

Lesson Plan – Fill the Boxes

Goals:

Exercise and improve 2D and 3D geometry skills.

Commented description of materials to be used:

The Fill the Boxes exhibit uses seven brick-sized pieces to be fitted into different-sized boxes. All boxes can be filled with these 7 pieces by changing their composition.

Strategies:

After fitting all seven pieces into the different-sized boxes, learners are encouraged to consider the volume of the pieces and boxes. We use a series of different challenges to enable learners to discover the relationship between the volume of 3D objects and the perimeter and area of 2D objects.

Suggestions:

Prompt learners with different questions on how positioning matters and how it changes the volume of a box.

Appraisal / Evaluation of Students:

We use different challenges related to geometrical calculations.

Assessment of lesson:

We compare the competence of learners in having a better understanding of the concepts of area and perimeter at the beginning and the end of the lesson. Also, we qualitatively try to understand whether the learners can justify their approach to spatial relationships.

Closure:

Overview of activity and key points, feedback from learners for further improvements and/or adjustments to be made.

Suggestions:

A series of questions can be made on where we encounter problems of compact disposition in daily life.