



*"It changes the way
we see the world."*

MACKENZIE WILSON
STUDENT FINALIST
GAHANNA, OH

A Student's Guide to The 2014-2015 Christopher Columbus Awards



*"It's not
like learning
something out of a
textbook. It really goes
beyond that to help you
understand science."*

CONNIE CHUNG
STUDENT FINALIST
NORTH WALES, PA



What's the deal?

We are challenging you to use your imagination and creativity to make your community a better place to live.

We think you have what it takes to identify a problem, look into it, come up with an innovative solution, test and refine the solution . . . and have fun doing it!

What's in it for me?

A fair question. Besides the fun of being creative, working with your friends and doing something good for others, there is a chance your team will become a finalist and:

- Participate in the National Championship Event in June 2015.
- Compete for a \$2,000 scholarship for each team member.

As a finalist, you'll also have an opportunity to apply for the **Columbus Foundation Community Grant**. If your team's grant proposal is chosen, funds will be awarded to help you and your community implement your team's idea over the next year. Just think of the possibilities!

What do I have to do?

"A Student's Guide to Getting Started," on the following four pages, will help you begin. You will work as a team of three or four, ask your coach questions and talk to people in the community to

help point you in the right direction.

Your objective is to prepare an entry that explains:

- Your community issue or problem.
- The scientific research you did to understand the problem.
- How you tested your solution.
- How your innovative solution will work in the community.

If at any point you aren't sure what to do next, ask your coach. He or she has a booklet that outlines additional details that will help you complete the entry and locate resources. To help you through the process, the competition also offers:

- A toll-free number, **800-291-6020**, to call with any questions.
- A website at **www.christophercolumbusawards.com**.

Who's behind this program?

The Christopher Columbus Fellowship Foundation.



Good luck!

We look forward to receiving your team's innovative entry!

A Student's Guide to Getting Started



one

Start building a team of three or four students in 6th, 7th or 8th grade who want to tackle a community problem. You may want to team with other students who share a concern about one particular issue. A good team will have people with many different skills, interests, talents and experiences.



three

Brainstorm ideas and decide which community problems to begin investigating. Community problems can deal with just about anything that affects people's daily lives. What issues are important to you? Are these issues important to other people too? Make sure you're looking at all sides of an issue. You may want to talk to your family, friends, teachers or others about how the issue affects them. After you've looked at different problems, choose one that you want to address.



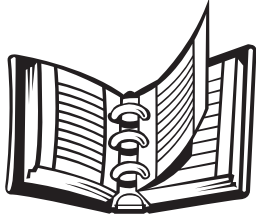
two

Ask an adult to join your team as a coach. You need someone who can volunteer time to help your team make a difference in your community using science and technology. Your coach will work with you throughout this competition project to keep your team on track and provide guidance and suggestions when you need them.



four

Do some research on possible solutions that include science, technology, engineering and math. What are some scientific ways to resolve the community problem you've chosen? You'll need to look at all sides again — how would other people be affected by the solutions you're proposing? What resources would you need — financial support, volunteer time from people in the community, raw materials, advice from an expert? Think about how you could get the resources. Contact community mentors who are experts or have a great interest in your issue to talk about your ideas.



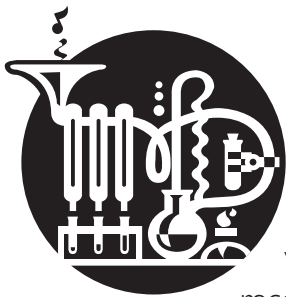
five

Now it's time to get hands-on! Use the scientific methods of inquiry and investigation. Based on what you've discovered, propose a unique, creative solution. What innovative technology or approach would you like to test in order to try to solve the problem?



seven

If your solution works and it's based on solid facts, sound thinking, good science and community input, congratulations! You have become a community innovator!

