REQUEST FOR PROPOSALS

Purpose: Implementation of **New Mexico Climate Champions**, a science education and action program for 5th – 12th grade students in New Mexico

Issued by:
Asombro Institute for Science Education
PO Box 891
Las Cruces, NM 88004
575-524-3334
www.asombro.org

Due Date: August 11, 2017

Award Information: Asombro will award five grants of $4,500 to entities that meet the eligibility criteria listed below. We expect awards will be competitive and not all proposals will be funded. Asombro is serving as a pass-through entity for this stage of the New Mexico Climate Champions project, which is funded by a grant to Asombro from the Environmental Protection Agency's Environmental Education Grant Program. As such, grant recipients are subject to the same Federal requirements as Asombro. If awarded a grant, the applicant will receive half of the grant ($2,250) at the start of the project and half of the grant ($2,250) upon acceptance by Asombro of the grant recipient's final report.

Eligibility: Any local education agency, college or university, state education or environmental agency, 501(c)(3) nonprofit, or noncommercial educational broadcasting entity licensed by the FCC is eligible. An individual teacher's school district may apply, but the teacher may not. For profit organizations are not eligible. These eligibility guidelines follow the criteria established for the EPA's Environmental Education grants.

Background
New Mexico Climate Champions is a science education and action project developed by the Asombro Institute for Science Education with funding from the Environmental Protection Agency's Environmental Education Grant Program. Asombro staff created two, 10-hour modules designed for use with 5th -12th grade students in classrooms or informal learning settings (e.g., after school programs, summer camps). One module covers climate change and energy issues in New Mexico. The other module covers climate change and water issues in New Mexico (see below for descriptions of the activities).

Both modules include five hours of content-rich, hands-on lessons and five (or more) hours of student-designed action projects to mitigate or adapt to climate change. Each module includes a kit of all materials needed to implement the activities with students. Grant recipients will receive a free kit (valued at more than $500) for either the energy module or the water module.

The purpose of this Request for Proposals is to solicit proposals for five grants of $4,500 that will be awarded by Asombro. Each grant recipient must:

- Implement one of the New Mexico Climate Champions modules (energy or water) with 5th-12th grade students in New Mexico in the fall 2017 semester (August – December 2017). This includes teaching the content lessons as well as students planning and carrying out action projects to mitigate or adapt to climate change.
- Administer and return simple evaluation tools developed by Asombro.
- Participate in the New Mexico Climate Champions Summit on January 15, 2018 (Martin Luther King, Jr. Day) in Las Cruces, New Mexico. The Summit is an opportunity for students to

showcase action projects they created and implemented as part of the New Mexico Climate Champions project. In-person participation is preferred, but submission of videos or posters will also be considered (see below).

- Submit a final narrative and financial report to Asombro by January 15, 2018.

New Mexico Climate Champions Modules

Educator guides, student handouts, answer keys, and slide presentations for each activity in the energy module and the water module are available online for use by grant recipients (http://asombro.org/nmcc.htm). Grant recipients will also receive a kit of equipment and supplies needed for all of the activities in the chosen module (energy or water). All activities were developed, tested, revised, and implemented by Asombro with more than 200 students in the 2016/17 school year. All activities are aligned with 5th-12th grade education standards, including Common Core State Standards, Next Generation Science Standards, and New Mexico Science Standards. A brief description of each activity is shown below:

Energy Module

Hour 1 – Insulating You, Insulating Earth (Greenhouse Effect) - To model the enhanced greenhouse effect, students conduct an experiment using their own thermal energy, thermometers, towels, and space blankets. Students learn how increased CO_2 in the atmosphere is creating a global warming effect. Note: This is the first activity in both the energy and water modules.

Hour 2 – Energy Resources and Use - To demonstrate the sustainability of renewable energy as an alternative to non-renewable energy, students use green and black beads to track the available energy throughout time as energy consumption increases.

Hour 3 – Energy Audit - Students investigate the relationship between energy use and climate change by conducting an energy audit of common household appliances. They calculate the amount of carbon dioxide that could be kept out of the atmosphere by reducing energy use.

Hour 4 – Energy Data Jam - Students identify trends in New Mexico energy consumption data and then develop and present a creative project to communicate the data to nonscientists.

Hour 5 – Solar Energy - Students play the role of solar engineers as they test two factors that can affect solar panel efficiency: air temperature and angle of sunlight. They report their findings as if they were writing a user's manual.

Hours 6 – 10: Stewardship Project Planning and Action - Students complete a detailed project planning guide that includes: deciding on a project, developing a goal, creating a plan, executing their plan, and evaluating the effectiveness of their project. Using an Asombro-developed action project as an example, students are walked through the necessary steps to turn their climate change knowledge into a stewardship action plan. Note: Action project planning and implementation is the final half of both the energy module and the water module.

Water Module

Hour 1 – Insulating You, Insulating Earth (Greenhouse Effect) - To model the enhanced greenhouse effect, students conduct an experiment using their own thermal energy, thermometers, towels, and space blankets. Students learn how increased CO_2 in the atmosphere is creating a global warming effect. Note: This is the first activity in both the energy and water modules.

