



Activity

- Plane Figures -



Educational Goals

- ❖ Highlight the playful potential of mathematics
- ❖ Develop mathematical vocabulary
- ❖ Describe planes figures and quadrilaterals

Key Features of the Targeted Competency

- ❖ To adopt the mathematical vocabulary (C3)
- ❖ To interpret or produce messages of a mathematical nature (C3)
- ❖ To establish links between mathematical language and everyday language (C3)

Concept Used

- ❖ Vocabulary (isosceles triangle, equiangular triangle, right triangle, circle, square, rectangle, parallelogram, rhomboid, hexagon, pentagon, trapezium, etc.)

Materials

- ❖ Plane figures for each student (in appendix)
- ❖ Draft paper
- ❖ Pencils
- ❖ Ruler

Targeted Academic Level
Grades 3 to 6

Targeted Competency



Mathematical Field Concerned



Suggested Teaching Formula



Time Required
Approximately 40 minutes



Suggested Process



Step 0: Preparation (15 minutes)

Ask the students to cut out the plane figures available in the appendix. It is preferable that each student has a sheet of figures to cut out. If you want to save time in class, you can cut out the figures beforehand.

Prepare a drawing made of the plane figures that the students will have. The students must not see that drawing. You can get inspiration from the examples provided in the appendix. It is preferable that the figures do not overlap each other.

Step 1: Introduction (5 minutes)

Once every student has his plane figures set, describe the drawing prepared during step 0 to the class, using the most precise vocabulary possible. The students must try to reproduce this arrangement using the figures they have.

Then, compare the different creations made by the students to the initial figure. It could be useful to discuss as a group some key words used during the description. If needed, do a second example together to make sure that the vocabulary is well understood by the students. It would be interesting to have a student describe the drawing this time.

Step 2: Constructions (10 minutes)

Place the students in pairs. One student builds a figure with his geometrical shapes without the other one looking. He then describes it to his peer, who tries to reproduce it. It is preferable that the students start the activity with constructions made of 4 to 7 shapes, so they can get used to develop a rich vocabulary without it being too difficult to describe. It is advised to ask the students to try to represent living beings or objects that really exist. Once the figure has been reproduced, reverse the roles and start again!

Encourage the students to use a specific vocabulary: isosceles triangle, equiangular triangle, right triangle, circle, square, rectangle, parallelogram, rhomboid, hexagon, pentagon, trapezium, etc.

The students who are comfortable can draw their figure arrangements instead of always handling the cut-out shapes. They can then be creative and use shapes different from the ones available in the appendixes, keeping in mind that they have to be able to efficiently describe these shapes to their peers.

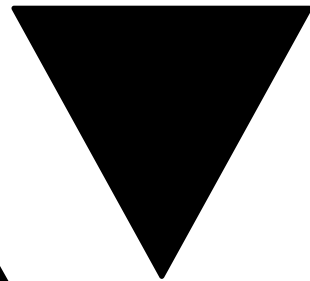
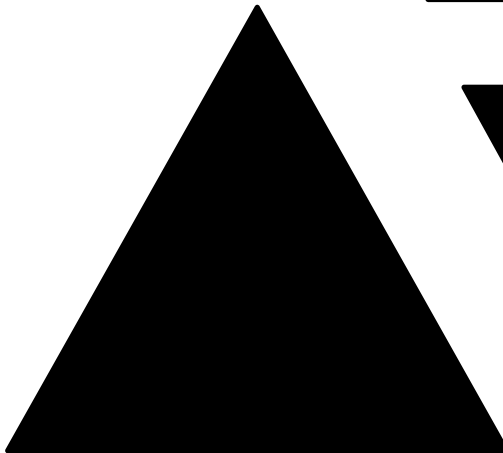
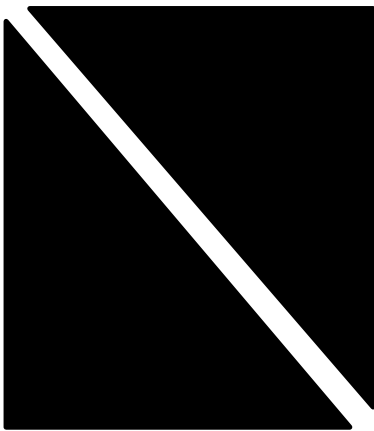
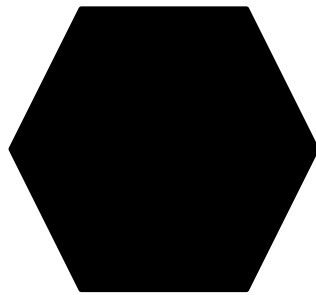
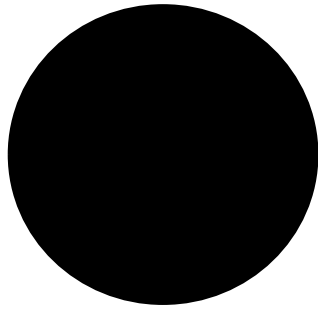
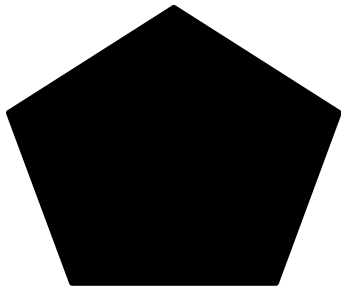
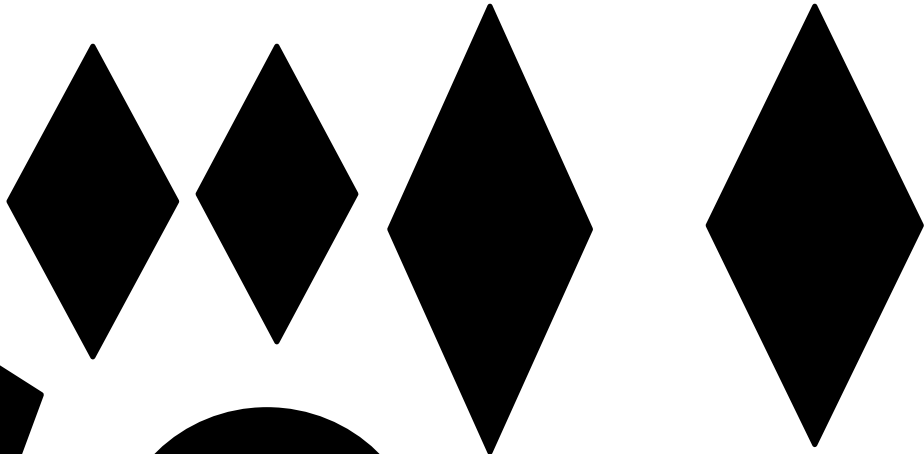
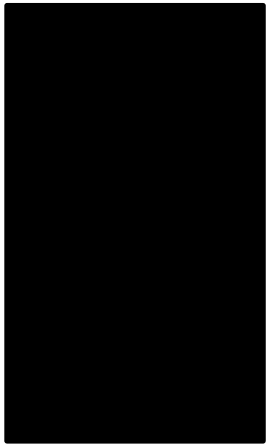
Step 3: Challenge (10 minutes)