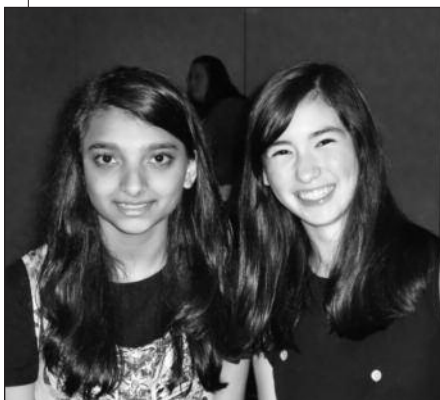


six

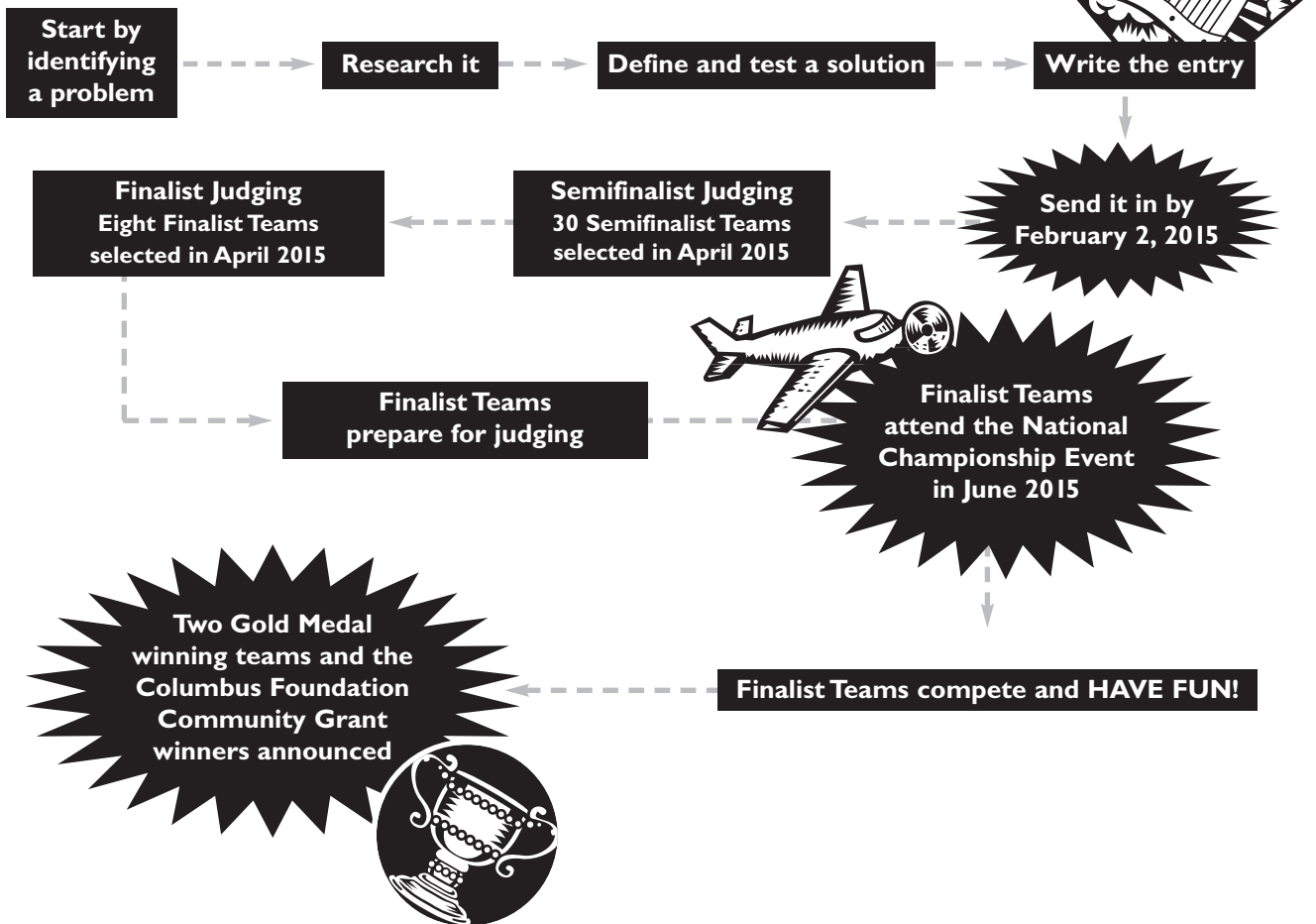
Design a test to see whether your solution will work. Be sure to record all your data and control any variables. Run experiments with a prototype to test your solution under various conditions. If your solution doesn't work, don't give up... brainstorm and test a new solution. Keep testing and modifying possible solutions to reach the best result. Most problems have more than one solution. Can you improve on your solution?

