

[Click Here](#)





The periodic table lists all identified elements and categorizes them into four main groups: s block, p block, d block, and f block based on the orbitals where their valence electrons reside. Additionally, these elements are classified as metals, nonmetals, or metalloids according to their physical properties. Notably, all s block elements except hydrogen are metals, with most p block elements being nonmetals and the rest being metalloids. A key distinction between s and p block elements lies in the orbital where their valence electrons are located: s block elements have valence electrons in the s orbital, whereas p block elements have them in the p orbital. Key areas covered include defining and characterizing s and p block elements, as well as comparing their differences. Key terms include metals, metalloids, nonmetals, and the specific categories of s and p block elements along with valence electrons. S block elements are those whose valence electrons reside in the outermost s orbital, which can hold a maximum of 2 electrons. Their electron configuration always ends with an s orbital (ns). Most s block elements except hydrogen are metals, but hydrogen is classified as a nonmetal despite being in the s block due to its electron configuration and properties. The groups 1 and 2 include s block elements, with group 1 consisting of alkali metals and group 2 comprising alkali earth metals. Helium is also an s block element because it has only an s orbital containing 2 electrons, categorizing it as such despite being a nonmetal. S block elements can exhibit oxidation states of +1 or +2, which are achieved by removing one electron (in group 1) or two electrons (in group 2). The atomic radius of these elements increases down the group due to additional electron shells, leading to decreased ionization energy and both melting and boiling points as well. The p block elements in the periodic table have valence electrons in their outermost p orbital, which can accommodate one to six electrons. This configuration is characterized by the presence of p orbitals at the end (np). Most p block elements are nonmetals, while a few exhibit metalloid properties. From group 3 to 8, all p block elements exist except for helium, which belongs to the s block. P block elements show an increase in atomic radius down a group and a decrease along a period. Ionization energy decreases down a group and increases along a period. Electronegativity also increases along the period. Fluorine, the most electronegative element, is part of the p block. Many p block elements exhibit allotropy, displaying different molecular structures for the same element. The oxidation states of these elements vary based on their valence electrons. Noble gases in group 8 are inert and unreactive except under extreme conditions. Halogens in group 7 have a tendency to form covalent compounds and participate in ionic bonds. The images used in this presentation are courtesy of two sources: Sch0013r and DePiep, who have released their work under Creative Commons licenses allowing for free sharing and adaptation. The specific images are "Periodic Table structure" by Sch0013r and "Periodic table (metalloids)" by DePiep, both available on Wikimedia Commons with CC BY-SA 3.0 and CC BY-SA 4.0 permissions respectively.

What are s and p block elements called. What are s block and p block elements collectively known as. What are s and p block elements discuss briefly. What are the characteristics of s and p block elements. What are s and p block elements write their properties. What the s and p block elements are collectively called. Elements found in the s and p block are considered what type of element. What are s and p block elements give properties. What are the valence electrons for s block and p block elements. What are s block p block and d block elements. What elements are found in the s and p block. What are the properties of s and p block elements. What are s and p block elements known as.