

## THE ARCHETYPES OF PERIODIC LAW

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The work is an illustrative continuation of Wolfgang Pauli's idea about archetypes in modern science, about the symbols that have a dual function: pre-scientific (religious, mythical, ornamental, etc.) and scientific in the modern sense of the word. Pauli in his arguments relied on the work of Plato, Johann Kepler, Carl Gustav Jung.

Our illustrative material is based on the theory of figurate numbers, which was actively developed in the Pythagorean period of mathematics. The fundamental similarity of the ancient Greek concept of gnomon and the modern concept of electronic and nuclear shells of an atom is emphasized. The isomorphism of the symbolic image of the periodic law and some ancient and modern folk ornaments is shown.

Our view on the symbolic representation of the Periodic Law of elements suggests a new approach to teaching chemistry and physics as academic courses. The teaching is divided into two stages. At the first stage, which, according to Jung, can be called subconscious, the child at the sensual level is introduced to the geometric archetypes of Periodic Law. Educational games with cubes, balls, pyramids, mosaics, coloring, constructors, beadwork, kirigami, modeling et cetera in an entertaining and safe form will not only strengthen the intellect, but also prepare the child for the second, conscious stage of obtaining academic knowledge. Thus, the age threshold for the beginning of chemistry and quantum physics studying will be reduced from 14 to 1,5-3 years old.

### References

1. Pauli, W.E. *The Influence of Archetypal Ideas on the Scientific Theories of Kepler* (1948) <https://ru.scribd.com/document/45712272/The-Influence-of-Archetypal-Ideas-on-the-Scientific-Theories-of-Kepler>