EnergyWhiz 2026
Solar Energy Cook-Off (SECO)
RULES

What is the SECO competition?

The Solar Energy Cook-Off (SECO) is a design and culinary competition. Each team is responsible for designing and building a fully operational solar cooking device, documenting the process on a team created web page, and also cooking a dish of their choice using their cooker. The challenge is to design an effective solar cooker and to pair the operational capability of the cooker to the type of food cooked. The use of local and Florida grown or harvested produce is highly encouraged. Expert judges will evaluate the cookers on their design, and the teams' culinary choices and capabilities.

Who May Compete

SECO is open to teams of two (2) to six (6) students in grades three (3) through eight (8).

The competition is divided into two divisions. Teams of mixed grade levels will compete in the division of the highest grade level student.

- Yellow Division - 3rd - 5th grade
- Orange Division - 6th - 8th grade

NOTE: Schools or clubs that have registered more than three SECO teams per division may be requested to select up to three of their teams to represent their organization at the culinary portion of the competition. This may be necessary depending on the number of overall teams enrolled given the timeframe for judging, the limited number of sun hours for cooking, and available area for cooker setup.

Important Dates

Events	Date
Project Webpages Due	Tuesday, April 14, 2026 by 6:00 pm
Web Pages Available for Public Viewing/Comments	Monday, April 20, 2026
Student/Team Names, Recipe Cards and Risk & Release Forms Due	Wednesday, April 22, 2026 by 6:00 pm
EnergyWhiz Event at FSEC	Saturday, April 25, 2026

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Requirements

Solar Cooker Design and Construction	
Teams shall:	
	design and build any style of cooker (box, panel, parabolic, etc.) to be powered exclusively by the sun using solar thermal energy to heat the food. No additional power sources are permitted.
	construct the cooker using non-toxic materials (some materials or paints give off toxic fumes when heated).
	seek adult assistance with power tools; safety first! Adults are encouraged to monitor the use of tools but are not to actively participate in the design or construction of the cooker.
	buy pre-cut parts or reuse items such as tempered glass or plexiglass, if appropriate.
	create a cooker large enough to cook at least (3) small servings of the food to be judged (tasted).
	submit and identify only one solar cooker for judging.
Note:	When several solar cookers are needed to prepare a recipe, cookers from previous years may be used. The cooker submitted for design judging should be identified and cannot be from a previous statewide EnergyWhiz event.
Culinary and Cooking with Solar	
Teams shall:	
	prepare a recipe of their choosing and cook it using their solar cooking device.
	pair the food cooked to the capabilities of the team's cooker, such as heat attainable, type of cooking (baking, frying), size of cooker, etc.
	plan for different types of cooking conditions, since the weather on the day of the competition can vary.
	cook at least three (3) small servings of their dish to be judged.
	use any kind of non-toxic cooking vessel or container.
	add any optional non-cooked items as garnish once the dish is fully cooked. This garnish must be specified in the printed recipe.
	notify the SECO administrative team prior to culinary judging, if the recipe ingredients need to be changed the day of the event from those specified in the recipe posted on the team web page.
	compost any plant or vegetable waste using the container provided at EnergyWhiz.

Web Page

Each team will populate a web page on the EnergyWhiz site that showcases their solar cooker. These pages will be used to judge the design of the cooker and will be viewed by students and the public.

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Below are the minimum requirements.

