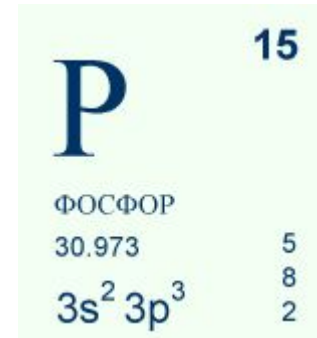

Phosphorus and Life

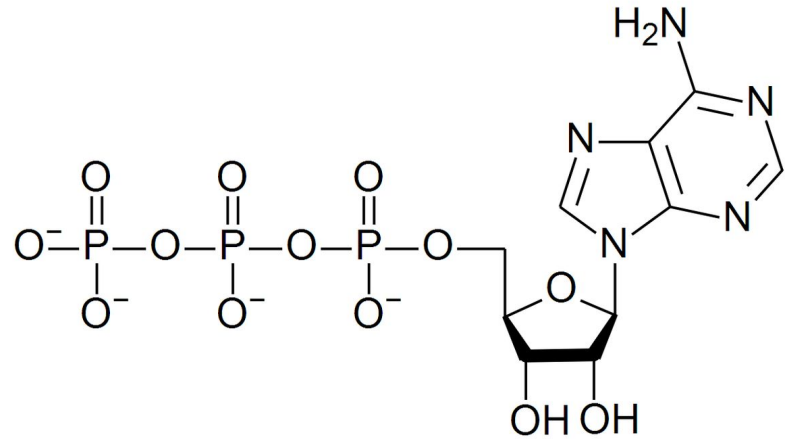
The earth's crust, including its oceans, is approximately 16 km thick but consists of merely 0.04% by mass of the element phosphorus.



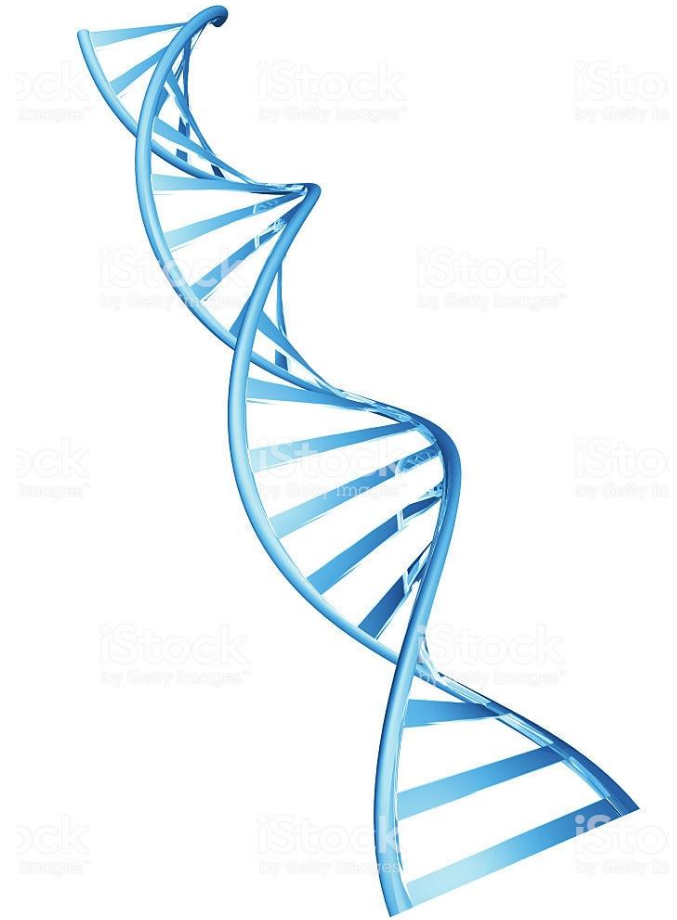
However, upon the examination of living organisms, we find that phosphorus is present in many of the molecules that play an essential role in living processes and that this element constitutes 2–4% of the dry weight of living cells.



To illustrate just how crucial phosphorus is to our lives, consider the fact that each day, one person's metabolic process results in a turnover of several kilograms of adenosine triphosphate.



Some of the most important roles of biophosphorus compounds – cellular energy storage and transfer, cell signaling, molecular media for genetic information storage and transmission, formation of lipid bilayers in membranes – are exemplified by the well-known structures, not to mention calcium phosphate, the key mineral constituent of bone.



Спасибо за внимание!