Hour 2 - Streams and Steam - Students play a Chutes-and-Ladders-style board game to understand the effects of climate change on the water cycle. Students identify large-scale impacts of climate change and brainstorm actions to mitigate these effects.

Hour 3 – Ready, Set, Grow - Students play the role of water-intensive and drought-tolerant plants to understand the impacts of climate change on water and primary producers. Students model the effects of increased CO_2 and decreased water availability on plants.

Hour 4 – Climate Data Jam - Students identify trends in predicted temperature and precipitation changes in several New Mexico counties and creatively communicate the data trends to nonscientists.

Hour 5 – Water Conservation - Students calculate their weekly water use and compare it to the average American. They explore three models of water conservation (land contouring, rooftop rainwater harvesting, and greywater recycling) while collecting quantitative data on the amount of water conserved.

Hours 6 – 10: Stewardship Project Planning and Action - Students complete a detailed project planning guide that includes: deciding on a project, developing a goal, creating a plan, executing their plan, and evaluating the effectiveness of their project. Using an Asombro-developed action project as an example, students are walked through the necessary steps to turn their climate change knowledge into a stewardship action plan. Note: Action project planning and implementation is the final half of both the energy module and the water module.

Dates for Proposal Submission and Notification

- Friday August 11, 2017 – All proposals are due by 11:59 PM. Electronic submissions encouraged. Mailed proposals must be received by August 11.
- Friday August 18, 2017 – Applicants chosen for a grant will be notified.

Proposal Format

To facilitate proposal review, please include all of the following information in the order listed below. Please include the following responses in a single-spaced, PDF document of no more than 10 pages (including attachments).

1. **Applicant information** – Include name of applicant organization, address, phone number, email address, website, name (and contact information) of person to contact regarding proposal.
2. **Data Universal Numbering System (DUNS) number of applicant entity** – DUNS numbers may be obtained without charge at http://fedgov.dnb.com/webform.
3. **Background information on your organization** – Tell us about your local education agency, college or university, state education or environmental agency, or 501(c)(3) nonprofit.
4. **Project description** – How will you implement one of the New Mexico Climate Champions modules (energy or water) with 5^{th}-12^{th} grade students in New Mexico in the fall 2017 semester (August – December 2017)? Please include details about personnel involved (e.g., qualifications, hours devoted to project, hourly rate or salary) and your plan for implementation.
5. **Description of student participants** – Describe the students who will participate in NM Climate Champions. Include details such as the number of participating students and demographic information about those students.
6. **Timeline** – Provide a timeline for your project. Remember that students must participate in the New Mexico Climate Champions project in fall 2017. Make sure to include participation in the New Mexico Climate Champions Summit in January 2018.
7. **Module choice** – Which module (climate change and energy OR climate change and water) will you use with students? Why did you choose this module?
8. **Summit participation** - How will you participate in the New Mexico Climate Champions Summit on January 15, 2018 in Las Cruces, New Mexico? While in-person attendance is preferred for educators and participating students, we will accept other forms of participation (e.g., sending a video of your students discussing their project, sending a poster about the action projects that can be displayed at the summit).

9. **Evaluation plan** – What are the goals for your project and how will you monitor accomplishment of those goals?
10. **Final report** – Who will write and submit the final report about your project? The final narrative and financial report are due to the Asombro Institute for Science Education by January 15, 2018.
11. **Budget and justification** – Provide a detailed budget and budget justification that shows how you will use the $4,500 grant. Funds can be used for personnel, travel, copying/printing, supplies, and student action project costs. Indirect costs are allowed. If your entity does not have a negotiated Federal indirect cost rate, you may use the 10% de minimis indirect cost rate. Enough detail must to shown in your budget and justification to help the grant committee understand your use of funds. We realize that details may not be available for money that will be allocated to student action projects since students will develop these projects. For this line item, please explain how you estimated the total money needed (e.g., five student groups with an average of $400 per action project for $2,000 total). Note that the total grant award will be $4,500.
12. **Evidence of eligibility** – Provide evidence that your organization fits one of the eligibility categories. For example, a 501(c)(3) should include a determination letter from the IRS.
13. **Letters of support (optional)** – You may include letters of support for your proposal. These letters should indicate any commitments made by partners. These letters are optional, and they are included in the 10-page proposal limit.

How to Submit Your Proposal

Emailed proposals: Send your proposal as **one** PDF document (including attachments) to Asombro's Science Education Specialist Ryan Pemberton (ryan@asombro.org). If you don't receive an acknowledgement that we received your proposal within 72 hours of submission, please contact us (575-524-3334 or ryan@asombro.org).

Mailed proposals: Mail one copy of your proposal to:
Asombro Institute for Science Education
PO Box 891
Las Cruces, NM 88004
If you don't receive an acknowledgement that we received your proposal within five days of mailing, please contact us (575-524-3334 or email ryan@asombro.org).

Questions

If you have questions about this Request for Proposals, please contact the Asombro Institute for Science Education by phone (575-524-3334) or email (ryan@asombro.org).