



# KIDS' SCIENCE CHALLENGE

## EDUCATOR AND MENTOR GUIDELINES

### THANK YOU FOR BEING A KIDS' SCIENCE CHALLENGE MENTOR

#### WHAT IS A MENTOR?

A Kids' Science Challenge "mentor", can be a teacher, group leader, facilitator, parent or other helpful adult who acts as a helper and facilitator to a KSC Team or KSC student. A KSC mentor helps students get ready to take the Challenge! We hope that your participation will be rewarding for you and your kids. Your participation in your students' learning is key to their success. Your involvement is truly appreciated.

#### SCIENCE TOPICS

Each year the Kids' Science Challenge selects 3 science topics which are demonstrated and explained with the help of a group of renowned scientists. On [kidsciencechallenge.com](http://kidsciencechallenge.com) kids watch videos, do research and play games as they learn about the topics. Then they submit their own well-thought-out ideas, questions or problems. Your kids do not have to submit a whole project or creation, just the idea for a project or experiment for a scientist to build, or a question for a scientist to solve. There is one grand-prize winner per topic. The winners will visit and collaborate with the scientists in their research and work settings. There are also a wide variety of cool finalists awards in each topic.

#### TAKE THE CHALLENGE

##### The Science Challenges are:

##### ZERO WASTE

Invent a package that never ends up in a landfill.

##### ANIMAL SMARTS

Design a toy, game or experiment that enhances the life of a pet or zoo animal and demonstrates its particular intelligence.

##### MEALS ON MARS

Come up with a new way to preserve, cook, deliver or sustainably produce food in flight or on Mars.

#### SCIENCE BACKGROUND

##### Zero Waste Introduction:

The Earth is filled with garbage and a lot of it comes from packaging. But it is possible to package our food, toys and other stuff without hurting the environment. To do that, packages need to be sustainable, or friendly to the environment. Sustainable packaging doesn't harm our world or use up the limited resources we have on Earth, such as clean water, air, and underground oil. Zero Waste is about using the right materials to make the package, using less energy to ship the package, and then reusing or recycling the package once it's done its job. Learn how sustainable packaging can help save the Earth from drowning in its own garbage.

##### Animal Smart Introduction:

Dogs who know over a thousand words, dolphins who can work together to plan new tricks, parrots who can think like a six-year-old child – humans are not the only intelligent animals. Animals show their smarts in many ways. They communicate, play, plan and problem-solve. Some can even recognize themselves in a mirror. Find out how much animals know and how you might help to keep their minds and bodies busy.

##### Meals on Mars Introduction:

Eating food is a lot more fun when it floats off your plate! If you think it was hard getting used to the food at sleep-away camp, imagine what the food is like when you're on the way to Mars. To prepare for

space travel, food scientists must think about how to prepare and preserve food, how astronauts will eat in zero gravity, and how they'll dispose of food and human waste. Once they're on Mars, they'll need to know how to grow or produce their own food there. Learn more delicious facts about space food. You'll find out that it's out of this world.

## GENERAL GUIDELINES

Students have the choice to work individually or in collaborative groups. Either way, the end product will be a completed Kids' Science Challenge Entry Application. When children prepare for entering the competition as individuals they will be guided through a series of learning activities, and then encouraged to imagine original ideas for their entries. See Mentor Tips below.

Although recommended, individual entrants are NOT required to have a mentor. They are free to simply use all of the Kids' Science Challenge resources as a guide to the learning activities.

To apply as a member of a team, students will work collaboratively on learning activities, and be encouraged to come up with an original idea together. Team submissions MUST be endorsed by a mentor. Teams can be made up of no more than 5 students. If a team submission wins a Grand Prize, the judges will award the prize to one team member, in consultation with the mentor. All other team members will receive finalist prizes.

Mentors help guide the students through the Entry Application process, assuring that they fill out all forms properly and that the Parent or Guardian Consent form is completed, signed and returned to the Kids' Science Challenge with the Entry Application. Each team member must submit a complete entry application.

It is critical that the students come up with and complete the entry on his or her own. But mentors play a key role in guiding students through the process of creating and then submitting an idea.

## MENTOR TIPS

- Encourage students to explore all of the resources on the KSC website, and to try to imagine new ideas as they go through this process. There are many activities that can be used in the classroom, at an after-school activity program or at home. Check out the Parent and Teacher page to get started.
- Allow students to select the activities they like and to imagine their own ideas.
- Encourage students to share ideas and brainstorm freely. For example, set a timer for 60 seconds. During that time ask your students to write down as many ideas as they can. Want more tips on brainstorming? Visit the KSC brainstorming page.
- Remember, there is no magic answer, encourage your students to think outside the box.
- To prepare kids for the process of completing the Entry Application, we've created a wealth of educational resources. Work with kids to brainstorm an idea using the **Kids' Science Challenge Brainstorming tool**. Teach a unit on each of the science topic with comprehensive lesson plans aligned to science and content area standards. Invite students to explore the topics in greater depth using additional **science activities**. You can also find the complete contest rules and regulations by visiting the **Official Contest Rules**.

## FORMING A KIDS' SCIENCE CHALLENGE TEAM

You may be asked by your students to assist in the formation of a Kids' Science Challenge Team. Teams may be formed in after-school groups, in classrooms, or other community organizations. The mentor will help the kids select an appropriate team name, guide them through the team entry process, and verify consistency within team entry applications. Each team member must submit a complete entry application that includes the team name and the name and contact information of the team mentor. Once a student joins a team for a specific science topic, a student may not re-enter as an individual for the same topic. Teams and individuals may submit entries for more than one topic, but only one entry per topic may be submitted by individuals or teams.

## TIPS FOR TEAMS

### How to Start Things Off in Your Group

- All Kids' Science Challenge Teams are limited to no more than 5 kids.
- Ask the kids if they would like to work individually or collaboratively as a team. It's okay to have both individual and team entries from one class or after-school group.
- Take a poll, or survey, to see if the kids are particularly attracted to any of the three science topics in the competition.
- Kids working in teams should agree on the science topic that they wish to enter.
- Help the kids to brainstorm about fun names for their team.

## OFFICIAL ENTRY APPLICATION

A downloadable PDF of the Official Entry Application is available at [kidsciencechallenge.com](http://kidsciencechallenge.com). You will be better able to assist your students by becoming familiar with the Official Entry Application.

### The Entry Application contains:

- **Background on the Kids' Science Challenge**
- **The Entry Application**

The Kids' Science Challenge is open for entries from October 1, 2011 through February 29, 2012. Entries **must** be postmarked or faxed by February 29, 2012. Winners will be announced on May 2, 2012.

## AFTER THE ENTRIES ARE COMPLETED

We encourage students to use their KSC entries as springboards for Science Fair Projects. In the spring, we'll be inviting all KSC entrants to send in photos of their Science Fair projects and we'll post them on our Science Fair page.

The kids who send in drawings as part of their entries may see their drawings posted in the Online Drawings Gallery in the spring of 2012. We will also conduct the Kids' Choice Award – allowing kids to vote for their favorite drawing.

Please join our **mailing list** to find out about upcoming activities and special events.



The first 1000 entries will receive free Activity Kits. Build a bird feeder and make a boat from rock paper and more!