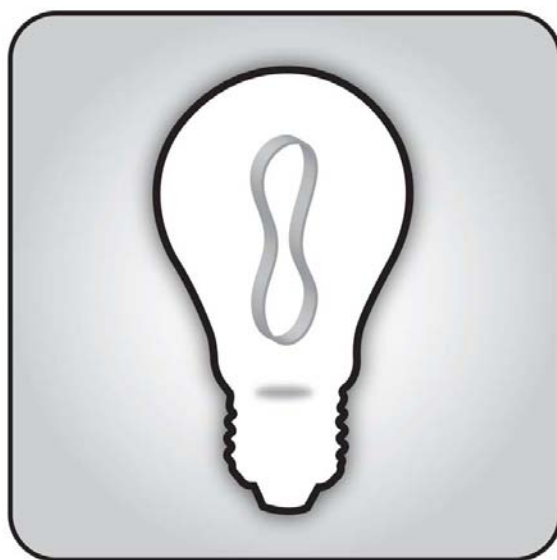
The Deadline for entries is Wednesday, February 10, 2010.

How to become a National Semi-finalist:

1. Young Inventors must be students in grades 5 to 8 for the school year 2009-2010.
2. Original inventions must incorporate the use of rubber bands.

*Savings bond values are at maturity for United States Series EE paper savings bonds.

3. To enter the contest, the following must be received at The National Museum of Education no later than 5:00 p.m. EST on Wednesday, February 10, 2010.
 - A written description that includes the name of the invention, its purpose, how it works, how the idea was created, and how it will be used or make everyday life easier or more enjoyable. The description must be no more than 1,000 words.
 - A sketch of your invention. A drawing of your invention with a diagram of how it works. Hand drawn or computer renderings are acceptable.
 - Any of the following visuals that would best explain your invention must accompany your entry: clear photograph(s), a VHS, a CD, a DVD, or Flash Drive depicting the invention and its use. All contest submissions will become permanent property of the Contest Hosts and will not be returned.
 - The young inventor's name, age, grade, school, sponsor (teacher/parent/guardian), address, phone number, cell phone, FAX and email, clearly marked on all mailed items.
4. If you are selected as one of twenty (20) national semi-finalists, you will be contacted by Saturday, February 20, 2010. The top 50 inventions in each division will receive an Honorable Mention Ribbon. All other contestants will receive a Special Recognition Ribbon.
5. Young inventors and one parent/guardian must be prepared to travel to Akron, Ohio to attend the Awards Ceremony on May 1, 2010 at The University of Akron, Quaker Square Inn. The Contest Hosts will be responsible for all travel arrangements within the domestic U.S. along with accommodations for the four (4) finalists and their respective parent/guardian.
6. Young inventors must be willing to participate in publicity events and media interviews surrounding the Awards Ceremony.
7. Finalists from the 2008-2009 Rubber Band Competition are **not** eligible for entry in the 2009-2010 Rubber Band Competition.
8. Semi-Finalists from the 2008-2009 Competition may re-enter with a new invention, or with a substantially improved version of their previous entry. The improvement must be clearly defined by the inventor.



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FOR YOUNG INVENTORS

HOW TO ENTER

- Inventions must be original. Each entry must be submitted by one student with the mentorship of parent(s) and/or a teacher/mentor. Group inventions will not be accepted.
- **Official Entry Form.** Submit a neatly completed Official Entry Form with your entry. It must be **signed by the inventor, his/her parent or guardian, and his/her teacher/mentor.** The signature on this form attests to the originality of the entry and verifies that the invention submitted meets the rules of the competition. Entry forms lacking the required signatures **will be disqualified.**
- **Sketch of Invention.** Draw your invention with a diagram of how it works. Hand drawn or computer renderings are acceptable.
- **Essay.** Prepare a description of the invention that does not exceed 1,000 words. The description should be neatly written in black or blue ink or typed. The description should give the **name of the invention** and include the following paragraphs:

- **Paragraph 1** – Explain the use of the invention. What does it do?
 - **Paragraph 2** – Explain the invention’s mechanics. How does it work?
 - **Paragraph 3** – Tell how you came up with the idea and why you chose to enter your invention as Arts & Leisure or Science & Engineering.
 - **Paragraph 4** – Explain why you think there is a need for this invention and how people will benefit from it in society.
- **Submit a visual of your creation.** You must send one or more **clear** visuals of your invention that shows it in full and you using it. You may send photograph(s), a video (VHS format), a CD, a DVD or Flash Drive of no more than 10 minutes showing your device and how it works.
 - **Indicate whether your invention is to be judged in the Arts & Leisure Division or the Science & Engineering Division.**
 - **Send Your Entry Materials.** Send all entry materials including Official Entry Form, Essay, Sketch, Photo(s) and optional VHS Video, CD, DVD or Flash Drive to:

