



Неожиданные открытия

Интегрированный урок химии и
английского языка

8 класс

Работу подготовили:

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Авдеева Оксана Сергеевна, учитель химии

Periodic Table of the Elements

Group ↓

Period ↓

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 1 1.008 H Hydrogen	2 4 9.012 He Helium																
3 6.938 Li Lithium	4 9.012 Be Beryllium											5 10.806 B Boron	6 12.0096 C Carbon	7 14.0064 N Nitrogen	8 15.999 O Oxygen	9 18.998 F Fluorine	10 20.1797 Ne Neon
11 22.989 Na Sodium	12 24.304 Mg Magnesium											13 26.9815 Al Aluminium	14 28.084 Si Silicon	15 30.974 P Phosphorus	16 32.059 S Sulfur	17 35.446 Cl Chlorine	18 39.948 Ar Argon
19 39.0983 K Potassium	20 40.078 Ca Calcium	21 44.9559 Sc Scandium	22 47.867 Ti Titanium	23 50.9415 V Vanadium	24 51.9961 Cr Chromium	25 54.938 Mn Manganese	26 55.845 Fe Iron	27 58.933 Co Cobalt	28 58.6934 Ni Nickel	29 63.546 Cu Copper	30 65.38 Zn Zinc	31 69.723 Ga Gallium	32 72.630 Ge Germanium	33 74.922 As Arsenic	34 78.971 Se Selenium	35 79.901 Br Bromine	36 83.798 Kr Krypton
37 85.4678 Rb Rubidium	38 87.62 Sr Strontium	39 88.9058 Y Yttrium	40 91.224 Zr Zirconium	41 92.906 Nb Niobium	42 95.95 Mo Molybdenum	43 (98) Tc Technetium	44 101.07 Ru Ruthenium	45 102.9055 Rh Rhodium	46 106.42 Pd Palladium	47 107.8682 Ag Silver	48 112.414 Cd Cadmium	49 114.818 In Indium	50 118.710 Sn Tin	51 121.760 Sb Antimony	52 127.60 Te Tellurium	53 126.904 I Iodine	54 131.293 Xe Xenon
55 132.905 Cs Caesium	56 137.327 Ba Barium	57-71 Lanthanoids*	72 178.49 Hf Hafnium	73 180.948 Ta Tantalum	74 183.84 W Tungsten	75 186.207 Re Rhenium	76 190.23 Os Osmium	77 192.217 Ir Iridium	78 195.084 Pt Platinum	79 196.967 Au Gold	80 200.592 Hg Mercury	81 204.382 Tl Thallium	82 207.2 Pb Lead	83 208.980 Bi Bismuth	84 (209) Po Polonium	85 (210) At Astatine	86 (222) Rn Radon
87 (223) Fr Francium	88 (226) Ra Radium	89-103 Actinoids**	104 (267) Rf Rutherfordium	105 (268) Db Dubnium	106 (269) Sg Seaborgium	107 (270) Bh Bohrium	108 (277) Hs Hassium	109 (278) Mt Meitnerium	110 (281) Ds Darmstadtium	111 (282) Rg Roentgenium	112 (285) Cn Copernicium	113 (286) Nh Nihonium	114 (289) Fl Flerovium	115 (290) Mc Moscovium	116 (293) Lv Livermorium	117 (294) Ts Tennessine	118 (294) Og Oganesson

Atomic number →

Atomic weight ←

Symbol ←

Name ←

*Lanthanoids

**Actinoids

57 138.905 La Lanthanum	58 140.116 Ce Cerium	59 140.908 Pr Praseodymium	60 144.242 Nd Neodymium	61 (145) Pm Promethium	62 150.36 Sm Samarium	63 151.964 Eu Europium	64 157.25 Gd Gadolinium	65 158.925 Tb Terbium	66 162.500 Dy Dysprosium	67 164.930 Ho Holmium	68 167.259 Er Erbium	69 168.934 Tm Thulium	70 173.045 Yb Ytterbium	71 174.9668 Lu Lutetium
89 (227) Ac Actinium	90 232.0377 Th Thorium	91 231.036 Pa Protactinium	92 238.0289 U Uranium	93 (237) Np Neptunium	94 (244) Pu Plutonium	95 (243) Am Americium	96 (247) Cm Curium	97 (247) Bk Berkelium	98 (251) Cf Californium	99 (252) Es Einsteinium	100 (257) Fm Fermium	101 (258) Md Mendelevium	102 (259) No Nobelium	103 (266) Lr Lawrencium

