



Solar Energy Cook-Off

These rules are for regional Solar Energy Cook-Off competitions, which includes culinary judging. These rules are not valid for virtual Solar Cook-Off competitions or the end of the year statewide EnergyWhiz event. Those rules can be found at: <https://www.energywhiz.com/competitions/>

The **Solar Energy Cook-off** is a two part competition encompassing design of a functional solar cooker and the creation of a dish cooked in this same cooker. This competition was developed to provide a real world solar thermal challenge for upper elementary, middle and high school students.

Competition Structure

The Solar Energy Cook-Off competition is open to teams of 2 - 6 students in grades 3 - 12. The competition is divided into three divisions: Yellow Division (3rd - 5th grade), Orange Division (6th - 8th grade), and Red Division (9th - 12th grade). Teams of mixed grade levels will compete in the division of the highest grade level student.

Construction Requirements

Teams may design and build any style of cooker (i.e. box, panel, parabolic, etc), using any non-toxic materials they wish. Only students are allowed to build their cooker; however, for safety reasons, teams may have assistance with power tools, and may buy pre-cut parts such as glass or plexiglass. Adults are encouraged to monitor the use of tools., but are not to actively participate in the design or construction of the cooker.

All cookers must be large enough to cook at least (3) servings of the food to be judged.

No commercially produced cookers will be allowed in the competition.

The solar cooker is to be powered exclusively by the sun using solar thermal energy to heat the food. No additional power sources are permitted for heating food. For example, photovoltaic powered hotplates are not allowed.

The cooker submitted for design judging must be one created for this year's event, it cannot have been used in a previous EnergyWhiz competition. However, cookers from previous years may also be used in the cooking process—teams may use several cookers to prepare their food, but must submit only one to design judging.

Cooking Requirements

Teams are to prepare a recipe of their choosing and cook it using their solar cooking device. To do this

effectively, the food cooked must be paired to the operational capability of the team's cooker, such as heat attainable, type of cooking (baking, frying), size of cooker, etc. Since the weather on the day of the competition is unknown and can vary, teams may want to plan for different types of cooking conditions.

The team must cook at least three servings of their dish to be judged.

Teams may use any kind of non-toxic cooking vessel or container.

Non-cooked items may be added as garnish to a dish after it has been in the cooker. However, this garnish must be specified in the printed recipe.

If recipe ingredients need to be changed the day of the event from those specified in the recipe posted on the team web page, notice must be given to the administrative team prior to culinary judging.

Competition Day

At the competition, each team will have a 'booth' space (at least 12' x 12' with a 6' table), in which to cook their food, discuss their cooker with the judges and present to the general public.

The Solar Energy Cook-Off will not be canceled for cloudy weather—teams will be expected to do the best that they can in all weather conditions except rain. In the event of severe inclement weather, the culinary portion of the competition will be canceled. The decision whether or not to cancel the culinary judging will be made by the administrative team between 11:30 and 12:00 on the day of the event. If this happens, the Design Judging will continue.

Each team is responsible for removing their cooker and any associated cooking debris from the premises once the competition is complete.

No pets except service animals will be permitted at EnergyWhiz.

Judging Criteria

Awards (1st - 3rd) will be given in each division for **Design** and **Culinary**.

Design judging includes:

- **Design decisions** - Does the team understand solar cooking and solar thermal design? Was careful attention paid to parts selection and integration?
- **Construction** - How well is the cooker constructed? Is the cooker sturdy enough to cook food? Is the design replicable?
- **Function** – From the test results and design decisions the team made, how well is it expected that the cooker will function?
- **Creativity** - How creative is the design and/or the use of materials? Were recycled materials used? Is the design and the web page presented in a creative way?
- **Durability** - Has the cooker been designed for repeated usage? Can the cooker stand up to moderate wind, humidity and light rain?

Culinary judging includes:

- **Suitability** – Does the prepared recipe fit the capabilities of the cooker design? Was the team able to prepare it easily? Did the team finish cooking in a timely manner?
- **Appeal** – How appealing is the prepared dish in appearance? How does it taste?
- **Difficulty** – Was the recipe too easy (i.e. a simple heat and serve)?
- **Creativity** – Does the recipe use a variety of ingredients? Has the team shown creativity in their recipe, cooking technique, or presentation?