

CAS program: Origami Group

School year: 2024/2025

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Origami author

CAS Coordinator: Loreana Selišek Butina M.A.
French teacher

Origami group learning outcomes

- Students were able to recognize their own strengths and identify areas for growth in origami techniques and related mathematical concepts.
- Students tried their hand at diagramming and sketching the folding sequence of the model, which allowed them to develop new skills.
- Students chose diagrams to fold from, in an area they wanted to develop, at the level they felt confident with.
- Through origami projects, students were able to demonstrate their origami skills and recognize the benefits of collaborative work.
- In folding advanced and difficult models, students showed commitment and perseverance.
- By involving in origami activities with guests from Japan and Azores, students were developing their cross-cultural competences.
- Creating and selling origami for charitable purposes at MIOC's Christmas Fair—with due respect for authorship and copyright—showed that students were able to recognize and reflect on the ethics of choices and actions.
- Students also learned how origami influences the modern world, particularly in origami-inspired engineering.
- One CAS student demonstrated exceptional persistence and dedication throughout the entire school year. The same student also showed initiative in planning and editing an origami magazine.

Students have learned the basic origami techniques and can understand origami symbology. They are capable of folding advanced origami models, following textual or visual instructions. Students understand the principles of symmetry, balance and proportion in origami models.

The students began their origami activities with the history of origami and traditional origami models. Origami bases and folding diagrams encouraged reflection on mathematical concepts and improved understanding of 3D concepts. Students also experimented with crumpling paper and analyzing the resulting patterns. Through paper folding, they practiced creating different shapes and formats, exploring the golden and silver ratios.

Reading crease patterns and origami diagrams involved significant problem-solving and understanding of the Huzita-Hatori axioms and Maekawa's theorem. Action origami introduced the topic of origami engineering—compliant mechanisms. There was also time for creative challenges. For the Christmas charity fair, students created numerous origami decorations and booklets containing diagrams, origami concepts, and stories. Through origami activities, students had the opportunity to connect with guests from Japan and the Azores. Since the group was composed of graduating students, activities concluded early due to exam schedules. The year ended with the publication of an origami magazine, edited and written by the students themselves.

We hope to bring more origami CAS experiences in the next school year.

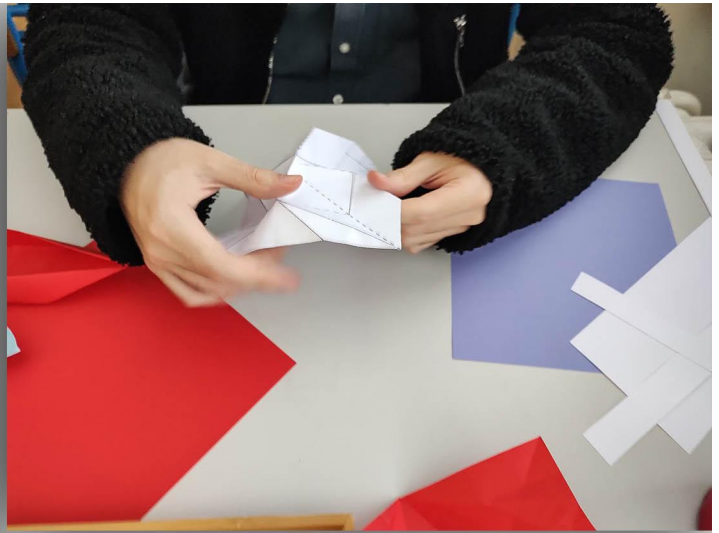
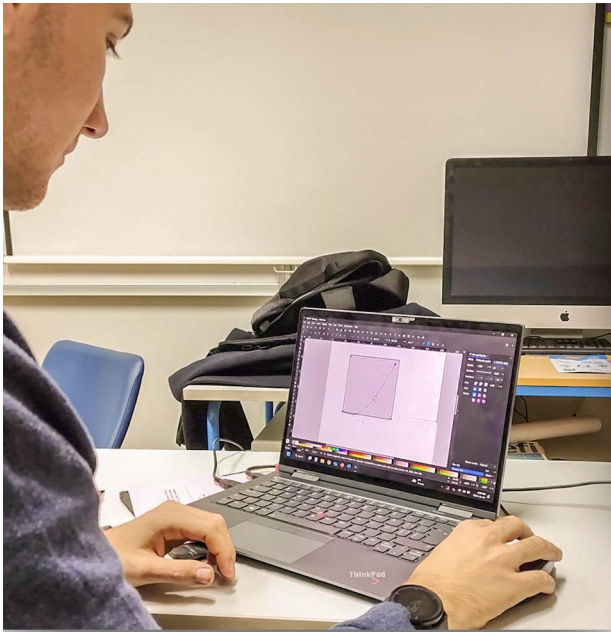
Sanja Srblićinović Čuček



Covers of this year's Origami Group magazine and A7 origami booklets that can be folded from A4 format.