Alkali Metals

Alkaline Earth Metals

Noble gas

Diatomic nonmetal

Unknown Chemical Properties

Lanthanide

Actinide

Transition Metals

Post-Transition Metals

Metalloid

Polyatomic nonmetal

1

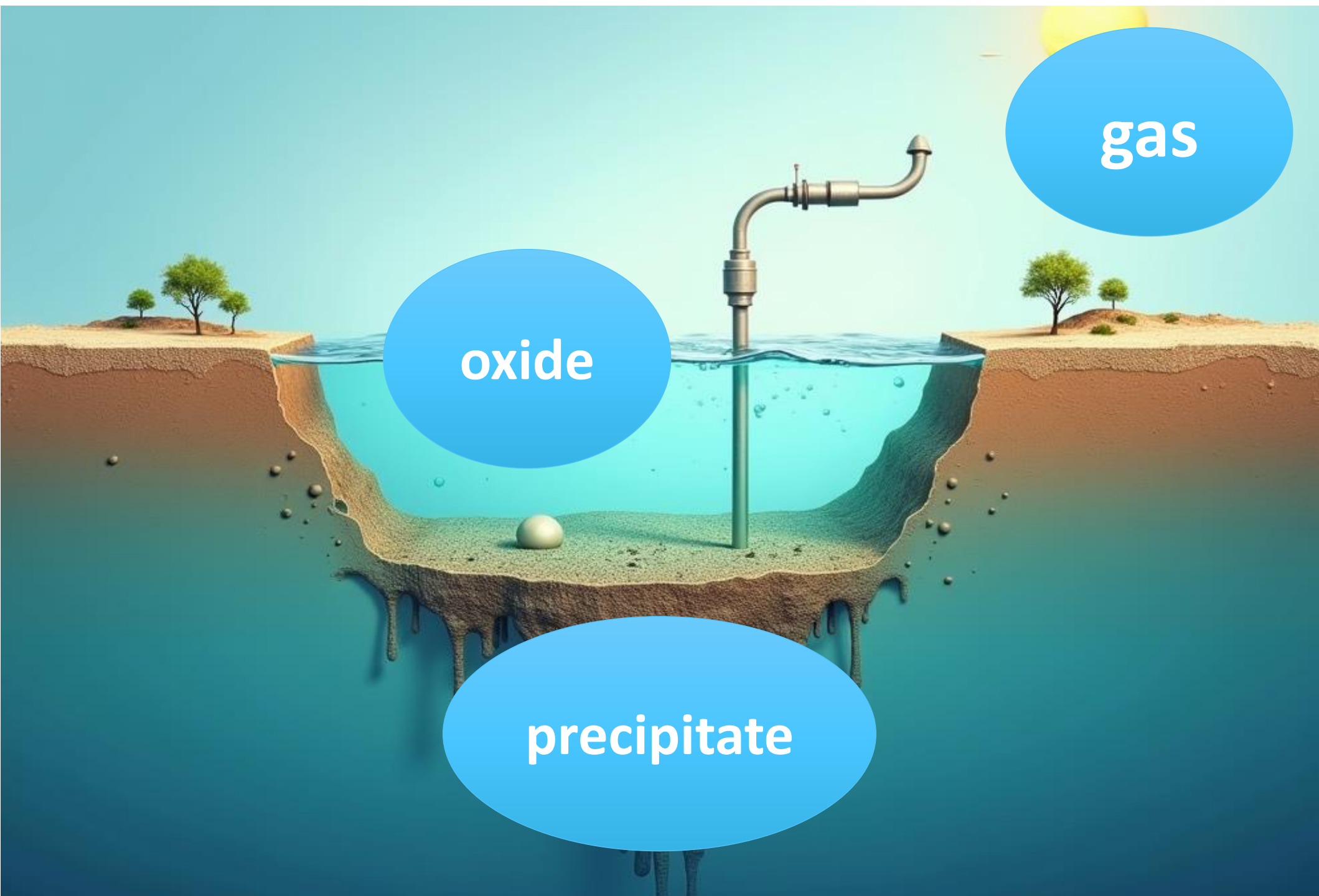
2

3

4

5

6



gas

The diagram illustrates a water treatment process in a cross-section of the earth. A vertical pipe is shown with a horizontal section above the water surface and a vertical section below. Bubbles are shown rising from the pipe into the water. The water surface is labeled 'gas'. The water column is labeled 