

SUBJECT AREAS:

Natural science

ACTIVITY DESCRIPTION:

Through this activity students to learn about geometry and origami

OBJECTIVES:

Geometry & origami

MATERIALS:

A4 papers (white or colored),

pens,

rulers (optional),

<https://www.youtube.com/watch?v=I9Pc6jRK83E>

GRADE/LEVEL:

Upper Elementary School (12-14)

DURATION:

Preparation time: 1 hour

Activity time: 45 min.

PLACE:

Classroom

AUTOR:

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Math and origami

INTRODUCTION:

Learning about different geometric figures can be fun and more involving for students with the use of origami. In this way students will be learning new skills but also understand how by holding the paper you can create a different geometric figures and recognize them.

BACKGROUND:

Origami the art of folding paper and substantiated, the resulting object. Teaching math and geometry in particular isn't easy and students often have difficulty understanding it. This combination is an interesting way of explaining it.

Procedure:

Outline: For this lesson it's necessary for teacher to learning how to create the origami box. The video tutorial can be found in the link in the materials section.

Instruction:

Each student will need 1 A4 paper, one pen, ruler is optional.

Lesson can begin with a question to students about the shape of the paper and they can write on in which shape does it have.

More questions about the rectangle can be asked or explained to students (answers can be wrote down on the paper):

The internal angles are right angles, i.e. 90° ($\pi/2$) wide, so it is equiangular. The consecutive sides are perpendicular. The opposite sides are parallel and congruent. The diagonals are congruent.

If you decide to use rulers students can also take measures.

After first step of folding the paper you can repeat questions about the form and its characteristics.

Each time your students fold their paper you can repeat questions and make sure they understand different shapes they have created and the characteristics they have.

At the end each student will have the origami box, if they want they can make two of them and they will have the rectangular box you can than analyze.

FUN FACTS:

- *Origami is derived from two Japanese words, Ori (folded) and Kami (paper). The transition from the term orikata to origami came into use in 1880. This ancient Japanese art of folding paper has become increasingly complex over the years.*

ASSESSMENT:

Teacher can assess student's knowledge by asking questions during the lesson. E.g. What shape? How many angles has?

EVALUATION:

Students should create some other origami figures at home, they can use different tutorials that are available online. The main task is not origami itself but the analysis during the process. On the separate sheet they should write down what they noted during folding the sheet, the amount of angles, different geometric figures that appeared.