**The National Museum of Education
80 W. Bowery St., Suite 305
Akron, Ohio 44308-1148**

DO NOT SEND YOUR INVENTION MODEL UNLESS YOU ARE NOTIFIED BY SATURDAY, FEBRUARY 20, 2010 THAT YOU ARE ONE OF THE TWENTY SEMI-FINALISTS. If you are notified that you have been selected as a semi-finalist, you must immediately submit a working model of your invention to the address provided to you upon notification to arrive no later than Monday, March 8, 2010. (A shipping label will be provided to you. Pack your model well; models received in broken or non-working condition will be disqualified.) Also, you and one parent/guardian must be prepared to travel to Akron, Ohio for an Awards Ceremony on May 1, 2010 as a finalist (a first place winner or a runner up).

- **Entry Deadline.** All entries **must be received by The National Museum of Education by 5:00 p.m. EST on Wednesday, February 10, 2010.** Entries received after the above date/time will be disqualified.
- **The National Museum of Education, the Contest Hosts and its Sponsor(s) are not responsible for:** lost, late, mutilated or illegible entries nor for mail or shipment errors or delays resulting in omission, defect, delay, theft or destruction or unauthorized access to or alterations of entry materials, or for technical limitations of any kind, or inaccurate transmissions of or failure to receive entry information by The National Museum of Education, the Contest Hosts or its Sponsor(s) on account of technical problems, or shipment problems or errors.

- **Please Note:**
 - Put your name on all materials submitted .
 - Do not use report covers, binders or folders. All sheets should be 8-1/2" by 11".
 - Staple all written materials, sketch, and photo(s) including the Official Entry Form with one staple in the left-hand corner.
 - Essays, sketches or diagrams, photos, videos, CDs, DVDs, and Flash Drives will not be returned to contestants.
 - Students may enter only one invention in either division.
 - Finalists from the 2008-09 Rubber Band Competition are not eligible for entry in the 2009-10 Competition.
 - Semi-Finalists from the 2008-09 Competition may re-enter with a new invention, or with a substantially improved version of their previous entry. The improvement must be clearly defined by the inventor.
 - Contestants who are selected as finalists and one parent/guardian must be prepared to travel to Akron, Ohio for an Awards Ceremony on May 1, 2010.

- **Permission to Duplicate.** Students, teachers, and parents are welcome to duplicate any part of this competition information (including the Official Entry Form). All entries must be accompanied by a copy of the Official Entry Form.

ABOUT THE COMPETITION

- This competition is open to full-time students who are in grades 5-8 for the 2009-2010 school year. These students must attend an accredited public or private school, charter school, or home school and must reside within the United States or U.S. Territories. Employees of the Rubber Division, ACS, The Akron Global Polymer Academy, The University of Akron, The National Museum of Education, and contest sponsor(s) and their immediate family members and/or those living in the same household of each are not eligible.

- All federal, state and local taxes are the sole responsibility of the winners. All federal, state, and local laws and regulations apply.

- All trip expenses will be awarded to the finalists and their respective parent/guardian. There will be no substitution of trip prizes.

- Hotel accommodations do not include incidentals, tips, telephone calls, or any other personal expenses incurred during the trip. Finalists and their respective parent/guardian must travel together. All taxes, fees and surcharges on prize or gratuities associated with any part of the prize are the sole responsibility of the contest winners.

ABOUT THE JUDGING

1. Ten (10) Semi-Finalists in each division will be selected and notified by February 20, 2010. Four (4) finalists (two first place winners and two runners-up) will be selected and notified by Wednesday, March 17, 2010.
2. All entries received in accordance with the rules will be judged on the following basis:
 - **35% Innovation/Inventiveness (How creative is it?)**
 - **35% Usefulness (How will it help/entertain or educate society?)**
 - **15% Research, Design & Execution (How well was the problem solved?)**
 - **10% Marketability (Would the cost of the invention be reasonable?)**
 - **5% Organization & Clarity of essay (including spelling and grammar.)**
3. Each contestant is limited to one entry.
4. Winners are selected by a panel of distinguished scientists, business executives, and educators. The decision of the judges is final.
5. After the judging of entries, ten (10) semi-finalists in each division will be selected and notified through The National Museum of Education by February 20, 2010. **Each semi-finalist must then ship his/her invention to the address provided at the time of notification.**
6. Four (4) finalists will be selected and notified by Wednesday, March 17, 2010. The four (4) finalists will then travel, along with one parent/guardian, to Akron, Ohio for an Awards Ceremony on May 1, 2010. All travel arrangements and accommodations will be provided by the Contest Hosts. All travelers must execute a Liability/Publicity Release prior to travel and must possess applicable travel documents (e.g. valid photo I.D.) prior to departure.
7. Entry materials, consisting of an essay, sketch, photo(s), video, CD, DVD or Flash Drive will not be returned to the contestants.
8. The Contest Hosts, the Sponsor(s), and the National Museum of Education are granted permission, upon entry into the competition, to use (in their sole discretion) the contestant's name, photograph, likeness, and entry materials including the invention, for publicity purposes. Acceptance of the prizes constitutes permission to the Contest Hosts, the Sponsor(s), and The National Museum of Education to use the winner's name and/or likeness for purposes of advertising and promotion and trade without further compensation unless prohibited by law. By accepting the prize awards, winners agree to hold harmless the Rubber Division, ACS, The Akron Global Polymer Academy, The National Museum of Education and Contest Sponsor(s), their respective officers, directors, agents, employees, attorneys, shareholders, partners, controlling persons, predecessors, subsidiaries, affiliates, parent corporations, insurers, successors,

