

# TECHNOLOGIES IN STEM EDUCATION

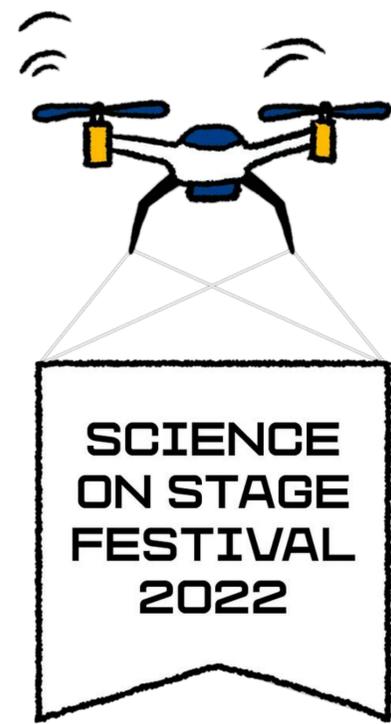
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## Shape it like a Sunflower

Biomimetics is the imitation of the models, systems, and elements of nature for the purpose of solving complex human problems.

Using several biomimetic designs processes the students explore the extraordinary characteristics and biological strategies that the species have developed through billion years of evolution, analyse the scientific support of their mechanisms and develop their own bio-inspired solutions

At first students were given some successful examples of biomimetic applications to introduce them to biomimetic. Then students are asked to select and study an organization that interests them and applies biomimetics. Using various valid sources, they study the bibliography of the organism they are interested in.



### Sunflower

Biology - Physics - Technology – Geography

- ❖ Through Biology students study the structure of the plant
- ❖ Studying the arrangement of the spirals of a sunflower, the students study the possibility of a biomimetic application for the optimization of the arrangement of the sun visors in solar thermal parks
- ❖ Using Tonatiuh Ray Tracing Software students study of the number and position of sunscreens