'oxide'. The bottom of the water column is labeled 'precipitate'. The background shows a landscape with trees and a sun.

oxide

precipitate





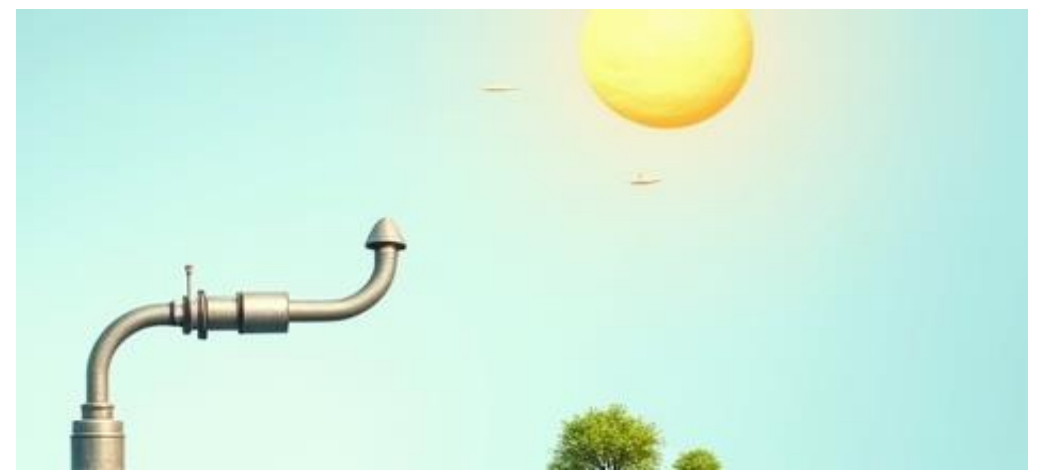
This substance is often used in the fire extinguishers. Atomic mass of 2 molecules is 28.

It looks like a yellow solid substance at the ambient temperature compounded with preassure.



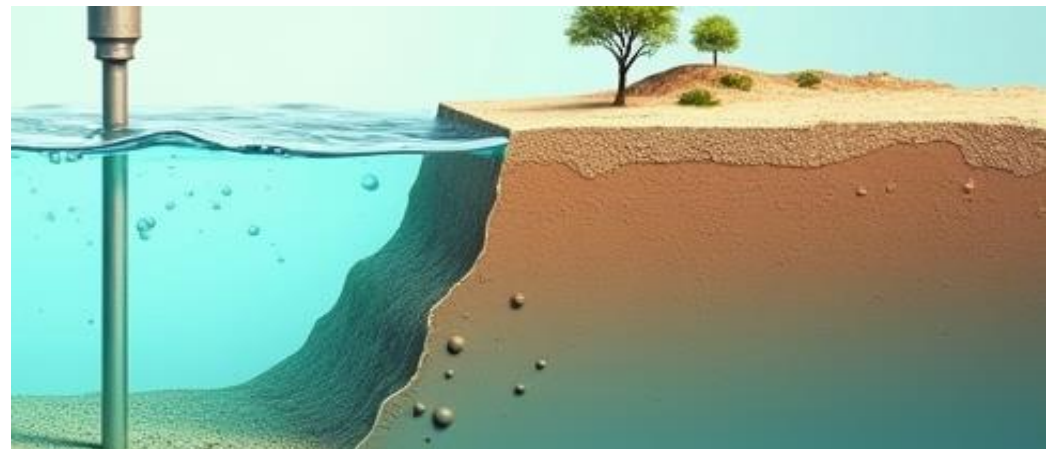
Its name was born from the Latin «natrium»,
which means «soda»





It is the most popular gas in the Earth's crust and comprises 47% of the Earth's crust.