1. Photo & Basic Info	
	Team name
	Name of the School
	First name(s) and **last initials** of students on the team (**no last names on the public page**)
	Grade level of each team member
	A photo of the completed cooker (use this as the *Featured Image* on your page). Be sure the project photo is clear/visible.
	List any past 'historical' information about your cooker team and/or school (this will be used by the announcer during EnergyWhiz when introducing you and your school). For example: o if your team has competed in the Solar Cook-Off before (how many years?) o if your school has previously competed in any other solar cooking event o past Solar Cook-Off awards won by the school o interesting fact(s) about your team, your recipe, or your school
2. Design Documentation	
	Photos - a minimum of two (2) clear photos of the cooker in high resolution showing it as it is being used to cook food or tested (with a thermometer or temperature probe).
	A list of any help received from non-team members (i.e. Home Depot staff, internet, parents, coach, etc). Include in this section any help you had with power tools, plans you downloaded or items that were cut at a store or shop.
	Design drawings (minimum of 2) that include measurements and dimensions.
	A statement of where the idea for your cooker (or unique parts) came from, and why you chose that type of cooker.
	A list of parts used in construction, including any recycled parts used.
3. Test Results	
	Include a statement of the highest temperature that you measured with your cooker, with the time of day and the weather conditions (cloud cover) during the testing.
4. Team Design Video - will be hosted on our Vimeo site and included on your team web page. It may be edited and/or pieced together or included on the web page in separate segments (up to 5 minutes, total).	
	Once your cooker is built record a video that includes information on: ○ Why the team chose this type of cooker ○ How the cooker works when it is put out in the sun ○ Special features of the cooker–close-ups are strongly encouraged ○ Each team member's contribution to the project

5. Recipe(s) - Include the recipe(s) that you will present to the judges at the competition.	
	Teams may want to plan/test two types of recipes for different solar thermal conditions (full sun and partly cloudy). You may include more recipes than are used; however, the recipe that is presented to the judges must be included on the web page and a physical copy submitted by the due date.
	The following recipe information is required at a minimum. See template and sample that follows. TEAM Name School & Location (City) Teacher/Coach Name * Title of Dish * Number of Servings * Solar Cooking Time * List of Ingredients & Amounts (Measurements) * Directions Fresh From Florida: Indicate with the letters "**FFF**" next to any ingredients that are grown by the team, Florida produced or Florida harvested (Fresh From Florida) Fun Fact**:** Provide a fun or interesting fact about the team, their school, recipe or their solar cooking experience on the recipe card. The Announcer will share this when the team presents their dish to the Culinary judges for tasting.
Note:	If multiple recipes will be tasted and the team has created a Menu, the list of menu items should be included. For example: Entrée: Chili, Drink: Lemony Sun Tea, Dessert: Strawberry Shortcake

Recipe Card – Template

Team Name	
School & Location	
Teacher	
Menu with Ingredients listed:	Menu Item: Menu Item: Menu Item: Please put (FFF) next to all Fresh from Florida Ingredients.
Fun Facts:	

Recipe Card – Example

Team Name	The Snackers
School & Location	Florida Elementary - Cocoa, FL
Teacher	Mr. Science
Menu with Ingredients listed:	**Appetizer – Mexican Street Corn:** Corn (FFF), Cilantro (FFF), Pepper (FFF), Sour Cream, Parmesan cheese, Green onion (FFF), lime juice (FFF), butter, salt, mayonnaise, jalapeno, garlic, red onion **Main Course - Fish Tacos:** Tilapia, Flour Tortillas, Everglades seasoning (FFF), Tomatoes (FFF), Lime (FFF), Lettuce (FFF), Cilantro (FFF), Oil, Breading, Cheese **Dessert - Churros:** Tortillas, Cinnamon sugar, oil.
Fun Facts:	We have competed at EnergyWhiz 3 times, but this is our first time competing in the solar cook off! Churros are our favorite dessert

Teams are encouraged to use the judging criteria as a guide to what extras they may want to include in their web page. See examples on the next page.

* extra photos and/or videos of the team and the design, building and testing process
* an explanation of unusual and/or recycled parts used in their cooker
* an explanation of the challenges encountered and what the team did to overcome them
* project log - entries made on workdays documenting the engineering process
* list of internet sites used in the planning process
* any items that the team feels will help the judges to pick them as the winning team!

During the week leading up to, and during EnergyWhiz, all SECO web pages will be available for viewing. Students are encouraged to share their web page address and to visit other team pages.

Competition Day - Time To Cook!

