

Designing a wall border

Opportunities for learning

- To recognize repeating patterns
- To describe repeating patterns
- To copy original repeating patterns
- To continue repeating patterns
- To invent repeating patterns
- To document repeating patterns

Material

Paper strips, crayons, (wooden) patternblocks, (paper) patternblocks, patternblock-stamp made of foam rubber

Introduction

The kids are sitting in a circle (on the floor or on chairs). First off, they see various images of repeating patterns from their environment (e.g. images of wallpapers, old churches, gift wrapping paper, etc.). Then the kids describe what they are able to see in the pictures. Next, the children can both work out and describe the specialties of repeating patterns (consecutive patterns with a smallest unit, shifted towards one direction). After clarifying on characteristics of repeating patterns the teacher puts an image of a repeating pattern into the middle of the circle. This has to be rebuilt by a child. Another child can continue the pattern accordingly. (see Fig. 1).

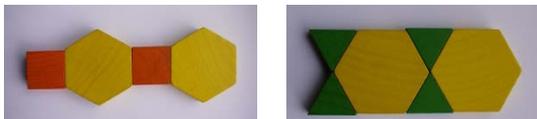


Fig. 1: Exempels for repeating patterns

The rest of the kids have to check on whether the repeating pattern was continued in the right way. If mistakes occur, the teacher can refer to the image in the middle of the circle.

Activity I – create “wall borders“ (repeating patterns)

The kids are divided in groups of two. They receive the task to create a wall border (repeating pattern) for the new classroom. In order to clarify on what a wall border is, the kids see an example on a paper strip. Afterwards the teacher tells the kids to invent an own wall border using the patternblocks (pattern shifted one-dimensionally). Weaker kids who are not able to invent an own wall border receive an illustrated excerpt from a repeating pattern which can be copied, continued and variegated.

Intermediate exchange - reflection

All tandems sit next to each other for a plenary session. Through selective questions the teacher is able to broach the issue of central aspects regarding both the assignment of task and problems observed throughout activity phase. Kids can convey their first experiences and conclusions, as well as difficulties.

Possible stimulus questions: How did you approach the task?
 How many units contain your wall border?
 What problems did you face throughout building your wall border?

Activity II – continue and document repeating patterns

The kids continue on working out their ideas. Kids who already finished the task get an empty paper strip for documenting their wall border. This can be carried out by means of a template, sticking various paper patternblocks, as well as stamping (see Fig. 2 & 3).



Fig. 2: placed and stamped wall border



Fig.3: wall border, stamp pad, foam rubber stamp

Closing exchange and reflection

The kids come together for a plenary session. The teacher praises both the work and outcomes of the children. Every tandem is able to show their documented wall border and point out specialties. Afterwards other kids are allowed to make further inquiries. An exhibition of all wall borders closes the learning activity.