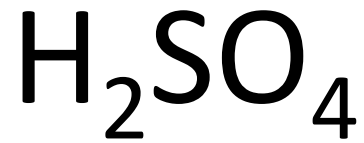
It absorbs X-radiation and gamma rays well enough. That's why it is included in protection materials. Its number is 56.



The name of this element comes from German word «zinke», which means «spiny»



Кислоты (acids)



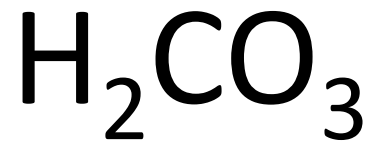
sulfur**iC** acid



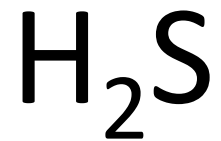
nitr**iC** acid



hydro-chlor**iC** acid



carbon**iC** acid

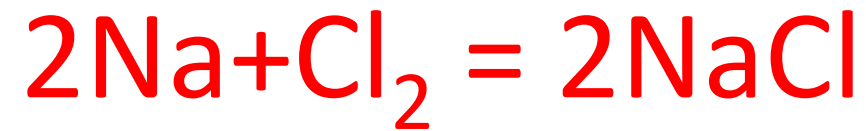


hydrogen sulfide acid

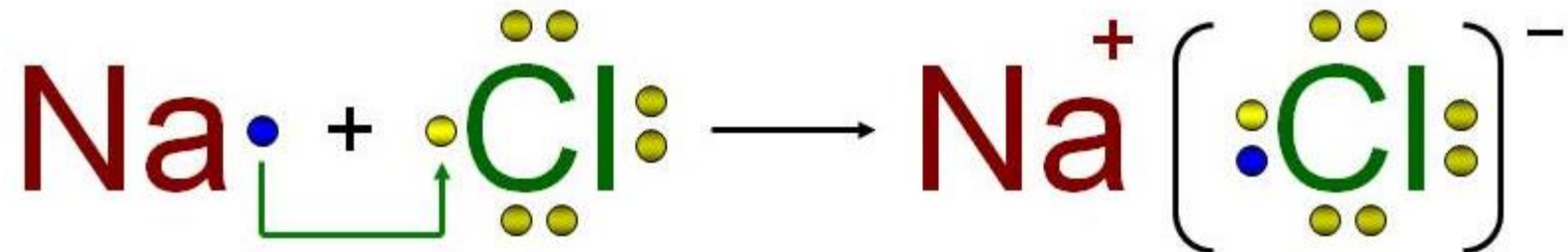


Work in groups

 «X molecules and Y molecules react to form Z molecules»



(Two sodium molecules and chlorine react to form two sodium chloride molecules).



nitrate + sulfuric acid

*H₂SO₄ NaOH HNO₃ KI HCl CuCl₂ H₂CO₃ Na₂S H₂S
Ba(NO₃)₂ CuCl₂ CaCO₃ AgNO₃ Zn*

chloride + alkali

*H₂SO₄ NaOH HNO₃ KI HCl CuCl₂ H₂CO₃ Na₂S H₂S
Ba(NO₃)₂ CuCl₂ CaCO₃ AgNO₃ Zn*

hydro-chloric acid + carbonate

*H₂SO₄ NaOH HNO₃ KI HCl CuCl₂ H₂CO₃ Na₂S H₂S
Ba(NO₃)₂ CuCl₂ CaCO₃ AgNO₃ Zn*

nitrate + iodide

*H₂SO₄ NaOH HNO₃ KI HCl CuCl₂ H₂CO₃ Na₂S H₂S
Ba(NO₃)₂ CuCl₂ CaCO₃ AgNO₃ Zn*

hydro-chloric acid + zinc

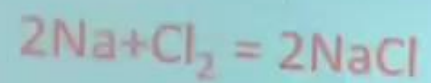
*H₂SO₄ NaOH HNO₃ KI HCl CuCl₂ H₂CO₃ Na₂S H₂S
Ba(NO₃)₂ CuCl₂ CaCO₃ AgNO₃ Zn*