and assign against any and all claims and liability arising out of their participation in this contest or the use of the prize. Winners assume all liability for any injury or damage caused or claimed to be caused, by the participation in this contest or use or redemption of any prize. By participating in this contest, contestants agree to be bound by the Official Rules and the decisions of the judges.

FREQUENTLY ASKED QUESTIONS ABOUT THE RUBBER BAND CONTEST

1. What sizes, colors, or quantity of rubber bands may I use to make my invention?

You can use a variety of sizes or colors or quantities of rubber bands to make your invention.

2. Does the invention have to consist of rubber bands alone?

No, rubber bands may be used with another product or products, but rubber bands should be a primary component of the invention.

3. Is this rubber band competition open only to science classes or science projects?

No, this competition is open to any discipline.

4. How do I get started?

Here are some categories to get you thinking about inventions.

Apparel	Household
Automotive	Lawn/Garden
Construction	Media/Software
Cosmetics	Medical
Crafts	Music
Creative Packaging	Quality of Life Improvement
Education	Safety
Entertainment	Sports
Furniture	Textiles
Games	Toys

5. Are some people allergic to rubber bands?

In rare instances, people who are allergic to latex may react to rubber bands. If in doubt, please consult your physician.

6. May I receive help and input from my friends, family and teachers?

No great inventor works alone. While the main concept and the bulk of the work associated with dreaming up and putting together your invention should be your own, we understand that bouncing ideas off parents, friends and teachers is normal and often necessary. We just ask that you let us know who worked with you throughout the process and that you make sure to let your own ideas shine through.

7. Who invented the rubber band?

In 1843, an English inventor named Thomas Hancock, sliced up rubber bottles to make elastic threads that were used as garters and suspenders. The usefulness of these elastic threads was limited because they would crumble in cold weather. A few years later, an English inventor and businessman named Stephen Perry would use Hancock's elastic threads as a starting point to create a rubber band made of vulcanized rubber. Perry patented the rubber band on March 17, 1845.

8. How are rubber bands made?

According to the Alliance Rubber Company website, making a rubber band is a lot like making a loaf of bread. First, you mix up the dry ingredients –color, additives to give it long life, and the “active” ingredient, sulfur, which brings about the critical chemical process of vulcanization. Vulcanization actually cross-links the rubber molecules into a strong chain, giving rubber its stretch and strength.

Next, the dry ingredients are added to the rubber in a large mixer called a banbury, named after its British inventor, Fernley H. Banbury. In the banbury, heat builds up from the friction and chemical reaction as the rubber mixes. When it reaches 250 degrees, the 500 pound ball of dough is dropped onto a giant rolling pin called a mill. The mill cools and rolls the dough out into sheets which are then split into strips and fed into a pressing machine called an extruder. The extruder pushes the dough out in a tube form, like a very long garden hose. This tube is then heated to finish the vulcanization, rinsed, cooled, and cut into bands at speeds of up to 3000 bands per minute.

9. Will I get my invention back?

Upon written request, all devices will be returned to their inventors within 12 months of submission. Students retain ownership and rights to the design of their rubber band invention.

10. What will happen if I am picked as a finalist but am unable to travel to Akron, Ohio on May 1, 2010?

Contest hosts will handle travel conflicts on a case-by-case basis. An alternate semi-finalist may need to be chosen.

11. Where can I find more information about rubber bands?

To find more information about rubber bands, you can visit the following websites:

www.agpa.uakron.edu

www.alliance-rubber.com/companyinfo/rubberfacts.html

Think outside the rubber band, and stretch your imagination!