



ClimACT



SOLARIS – Solar Oven Contest 2017/2018

PROJECT FUNDED BY THE INTERREG SUDOE PROGRAMME THROUGH THE EUROPEAN REGIONAL DEVELOPMENT FUND (ERDF)

Solaris Contest 2018 - ClimACT

Goals

Within the framework of the Interreg Sudoe ClimACT project, schools of Portugal, Spain, France and Gibraltar are challenged to build a prototype of a Solar Oven.

With the construction of these prototypes, the participants will address matters related to geometry, movement of the sun, orientation, geography, optics, among others. Solar ovens are used in thermal conversion of solar radiation for cooking food or boiling water.



Solaris Contest 2018 - ClimACT

Details

The Solaris Contest is open to every ClimACT / Low Carbon Schools. Each country will select the best solar oven for the final meeting of the ClimACT project at Lisbon – Portugal.

1st Category: students between 6 and 14 years old

2nd Category: more than 14 years old

Note: The participation in this contest does not require registration, but please send us an e-mail just to confirm your participation: climact@abae.pt

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Definition of Work

Should be a collective work, where the involvement and participation of students is essential. The materials used in the construction of solar ovens for cooking must be resistant to humidity and the temperatures that reaches inside.

A solar oven must have the following types of materials:

- structurals - guarantee the stability of the set (cardboard, wood, plastic, cement, etc);
- isolation - minimizes the thermal losses (glass wool, styrofoam, newsprint, etc);
- transparent - allow the creation of greenhouse effect inside the box (glass, plastic for high temperature, etc);
- reflectors - minimize thermal losses inside the solar oven and can concentrate the solar radiation inside (mirrors, aluminum foil, etc).

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Delivery

The entire construction process, as well as the final work, must be recorded in photography and / or video.

The photographs and / or video should be sent by e-mail to climact@abae.pt, with the identification of all the authors (School, Teacher(s), Student(s), accompanied by a brief description of the construction process and the materials used. The participants should also evidence the confection of a simple meal in the oven (eg: baked apples or a cake).

Timeline

Entries must be sent by June 2018 to the e-mail address indicated. Works that do not meet the requirements will not be accepted.

The decision of the Jury can not be appealed.

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Rating Criteria

In the evaluation of the prototypes, the performance of the furnace in the heating of 1 liter of water, as well as its aesthetics and the creativity demonstrated in its construction will be taken into account.

Solar Energy Teaching Guides

Solar Energy Lesson Plans:

<http://www.efmr.org/edu/solar2009.pdf>

Construction of Solar Ovens:

https://www1.eere.energy.gov/education/pdfs/solar_exploringsolarenergystudent.pdf

Example 1 – School Esc. Secundária Abel Salazar Portugal



Example 2 – School EB1 Padre Manuel de Castro Portugal





To encourage the transition to Low Carbon Schools through the development of technical and educational tools and activities