chloride + sulfide

*H₂SO₄ NaOH HNO₃ KI HCl CuCl₂ H₂CO₃ Na₂S H₂S
Ba(NO₃)₂ CuCl₂ CaCO₃ AgNO₃ Zn*

Work in groups

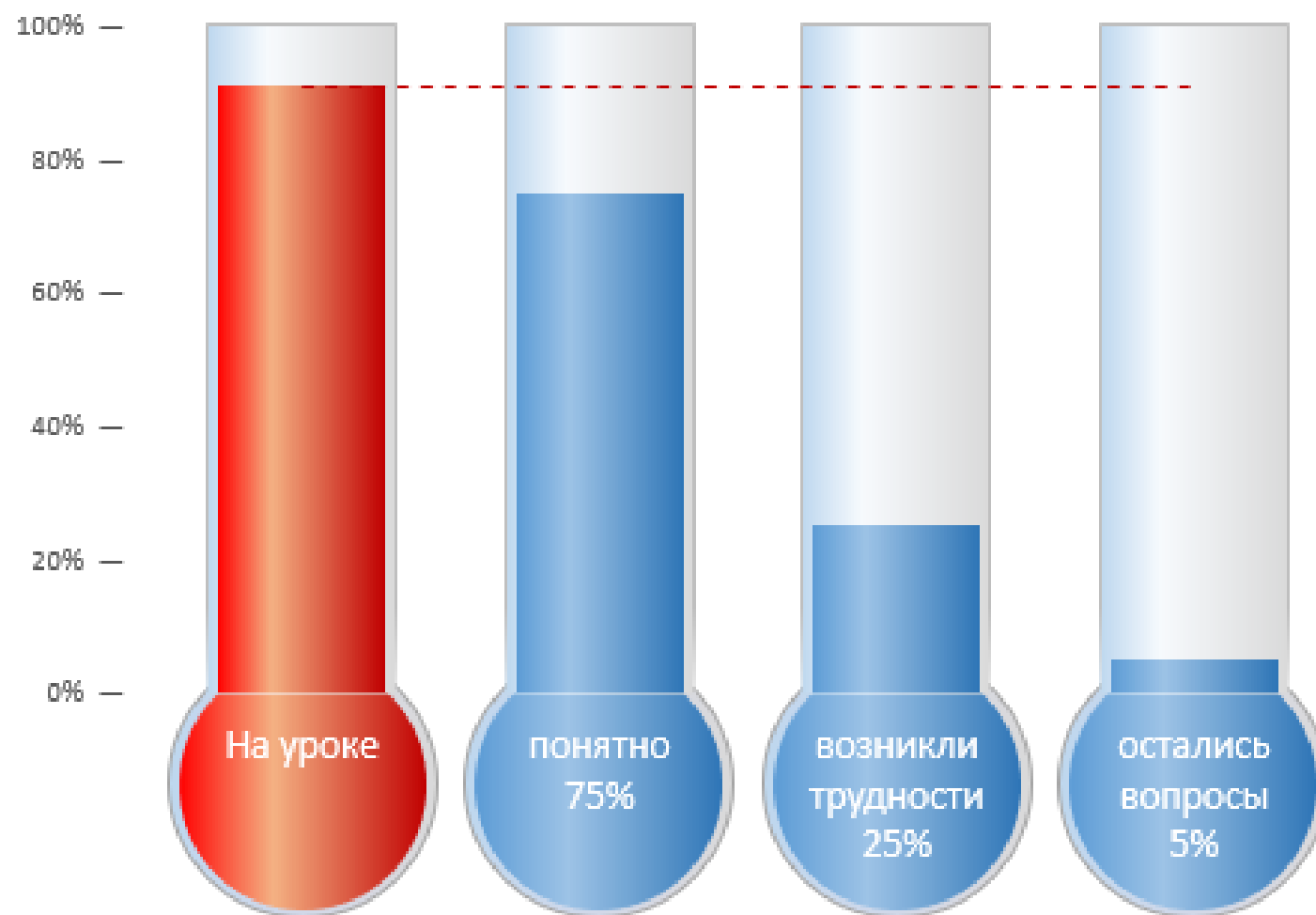
«X molecules and Y molecules react to form Z molecules»

