

Overview:

The purpose of this exercise is to correctly place unknown elements into a blank periodic table when given certain physical and chemical properties. In this activity you will classify, interpret and aliens elements into a similar pattern like the Earth's Periodic Table of Elements.

Materials:

1. Alien Periodic Table Instructions
2. Blank Periodic Table
3. Any notes from class you feel that could be useful

Procedures:

1. Put your name on the Alien Periodic (Last Page)
2. Read the procedures once through before completing the task.
3. After you have read the procedures once through, sort the alien names with the clues given. (It might help to sort each bullet point individually before trying to sort them all.)
4. Once you have sorted all the bullet points, now sort all the bullet points together and start to write the Alien element symbols in the Alien Periodic Table.
5. Pick appropriate item from drop-down list to identify the metals, non-metals, and metalloids.



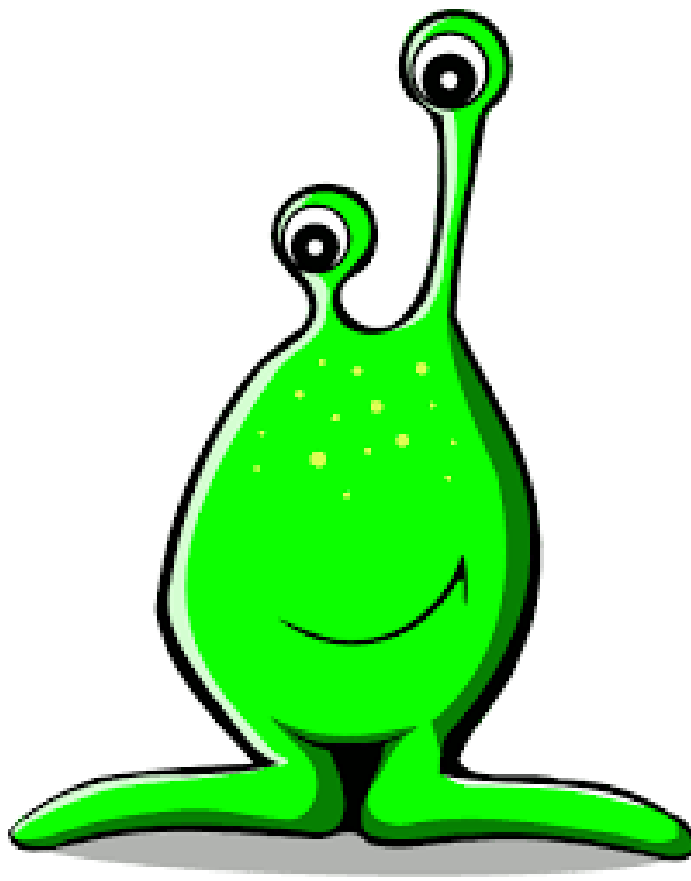
The Alien Periodic Table*

The Story

Earth's scientists have announced that they have made radio contact with intelligent life on a distant planet. One of this alien's languages has been translated and the scientific information has begun to be exchanged. The planet is composed of the same elements as the earth. However, the aliens have different names and symbols for the elements. Since they don't know the names of our elements, they have sent descriptions of theirs with certain properties. There is no information on the transition metals or rare-earths, so all you have to do is put their elements into our abridged periodic table. Good luck

Problem:

Imagine that inhabitants of another planet send data about 30 elements to Earth. However, these inhabitants use different names and symbols for these elements than humans do. Which elements on earth's periodic table do these "alien" names represent?



Clues:

1. The noble gases are bombal (Bo), wobble (Wo), jeptum (J), and logon (L). Among these gasses, wobble has the greatest atomic mass and bombal has 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, chow has the lowest atomic mass. Quackzil is in the same period as wobble.
3. Apstrom (A), vulcania (V), and kratt (Kt) are non-metals whose atoms typically gain or share one electron. Vulcania is in the same period as quackzil and wobble.
4. The metalloids are ernst (E), highho (Hi), terriblum (T), a and sississ (Ss). Sississ is the metalloid with the highest atomic mass. Ernst is the metalloid with the lowest atomic mass. Highho and terriblum are in Group 14. Terriblum (T) has more protons than Highho (Hi) The element yizzer (Yz) touches the zig zag line but it is a metal not a metalloid.
5. The most metallic element is xtalt. The most chemically active non-metal is called apstrom. The lightest element is called pfsst (Pf). The heaviest element on the planet is Elrado (El).
6. The lightest element of all is called pfsst (Pf) The heaviest element in the group of 30 elements is Eldorado (El). The most chemically active non-metal is apston (A). Kratt reacts with byyou (By) to form table salt.
7. The element doggone (D) has only 4 protons in its atom.
8. Floxxit (Fx) is important in the chemistry of life. It forms compounds made of long chains of atoms. Rhatrap (R) and doadeer (Do) are metals in the fourth period, but rhatrap is reactive than doadeer.
9. Magnificon (M), goldy (G), and sississ are all members of Group 15. Goldy has fewer electrons than magnificon.
10. 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 atmosphere. Oz has a lower atomic number than urrp.
11. 11. 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.

*Adapted from Prentice Hall Science Explorer Physical Science, 200

Alien Periodic Table

Name: _____



	Group 1			Group 13	Group 14	Group 15	Group 16	Group 17	Group 18
Period 1									
Period 2									
Period 3									
Period 4									
Period 5									

