

POLY-UNIVERSE – Knowledge Produce Toy Family

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The toy family, in using and developing the basic geometric shapes of SAXON's poly-dimensional plain painting, communicates a new artistic perspective to both nursery and primary school children and adults. These colourful and easy-to-handle geometric shapes generate infinite logical complexity and complicated mathematical and morphological puzzles. However, its strength is its simplicity – it provides an equal opportunity for children of different ages, at different levels of mental and emotional maturity to develop their personality.

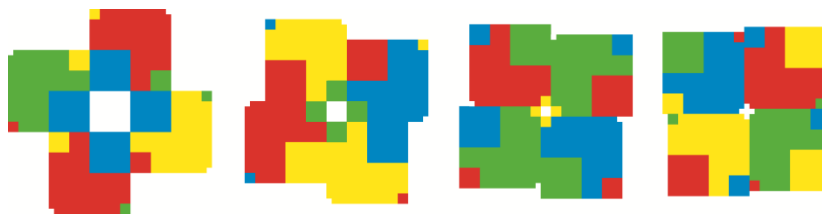


Figure: SAXON, Modules of POLY-UNIVERSE 1979-09 (*Squares, toy family*)

Progressive use of colour and shape groups and the high degree of manual activity and reflective thought create a constant challenge for the children and maintain their desire for exploration, at the same time allowing an undisturbed and continuous feeling of success. Direct physical activity, the emotions conveyed by colours, and the possibility of trying out plenty of variations without being checked make the children feel free and relaxed. Such experiences help the children to find more creative and imaginative solutions when dealing with problems from different areas of life or to acquire new knowledge.

All in all, “POLY-UNIVERSE” should not be limited to school-lessons, to after-school problem-solving courses, to any controlled activity (while being suitable for all these), but can act as a catalyst for the new pedagogical practice of learning by playing: *teaching to see*.

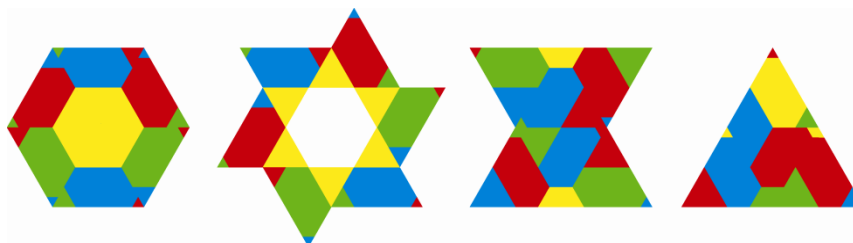
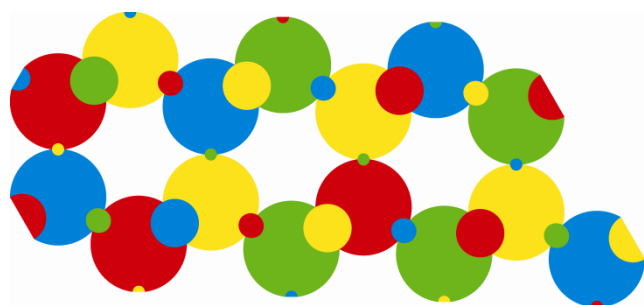


Figure: SAXON, Modules of POLY-UNIVERSE 1979-09 (*Triangles, toy family*)

The Aim of the Workshop

I did not set up any rules for the game. During the workshop the children and adults will not solve given mathematical problems, but they will recognize the mathematical and aesthetic correlations hidden in the system individually. These correlations could be summarized as follows:



- Discovering geometric shapes
- Searching for proportions
- Expanding the limits of composition
- Possibilities of combination, feeling the infinite
- Finding the linkage points
- Making colours collide
- Mixing forms
- Setting the directions
- Examining symmetry

Figure: SAXON, Modules of POLY-UNIVERSE 1979-09 (*Circles, toy family*)

So, this toy family does not only aim at problem-solving or recognizing colours or shapes, or solving logical puzzles, but also offers the possibility of playing a game freely, so children or adults can learn indirectly, through a game, an activity.

When dealing with the different-scale basic geometric shapes and primary colours, they gain experience, discover and see correlations, points of linkage and shape connections and the sharp borderlines between colours, not knowing that they are learning. They can explore “POLY-UNIVERSE”, the realms of mathematics, art and philosophy, wandering engrossed in them, without being aware where they are.

This novel toy family does not only develop skills or offer a visual-aesthetic experience, but it also expands the scientific knowledge, since it is based on an extraordinary mathematical set of proportions – scale-shifting symmetry.

Children and adults of different age groups, culture and social background can take part in the workshop. Both disabled and healthy children and adults can enjoy it during the workshop.