

تم تحميل هذا الملف من موقع المناهج الإماراتية



الملف ملخص الدرس الأول الذرات والعناصر والمركبات من الوحدة الأولى بالانجليزي

[موقع المناهج](#) ← [المناهج الإماراتية](#) ← [الصف الثاني عشر العام](#) ← [علوم](#) ← [الفصل الأول](#)

روابط مواقع التواصل الاجتماعي بحسب الصف الثاني عشر العام



روابط مواد الصف الثاني عشر العام على تلغرام

[الرياضيات](#)

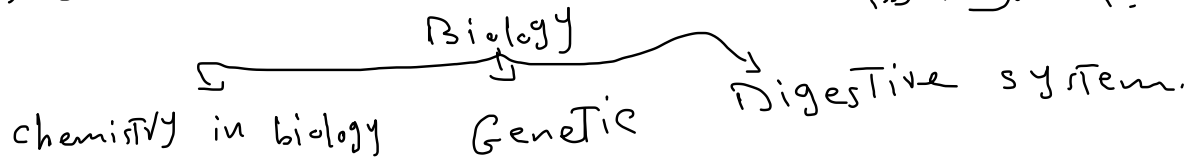
[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

المزيد من الملفات بحسب الصف الثاني عشر العام والمادة علوم في الفصل الأول

| | |
|--|---|
| تلخيص الجهاز العصبي | 1 |
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| التغذية | 4 |
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unit 1] chemistry in Biology] الحياء كالم الأبيار

chemistry :-

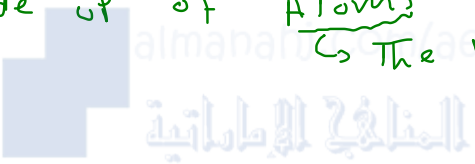
↳ is the science that specialized with study of matter, composition and properties. متف

the matter :-

↳ is everything that has mass and occupies space. يشغل

↳ is made up of Atoms or Take
↳ The basic unit of matter.

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- Atom + Atom \longrightarrow element
ذرة ذرة عنصر



- element + element \longrightarrow molecular
جزئاً



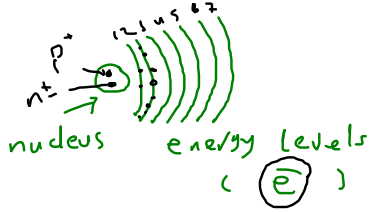
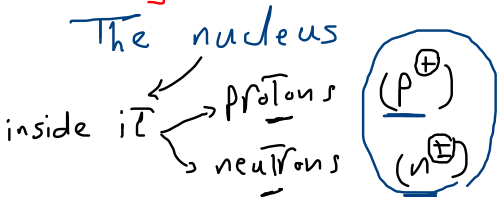
- molecular + molecular \longrightarrow compound
مركب



- compound + compound \longrightarrow substance (matter)

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Atom made up



The electrons
- outside the nucleus
- orbit around the nucleus
in 7 energy levels.

* notes :-

① The number of protons in the nucleus represents the Atomic number العدد الذري

② the sum of the number of neutrons and protons represents the mass number العدد الكتلي

* $\text{protons} = \text{Atomic number} = \text{electrons}$

③ IF mass number = $P^+ + N^0$
number of p^+ = number of electrons, so total charge for a neutral atom is equal to zero
 $p^+ = e^- \rightarrow \underline{\underline{\text{zero}}}$

IF

$$p^+ = e^-$$

Atom zero

$$p^+ > e^-$$

Atom positive

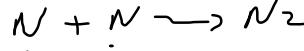
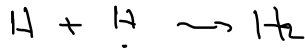
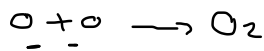
$$p^+ < e^-$$

Atom negative

Elements

• IS a pure substance that cannot be broken down into other substance by chemical or physical methods.

• is made up of only one type of atom.



• the elements on the periodic table arranged in horizontal rows called periods and vertical columns called groups.



Q/ why is the table of elements called the periodic table? ~~XX~~
→ Elements of the same group have similar chemical and physical properties.



Living organisms are made up of 3 basic elements

Carbon
C

Hydrogen

Oxygen
O

is the most abundant element
in our body.

• each element has own p^+ and e^- and n^+ number -
but, scientists found the same element in p^+ but n^+ differ.

isotopes

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isotopes

• they are atoms of an element that differ in the number of neutrons.

• isotopes of an element are determined by mass number

$$= p^+ + n^+$$

ex: $^{12}_6\text{C}$ $\left[\begin{array}{l} \rightarrow p^+ \\ \rightarrow n^+ \end{array} \right]$ element \rightarrow a pure substance.

$^{13}_6\text{C}$ $\left[\begin{array}{l} \rightarrow p^+ \\ \rightarrow n^+ \end{array} \right]$ isotopes \rightarrow differ in n^+

$^{14}_6\text{C}$ $\left[\begin{array}{l} \rightarrow p^+ \\ \rightarrow n^+ \end{array} \right]$ radioactive isotopes \rightarrow is isotopes but when

when nucleus divided
produced radioactive -

عن

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المنهج الإلكتروني

notes:-

- isotopes of the same element have the same chemical properties.
- changing the number of neutrons does not affect the charge of the atom.

but affected the stability of the nucleus.

تؤثر في الاستقرار
 leads to the decomposition or division of the nucleus.

→ ⁻¹⁴C is a radioactive isotopes that found in all living organisms.

uses
 → in the medical to diagnose disease.
 → To locate and treat some types of cancer.

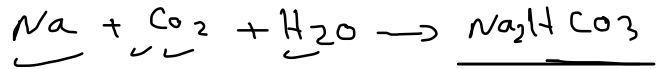
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Compounds

↳ Everything around you components of compounds.

↳ A pure substance consisting of the union of 2 or more different elements.



↳ For each compound a chemical formula consisting of the symbols of the elements.

↳ The famous compounds are Hydrocarbons الهيدروكربونات

- Are compounds consisting of C + H only

- ex: - (CH₄) methane

+ Properties of Compounds:-

① Properties of Compounds differ from properties of the elements that inter into its composition.



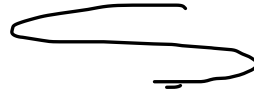
② A compound consists of a group of elements in fixed proportion.

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H₂O → UAE
→ EGYPT
→ EVANKE

③ Compounds cannot be broken down into their elements by physical methods = but can by chemical methods.

separate H₂ from O₂ by التفريق الكهربائي
Electrolysis



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