Keep the same teams used for the previous step and provide each team with a set of more difficult shapes. It is advised that all the teams receive the same set. The rabbit and the human suggested in the appendix are interesting possibilities, but we also encourage you to create new ones.

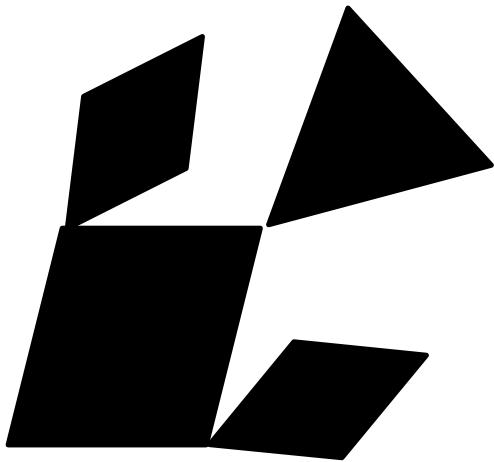
Next, ask one student per team to describe the figure to his peer using a specific vocabulary, so he tries to reproduce the drawing. The first team that manages to reproduce the image correctly wins the challenge.

APPENDIX

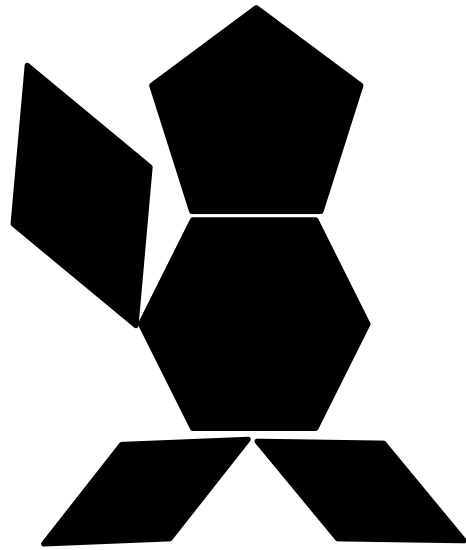
Plane Figures:



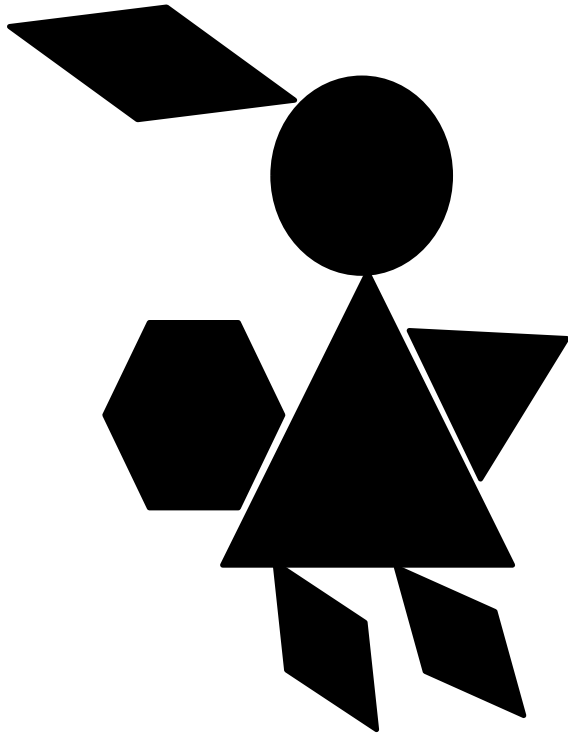
Some Possible Figure Arrangements:



