

Electron Configuration Worksheet

For the Teacher

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You may use and distribute the worksheet and this guide at no charge.

Purpose and Philosophy

The electron configuration worksheet is a general-purpose worksheet for helping high school students understand electronic structure in atoms. With this background they can better understand the structure of the periodic table and the nature of chemical bonds.

The design of this worksheet tries to meet these principles:

- High school students must understand (and not just memorize) the structure of the periodic table and the nature of chemical bonds.
- High school students should become familiar with modern ideas about the electronic structure in atoms.
- Even though the rules for electronic structure (Hund's rule, the *Aufbau* principle) can seem complicated and can only be understood with advanced theories (quantum mechanics), the basic rules are simple, and can be easily learned.

Basic Usage

The worksheet has space for students to fill in the electron configuration for six atoms or ions. Each space looks like this:

Atom or Ion: _____
Protons: _____ # Neutrons: _____

Increasing Energy ↓	1s	_____	1
	<hr/>		
	2s	_____	2
	2p	_____	
	<hr/>		
	3s	_____	3
	3p	_____	
	<hr/>		
	4s	_____	4
	3d	_____	
	4p	_____	
	<hr/>		
	5s	_____	5
	4d	_____	
	5p	_____	