Note: Because competitions run concurrently, individual students may only participate in two (2) EnergyWhiz competitions as team members.

Check in – Solar Energy Cook-Off Headquarters Tent
Upon arrival, the coach or teacher (or the team's adult designee) will need to check in at the SECO Headquarters tent near the solar cooking field and get their information packet, containing:

- Schedule
- Booth assignment (minimum 12' x 10' with a 6' table)
- Step by step (procedural) directions for the day
- Table sign
- Certificates of participation

Food Prep and Cooking
The team may setup their cooker(s) in their assigned area any time after check-in and can begin cooking. Each booth will have a table for food preparation and for plating their finished product. An appliance station will be available for team use.

Judging
During the food prep and cooking time, teams will be visited by various judges who will ask questions and evaluate the team's project based upon the rubrics that follow. Each team should be available to also talk to the public about their cooker and menu items.

Food Tasting
Food will be plated and presented to their division's three judges for tasting at the team's designated time and location according to the schedule, unless notified otherwise the day of the event. For planning purposes, times will not be earlier than 12:00 noon. Further information on this will be given at check-in.

Cancelation
In the event of severe inclement weather, the culinary portion of the competition may be canceled. That decision will be made by the administrative team between 11:30 and 12:00 on the day of the event.

Judging for the other awards will continue. SECO will not be canceled for cloudy weather; teams will be expected to do their best in all weather conditions except when rain or lightning is present.

Clean-up
Each team is responsible for removing their cooker and any associated cooking debris from the premises once the competition is over. A composting container will be provided to each team. A large compost bin, as well as recycling and trash bins will be located throughout the area for your use.

NOTE: No pets except service animals will be permitted at EnergyWhiz.

Evaluation and Judging

SECO projects are previewed online by multiple judges and are ranked based on the rubrics that follow. Final review and judging for all other awards occur in-person at EnergyWhiz.

Best Design - 1st - 3rd Place Awards: Given to top three scoring teams in each division.
Wow! - 1st Place only, to top team in each division.
Fresh From Florida – 1st Place only, to top team in each division.
Culinary - 1st - 3rd Place Awards: Given to top three scoring teams in each division.

CATEGORY	BEST DESIGN	MAX POINTS
Design Decisions:	Does the team understand solar cooking and solar thermal design? Was careful attention paid to parts selection and integration?	25
Construction:	How well is the cooker constructed? Is it sturdy? Is the design replicable? Can it stand up to moderate wind and humidity? Can it be used repeatedly?	25
Function:	From the test results and design decisions the team made, how well is it expected that the cooker will function?	25
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?	25
	Design SCORE	100

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CATEGORY	WOW!	MAX POINTS
Presentation:	How well does the team communicate? Are they enthusiastic? Do they approach & interact with the crowd?	25
Impression:	Does the team have a unified appearance (i.e. team t-shirts, theme, etc.)? Do they give a good first impression? Do they make you want to taste their food? Is their cooking table attractive?	25
Message:	How well does the team convey the message that solar cooking works? How well does the team know their subject?	25
WOW! Factor	How creative is the team? Do they go above and beyond the average to promote solar cooking, their recipes, their school/team?	25
	Design SCORE	100

CATEGORY	FRESH FROM FLORIDA	MAX POINTS
Recipe:	Does the prepared recipe highlight Fresh from Florida commercial or homegrown products and/or produce?	40
Availability:	How well does the team understand product and/or produce seasonal availability?	30
Benefits:	Do the students understand the benefits of using Fresh from Florida products and produce?	30
	Design SCORE	100

CATEGORY	CULINARY	MAX POINTS
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?	30
Appeal:	How appealing is the prepared dish in appearance? How does it taste?	30
Difficulty:	Does the cooked dish require some culinary skill (not just a simple heat and serve)?	20
Creativity:	Does the recipe use a variety of ingredients? Has the team shown creativity in their recipe, cooking technique, or presentation?	20
	Design SCORE	100

Good Luck to All SECO Teams!