

HOMEWORK – lesson 6

4. Read the text and put the missing phrases back in the right gaps

- A. good conductors of electricity and malleable
- B. combinations of elements can create the products
- C. semiconductor and computer chip
- D. classify elements by properties

How to read and interpret the periodic table

The periodic table helps chemists 1...D... and similarities. One way to sort the elements is to divide them into three categories – metals, nonmetals and metalloids.

Most of the elements on the periodic table are considered metals. They share similar characteristics – most are solid, shiny, 2...A..... Nonmetals have properties opposite of the metals – they are brittle, not flexible and not strong conductors of heat or electricity. Some nonmetals are liquids, some are gases. Metalloids, or semimetals, are considered a cross between metals and nonmetals. Metalloids have unique conductivity properties, which make them useful in the 3...C.... industries.

The periodic table can help us better understand chemical elements and their relationship to one another – how they react with each other, and how 4 ...B..., materials and technologies that shape our lives.

<https://www.chemicalsafetyfacts.org/celebrating-150-years-of-the-periodic-table-of-elements/>

6. Find the 15 chemical elements.

If you cross all of them, the remaining letters, if read from left to right, form a word. Which word is it?

	A	B	C	D	E	F	G	H	I
1	C	A	R	B	O	N	I	T	E
2	A	L	U	M	I	N	I	U	M
3	L	E	B	S	L	E	M	M	E
4	C	K	I	N	O	E	N	N	T
5	I	C	D	R	R	D	A	E	L
6	U	I	I	C	O	Z	I	N	C
7	M	N	U	R	A	N	I	U	M
8	S	R	M	O	S	M	I	U	M
9	Y	T	T	E	R	B	I	U	M

/ˈæl yəˈmɪn i əm/ aluminium
/ˈɒz mi əm/ osmium
/ˈmɜː kyə ri/ mercury
/ˈkæɪ si əm/ calcium
/ruˈbɪd i əm/ rubidium
/ˈni ʊn/ neon
/ˈkɑː bən/ carbon
/ˈsoʊ di əm/ sodium
/ɪˈtɜː bi əm/ ytterbium
/ˈaɪ ərn/ iron
/tɪn/ tin
/ˈnɪk əl/ nickel
/led/ lead
/jʊˈreɪ ni əm/ uranium
/zɪŋk/ zinc

http://dictionary.reference.com/help/luna/IPA_pron_key.html

7. Explore The Royal Society of Chemistry's interactive periodic table: images, history, alchemy, podcasts, trends. Identify the elements described in 1 - 6 below.

<https://www.rsc.org/periodic-table/>

1. This metallic element is present in surprising amount in baked beans. **nickel**
2. This is a shiny grayish metal that rusts in damp air. **iron**
3. This element's name is derived from the Greek word for 'sun'. **helium**
4. This element represented the perfection of all matter at any level for the alchemists. **gold**
5. This is the element with the highest density. **osmium**
6. This element has the highest melting point. **carbon**

8. Synonyms

1. Silicon is a nonmetallic element that is inexpensive because it is so *abundant* in minerals and rocks.
a. rare
b. **plentiful**
2. When exposed to air and moisture, iron will *corrode*.
a. **rust**
b. shine
3. After the fire, the police investigated the cause of the *combustion*.
a. **burning**
b. excitement
4. Gasoline should be stored carefully because it is *flammable*.
a. fireproof
b. **able to catch fire easily**
5. Heat can *convert* a solid to a liquid.
a. condense
b. **change**
6. A *catalyst* speeds up a chemical reaction.
a. **chemical agent**
b. forest animal
7. The temperature on a Fahrenheit fever thermometer *ranges* from 94° to 108°.
a. **extends**
b. contracts
8. The *volume* of air in a room can be measured in cubic feet.
a. quality
b. **quantity**
9. Ten *minus* four equals six.
a. **less**
b. plus
10. Water contains hydrogen and oxygen in a *ratio* of two to one.
a. **proportion**
b. size
11. The price of gasoline was *quadrupled*, and there were fears it would go even higher.
a. **multiplied by four**
b. divided by four