

ARCHETYPES OF THE D.I. MENDELEEV'S PERIODIC SYSTEM

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In the upcoming 2019, the world scientific community celebrates the 150th anniversary of the discovery by Dmitry Ivanovich Mendeleev of the Periodic Law of Chemical Elements (PLCE). During this time, hundreds of forms of graphical display of PLCE - Periodic System (PS), including three-dimensional models, have been proposed. In this context, the work raises the question of the location of a block of s-elements that has long been discussed in the literature: on the left edge of the table, as is customary today, or on the right edge, as suggested by Charles Janet (4). The arguments in favor of the version of Janet.

The proposed approach to the laws of the structure of the PS can be called a figure-numeric approach, the scientific foundations of which can be traced from the Pythagoreans, and the traditional roots lie in folk ornaments. The key elements are the square gnomon and the square itself. It is known that when doubling, they reflect in the atomic model the number of electrons on the filled subshell and atomic shell, respectively. In PS it is the length of s, p, d, f blocks and the length of the period. Signs of self-similarity of the object allow to consider PS as a fractal. The figure-numerical approach allowed us to create several two- and three-dimensional PS.

Expanding the didactic possibilities in understanding the fundamental law of nature through the artistic (ornament) and game (cubes, lego, computer simulation) component will help, in the author's opinion, to facilitate understanding of PLCE in the educational process.

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