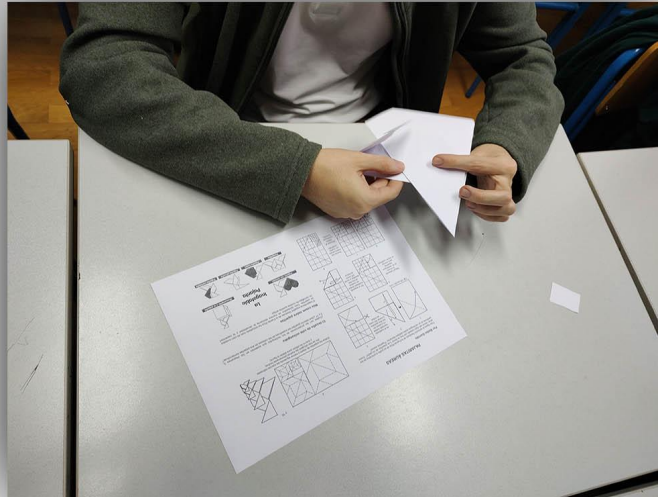
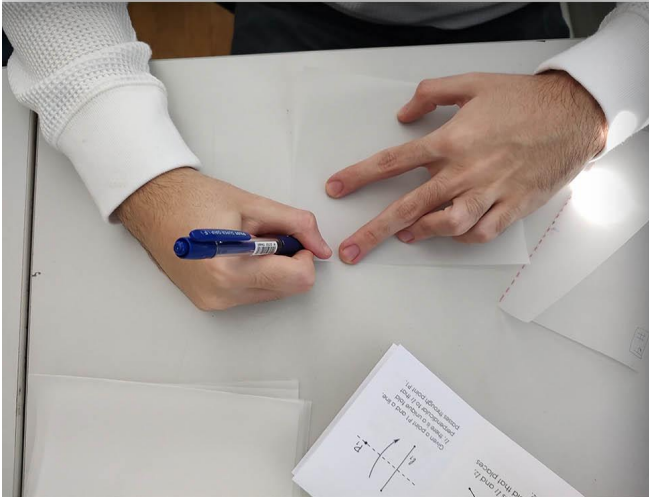
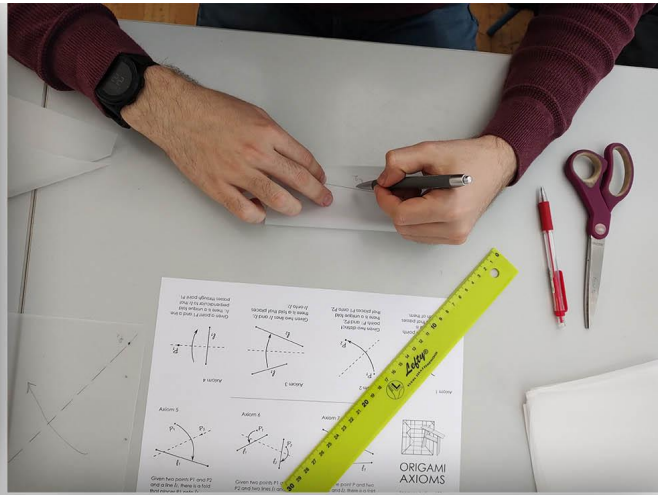
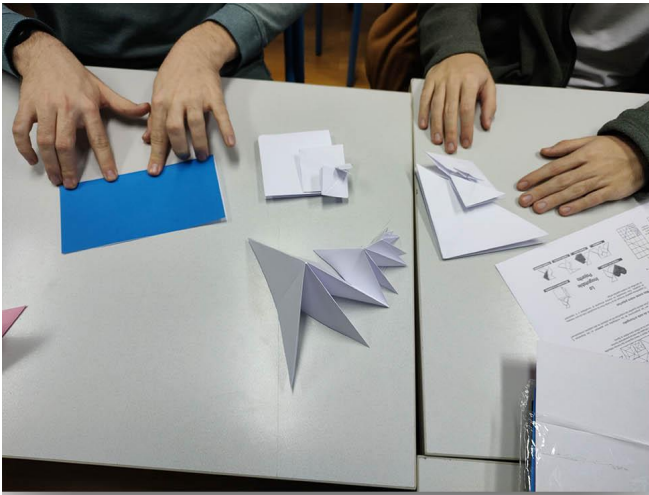
Christmas Fair activities



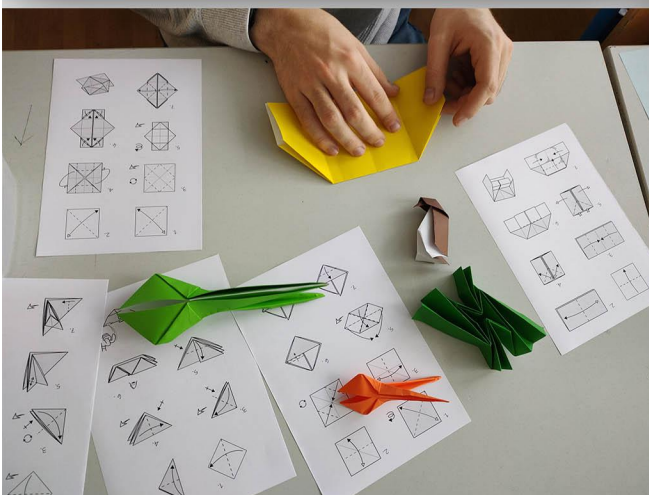
Diagramming and crease patterns



Origami guests
from the Azores
and Japanese guests



Mathematical concepts



Models of choice