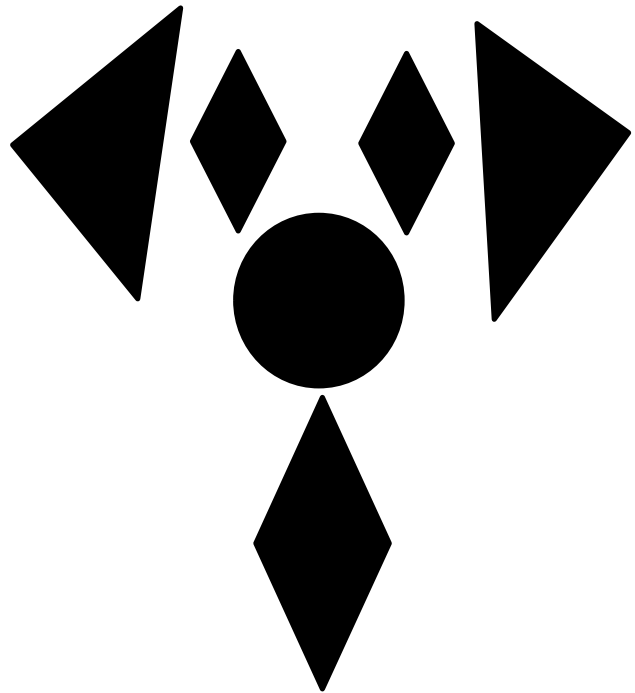
Fish



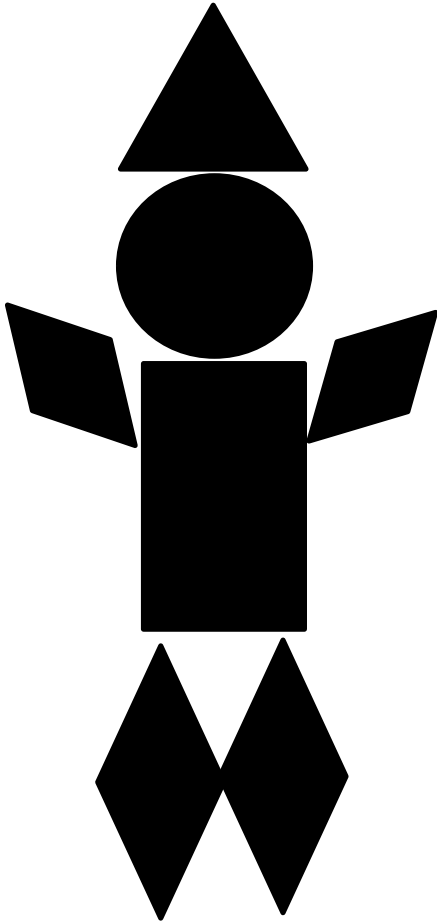
Beaver



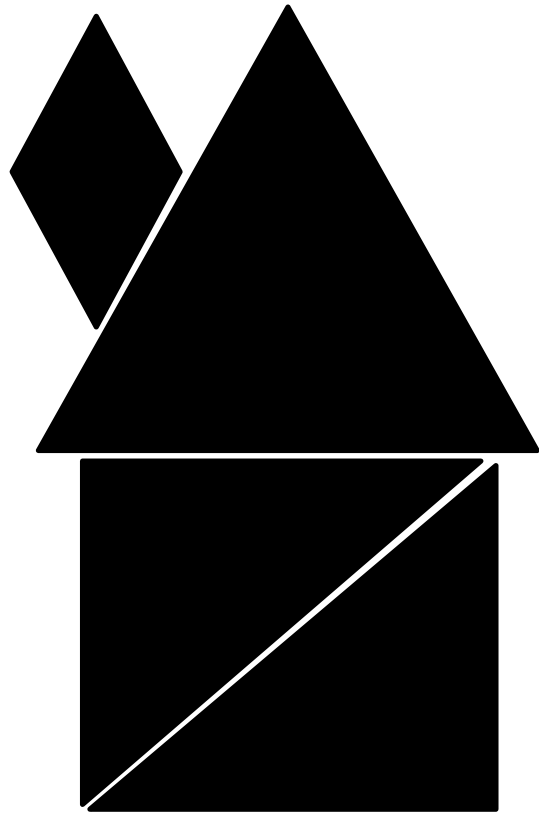
Rabbit



Dog



Human



House