

Welcome to our contest, Invention 2003.

Here's the problem:

You have just been awarded the Nobel Prizes for
both Peace and Science!
Show us what you did to earn this honor.

The next pages contain some ideas to help you get started.

Official Rules

1. Any Central Oregon student in grades K-12 may enter.
Sure, you may enter with friends (K-8, groups no larger than 3 students; high-school, individuals only).
2. Use any format you like for your contest entry, such as pictures, models, board games, descriptions, computer programs, dramas, tapes, or whatever medium best conveys your ideas.
3. All entries must be received by **5:00 p.m. Friday, November 14, 2003**, at

Bend Research, Inc.
64550 Research Road
Bend, OR 97701
4. Include your first and last name, teacher, grade, and school on the entry form provided. Cut it out and attach it to your entry. **Make sure your name is on each piece of your entry.** Your entry will be returned to you if you check the appropriate box on the entry form.
5. A panel will judge entries for creativity, originality, coolness, and how well ideas are developed to address the problem. **Entries must not defy the laws of nature.**
6. Fabulous prizes (specially designed T-shirts) will be awarded to the top several entrants in each grade, K-8. Winners will also be invited to a special Science Night presentation in their honor. Less-fabulous prizes will be awarded for good efforts.
7. **A \$1,000 scholarship** will be awarded to the best high-school entry. A **digital camera** will be awarded to the best middle-school entry.
8. Winners will be announced by December 1, 2003.
9. Have fun!

For more information, go to our website at <http://www.cocc.edu/invention> or call Heidi at 382-0212, ext. 242, or Franz at 382-0212, ext. 105.

Invention is sponsored by Bend Research, Inc., with help from the Bend-La Pine School District and Central Oregon Community College.

Topics To Consider

If an inventor like you made a scientific discovery that solved one of humanity's big problems, you might win both a Nobel Peace and a Nobel Science Prize. What are humanity's big problems? War, hatred, jealousy, greed, ignorance, intolerance, disease, hunger, malnutrition, energy production, pollution, environmental degradation, nuclear proliferation, limited natural resources, limited means of production, limited living space, and so on. Here are some ideas.

- Hunger** Your innovations in farming, fishing, or ranching have contributed to increased plant and animal food production. Your ideas have resulted in the cultivation of new plants and the domestication of new animals. Share them with us.
- Manufacturing** New manufacturing methods have emerged because of your innovations.
- Natural Resources** Describe the organism that you engineered to solve a major problem of humanity. Your ideas have helped safeguard land, water, and air quality. Show us.
- Technology** A genetically engineered change has caused a world crisis. You fixed it!! How? You have altered the traits of plants or animals. Describe how your work has helped humanity.
- Community** Your new building materials or styles have changed the way people live. Your invention makes it possible for people to live in harsh environments.
- Transportation** Your ideas for propulsion have revolutionized the way the world travels.

Choose one of these topics or many! You can also invent your own Nobel Prize-winning topic related to science and peace.

Inventerprise 2003 Entry Form

Please Print

Grade _____ School _____

Teacher _____

Student Name(s) _____
first last

Entry Title _____

first

last

first

last

Check box if you want your entry returned

Make sure your name is on each piece of your entry. Number of entry parts _____

Please cut out and firmly attach this entry form to your contest entry

The Nobel Prize

Alfred Nobel was an inventor and entrepreneur who grew quite wealthy during his lifetime, primarily from his invention of dynamite. When he died in 1896, he left behind a will in which he instructed that some of his fortune be used to award cash prizes each year to “those who have conferred the greatest benefit on mankind.” He specified that the awards be granted in the fields of chemistry, physics, physiology or medicine, and literature. Furthermore, he instructed that an award be granted for the promotion of “fraternity between nations,” what we now call the Nobel Peace Prize.

The first Nobel Prizes were awarded in 1901. The list of winners since then includes the greatest minds of the last century for discoveries and inventions that have improved the health and welfare of all humanity.

Go to the website at www.nobel.se to see a complete list of Nobel winners. Although no one has ever won an award for both science and peace in the same year, there have been individuals who have won more than one prize, but for unrelated feats.

The discoveries and inventions of some of the Nobel Prize winners have made such an impact on the health and welfare of the earth’s people that they could have just as easily been granted the Peace Prize in addition to the prize for their contribution to the fields of physics, chemistry, or physiology/medicine. Here are some examples.

- 1945 Sir Alexander Fleming, Ernest B. Chain, and Sir Howard Florey won in medicine/physiology for the discovery and production of the first widely used antibiotic, penicillin. Millions of lives have been saved.
- 1956 William B. Shockley, John Bardeen, and Walter H. Brattain won in physics for their work on semiconductors and their discovery of the transistor effect. The computer age was born.
- 1911 Marie Curie won the Chemistry Prize, and in 1903 she shared the Physics Prize for her work in understanding radiation. Its medical uses have affected the lives of millions.
- 1915 Richard Willstatter won in chemistry for his work in the area of plant pigments, especially chlorophyll, considered today to have laid the groundwork for modern biochemistry.
- 1954 Linus Pauling won in chemistry for his research into the nature of the chemical bond, which led to means of uncovering complex chemical structures. He also was awarded a Peace Prize in 1962 for his campaign to end nuclear weapons tests.
- 1962 Francis Crick, James Watson, and Maurice Wilkins won in medicine/physiology for the discovery of the structure of DNA, the chemical basis of life, as we know it.
- 1995 Paul J. Crutzen, Mario J. Molina, and F. Sherwood Rowland won the chemistry prize for their work in understanding the decomposition of the Earth’s ozone layer. This may someday help us save the life of our planet.

As you can see from this list, your scientific invention today can beneficially affect the lives and well-being of people worldwide, thus promoting “fraternity between nations.”