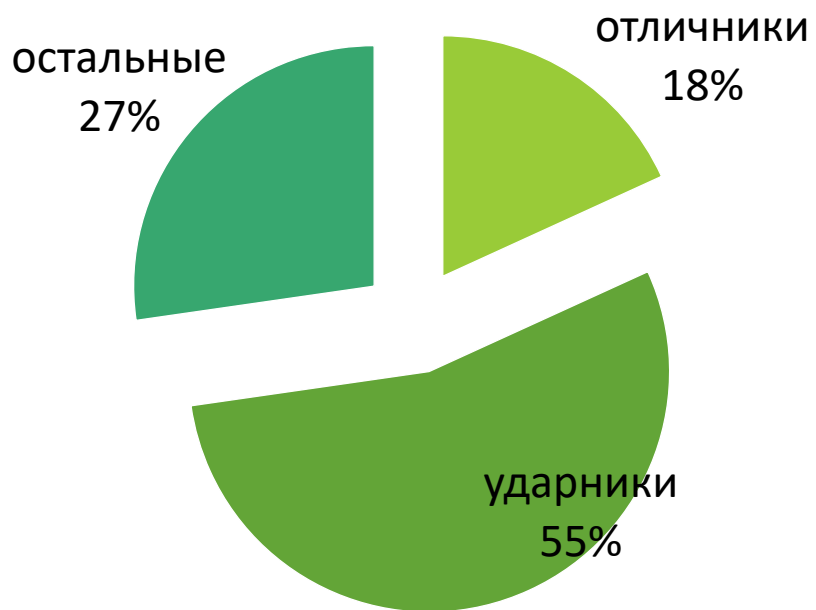
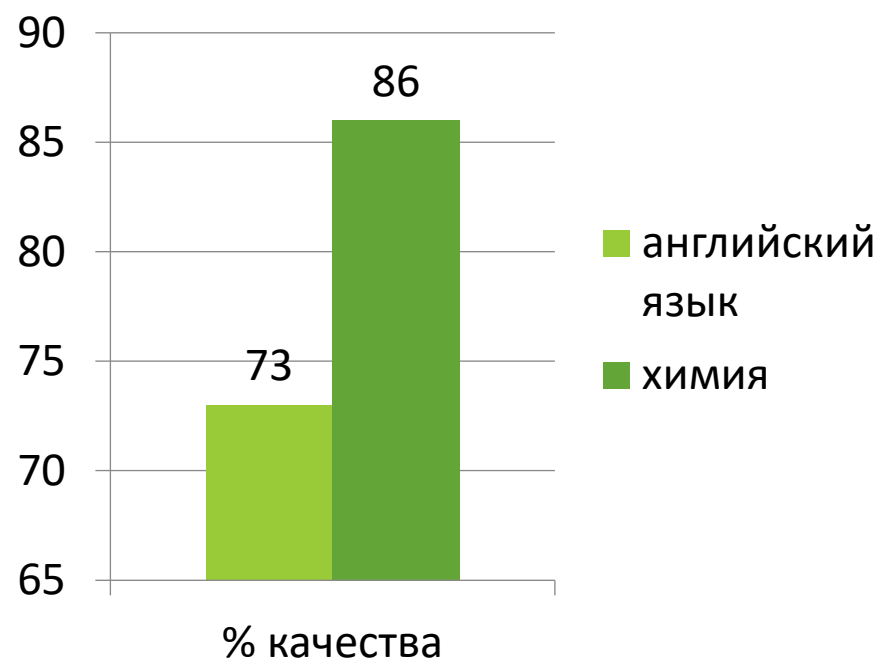


[Two sodium molecules and chlorine react to form two sodium chloride molecules].



InShot













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