



## 2012 Discovery Education 3M Young Scientist Challenge

### Entry Video Topics

Many of the greatest innovations of our time were first designed to solve a simple problem. This year's Discovery Education 3M Young Scientist Challenge encourages young people to solve everyday problems using science and innovation. When you are working in the field of science, the opportunities are endless! Look around you – science is everywhere. Your innovative ideas just may revolutionize the way we live.

### THE CHALLENGE

Specifically, students will be challenged to identify an everyday problem related to **the way we move, the way we keep ourselves healthy, or the way we make a difference**. The problem should directly impact them, their family, their community, or the global population. The idea must be a **new** innovation or solution, and cannot simply be a behavioral change or a new use for an existing product.

### VIDEO SUBMISSION

The challenge is to **create a one- to two- minute video** that...

- explains the problem and how it impacts them, their family, their community or the global population;
- describes a **new** innovation or solution that could solve or impact the problem;
- explains the science, technology, engineering and/or mathematics behind their innovation; and
- illustrates how their innovation could both address the everyday problem they've identified and have a broader impact locally or globally.

### THOUGHT STARTERS

The following are thought-starters within each category. **Students are encouraged to consider one of these topics *or* come up with their own ideas within these categories.**

- **The Way We Move.**  
Millions of people around the globe are moving everyday—walking, biking, driving, taking the bus or ferry, or traveling on horseback, just to name a few.



## Entry Video Topics

What kinds of technologies, innovations, or solutions might:

- Help reduce traffic accidents, jams or other transportation safety hazards?
- Create greener transportation solutions that are less harmful to the environment? (electrical, natural gas, hybrid, etc)
- Reduce your carbon footprint? And improve the energy to humans per mile ratio? (public transportation, natural gas powered vehicles, etc.) Improve airline screening and/or security tools to make air transportation safer and/or more efficient?
- Make transportation more accessible to people with disabilities, limitations or challenges?

○ **The Way We Keep Ourselves Healthy.**

From the ball field, to the living room, to the classroom, ensuring the health and safety of others is of paramount importance.

What kinds of technologies, innovations, or solutions might:

- Ensure clean drinking water for all people across the world?
- Detect and/or prevent food poisoning?
- Prevent the spread of germs or illness when you're sick?
- Improve the way drugs or vaccines are administered to treat disease or illness?
- Ensure fruits and vegetables are kept fresh?

○ **The Way We Make a Difference.**

Science touches every part of our lives, especially in times of need.

What kinds of technologies, innovations, or solutions might:

- Protect people in the event of an emergency? (for example, communications, shelter, first aid, clean air/water)
- Reduce energy loss in homes and buildings so that less energy is used?
- Improve the quality of life for people living in remote parts of the world?
- Produce energy in ways that is least harmful to the environment?

Entries will be scored using the following judging criteria:

- Creativity (ingenuity and innovative thinking) (30%);
- Scientific knowledge (30%);
- Persuasiveness and effective communication (20%); and
- Overall presentation (20%).



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Looking for inspiration? Here's one story that might inspire you...

*One Sunday in 1974, Arthur Fry, a new-products developer at 3M, was singing in his church choir. The little piece of paper he used to mark his choir music had fallen out, causing him to lose his page. He thought back to a weak adhesive that one of his colleagues, Spencer Silver, had developed and wondered if he could use it to create an adhesive bookmark that could be easily removed without damaging his hymn book. The next day he used the adhesive to create the sample bookmarks. The rest, as they say, is history. Arthur's sample bookmark led to Post-It® notes, an innovation that has revolutionized the way we communicate and organize information. Arthur, of course, had no way of knowing this. He was simply trying to keep his place in church!*

Source: <http://invention.smithsonian.org>