

## Alien Periodic Table

Imagine that inhabitants of another planet send a message to Earth that contains information about 30 elements. However, the message contains different names and symbols for these elements than those used on Earth. Which elements on the periodic table do these "alien" names represent? Make an alien periodic table using the blank periodic table on the bottom of this page.

### Alien Elements

1. The inert gases are bornbal (Bo), wobble (Wo), jeptum (J), and logon (L). Among these gases, wobble has the greatest atomic mass and bornbal the least. Logon is lighter than jeptum.
2. The most reactive group of metals are xtalt (X), byyou (By), chow (Ch), and quackzil (Q). Of these metals, chow has the lowest atomic mass. Quackzil is in the same period as wobble.
3. Astrom (A), vulcania (V), and kratt (Kt) are nonmetals whose atoms typically gain or share one electron. Vulcania is in the same period as quackzil and wobble.
4. The semimetals are ernst (E), highho (Hi), terriblum (T), and sississ (Ss). Sississ is the semimetal with the greatest atomic mass. Ernst is the semimetal with the lowest atomic mass. Highho and terriblum are in Group 14. Terriblum has more protons than highho. Yazzer (Yz) touches the zigzag line, but it's a metal, not a semimetal.
5. The lightest element of all is called pfsst (Pf). The heaviest element in the group of 30 elements is elclorado (EI). The most chemically active nonmetal is astrom. Kratt reacts with byyou to form table salt.
6. The element cloggone (D) has only 4 electrons in its atoms.
7. Floxxit (Fx) is important in the chemistry of life. It forms compounds made of long chains of atoms. Rhaatrap (R) and Doadeer (Do) are metals in the fourth period, but rhaatrap is less reactive than doadeer.
8. Magnificon (M), goldy (G), and sississ are all members of Group 15. Goldy has fewer electrons than magnificon.

### Alien Periodic Table

	1								18
1									
	2								
2									
3									
4									
5									

9. Urrp (Up), oz (Oz), and nuutye (Nu) all gain 2 electrons when they react. Nuutye is found as a diatomic molecule and has the same properties as a gas found in Earth's atmosphere. Oz has a lower atomic number than urrp.

10. The element anatom (An) has atoms with a total of 49 electrons. Zapper (Z) and pie (Pi) lose two electrons when they react. Zapper is used to make lightweight alloys.

Questions:

1. List the Earth names for the 30 alien elements in order of atomic number.

1 _____	11 _____	21 _____
2 _____	12 _____	22 _____
3 _____	13 _____	23 _____
4 _____	14 _____	24 _____
5 _____	15 _____	25 _____
6 _____	16 _____	26 _____
7 _____	17 _____	27 _____
8 _____	18 _____	28 _____
9 _____	19 _____	29 _____
10 _____	20 _____	30 _____

2. Were you able to place some elements within the periodic table with just a single clue? Explain using examples.

3. Why did you need two or more clues to place other elements? Explain using examples.

4. Why could you use clues about atomic mass to place elements, even though the table is now based on atomic numbers?

5. Notice that Period 5 is incomplete on the alien periodic table. Create names and symbols for each of the missing elements. Then, compose a series of clues that would allow another student to identify these elements. Make your clues as precise as possible.