eight

Prepare your entry and show the judges how your team applied its cranial matter to a community matter. **You may end up at the National Championship Event!**



The Road to the Finals



Entry Guidelines Summary

A COMPLETE ENTRY CONSISTS OF **5 SECTIONS** – 4 WRITTEN AND 1 VISUAL.

(Ask your coach for more details about specific rules and format.)

- Section 1: Project Overview** (max. 1 page): Clearly outline the team's problem and solution. Why is it a problem?
- Section 2: Research** (max. 3 pages): Show us your scientific and community-based research.
- Section 3: Testing** (max. 3 pages): How did you test and retest your idea? What evidence proves it can work?
- Section 4: The Solution** (max. 3 pages): How can you make it work in your community?
- Section 5: The Visual:** Using a diagram (no larger than two 8 1/2" x 11" pages), mechanical drawing (no larger than two 8 1/2" x 11" pages), photographic series (no more than four photos), a DVD (five-minute maximum length, accepted formats mp4, mpg, avi, wmv, m4v, mov) or a PowerPoint presentation on CD (maximum of 20 slides; no video elements inside the slides), present your idea in a creative and visual way.

A complete entry consists of 5 sections: 4 written and 1 visual.

All entries must be uploaded by February 2, 2015.

That's my idea! Oh yeah? Prove it!

Have you ever found yourself saying, “Hey, that’s my idea!” and when you were asked to prove it was your idea, you couldn’t? This happens all the time. Usually, the reason people cannot prove certain ideas were originally theirs is because they don’t have evidence to show they had the idea and when they had it. To help keep track of your own ideas for this project, you may want to document your work in an idea notebook.

How do you “prove it”?

The easiest way to show when you first had an idea is by drawing or writing it down in an idea book. Once you have written your idea down, sign and date the page. Also, have someone who you trust be your “witness” for that idea — get the witness to sign and date the page, too.

What is an idea book?

An idea book can have several other names — it may be called a journal, a laboratory book or simply a notebook. This notebook is where you should sketch out, write down or record your ideas. Choose a composition book with sewn-in pages. If you use a spiral or loose-leaf notebook, you may lose pages or be tempted to remove pages. You don’t want to do this because you may end up throwing away a really good idea!

Also, be sure to use a ballpoint pen to record your ideas. This ensures that you will have a permanent record and removes the temptation to erase a potentially good idea. Sign and date each page in your idea book so you will have proof of the date you recorded the idea or worked on the invention.

What is recorded in the idea book?

In addition to drawing or writing down your ideas, write down all the work you do while developing the idea. For example, if you have an idea for a new cookie recipe, write down the recipe. While you are in the kitchen making the cookies, write down any changes you make to the recipe during the mixing and baking process. After all, what if you invent the most delicious chocolate chip cookie ever and you can’t remember what you added or did to make it taste that way? By writing down all of your work in your idea book, you will have a record of what works and what doesn’t work, and a way to repeat the process. Your idea book will serve as proof that you had and worked on the idea at a particular point in time.

What does a witness do for me?

Wouldn’t it be really great if you had your idea book to rely on and you could produce someone who would be willing to say that the information in your idea book was true? This is achieved by having someone you trust read and understand what you have drawn or written down in your idea book, and sign and date your book as a witness to your work.

**Your ideas are important! You don’t want to lose them.
Take the time to write them down and have the pages witnessed.
If anyone ever says “prove it,” you will have the proof you need.**