

Lesson plan for grades VII–VIII

Participants: primary school students

Lecturer: teacher

Subject

Exercises of spatial imagination on examples of natural architecture

Aim

- ★ familiarization with natural materials in architecture and with renewable energy sources; introducing the concept of ecovillage
- ★ practicing spatial imagination, learning the basics of architectural drawing and modeling, practicing manual skills

Student activity during classes

workshop work individually and in groups

Duration

4 x 45 minutes

Materials and teaching aids

- ▶ the content of the lecture from the *Natural Architecture and Art* website (called further: website), see: links at the bottom of the plan
- ▶ colored cardboard from a technical block in natural colors found in natural construction (the color of clay, straw, stone, tiles, shingle, green, etc.)
- ▶ A4 or A5 cardboard for the base of the building, the base will be a "plot" for the backyard garden
- ▶ small sticks, plasticine
- ▶ glue, crayons, markers
- ▶ scissors, ruler, set square, pencil

Methods and forms of implementation

verbal, activating, practical action

Course of classes

- 1) students learn about natural materials used in construction and the concept of an ecovillage; the teacher presents examples of buildings built of natural materials, examples of ecovillages and eco-settlements
- 2) the teacher introduces students to the basics of technical drawing and to concepts such as projection and facade
- 3) students sketch the building of their choice and start making a model in a scale of 1: 100 on prepared A4 or A5 cardboard
- 4) students cut and glue the walls and roofs of the planned house, attach them to cardboard
- 5) arrangement of a small garden around the house, greenery, paths, places to play and more

- 6) on the joined tables, students arrange houses with gardens and other buildings together to form a fragment of an "ecovillage"

Summary

- ✓ students discuss the solutions they implemented, their advantages and disadvantages

Text and visual materials to be used during classes

Link to the section "Natural building materials"

<https://naturalnydomek.pl/en/surowce>

Link to the section "Renewable energy sources"

<https://naturalnydomek.pl/en/energia>

Link to the text "Earthship"

<https://naturalnydomek.pl/en/techniki?category=Earthship>

Link to the text "Ecovillage"

<https://naturalnydomek.pl/en/urbanistyka?category=Ekowioska>

Link to the text "Eco-estates"

<https://naturalnydomek.pl/en/urbanistyka?category=Ekoosiedle>

Links to the text "Building techniques" + further individual techniques

<https://naturalnydomek.pl/en/techniki>

Link to the movie - construction of a cardboard house and building models

<https://youtu.be/SfEOHQWDo0>

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