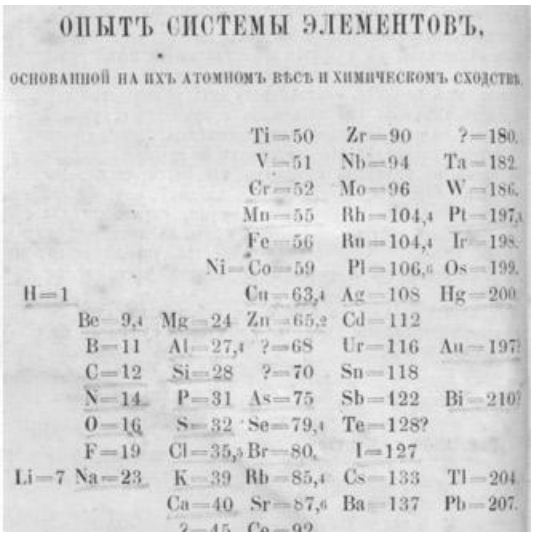
Mendeleev Game

Overview:

A casual educational 2D Android game. The game aims to help high school students in learning some fundamentals basics of the chemistry subject.

Game Name:

The game name is derived from the name of the Russian chemist and inventor "Dmitri Mendeleev" who formulated the Periodic Law and created the first draft of the periodic table.



ОПЫТЪ СИСТЕМЫ ЭЛЕМЕНТОВЪ,

ОСНОВАННОЙ НА ИХЪ АТОМНОМЪ ВѢСѢ И ХИМИЧЕСКОМЪ СХОДСТВѢ.

			Ti=50	Zr=90	?=180.
			V=51	Nb=94	Ta=182.
			Cr=52	Mo=96	W=186.
			Mn=55	Rh=104,4	Pt=197,1
			Fe=56	Ru=104,4	Ir=198.
		Ni=Co=59		Pl=106,6	Os=199.
H=1			Cu=63,4	Ag=108	Hg=200.
	Be=9,4	Mg=24	Zn=65,2	Cd=112	
	B=11	Al=27,4	?=68	Ur=116	Au=197?
	C=12	Si=28	?=70	Sn=118	
	N=14.	P=31	As=75	Sb=122	Bi=210?
	O=16.	S=32	Se=79,4	Te=128?	
	F=19	Cl=35,5	Br=80.	I=127	
Li=7	Na=23.	K=39	Rb=85,4	Cs=133	Tl=204.
		Ca=40.	Sr=87,6	Ba=137	Pb=207.
		?=45.	Ce=92		

Objectives and Scope:

The main objective of the game is to introduce the students to the periodic system while playing a challenging entertainment game. The student will get the chance to familiarize himself with lots of chemistry information without the need to memorize or read long sentences as he moves between the game levels.

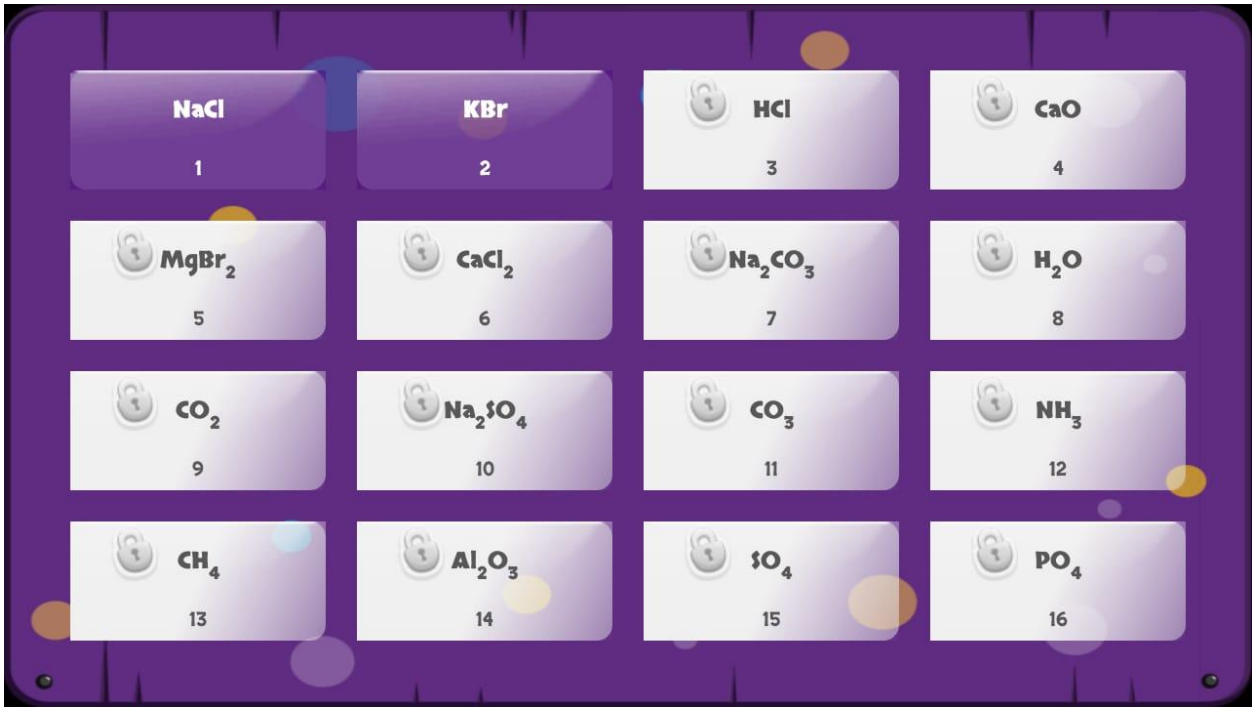
Game Modes:

The game has two main playing modes: Atoms and Compounds. In Atoms playing mode, the student will be introduced to the periodic table and all of the 118 atoms inside the table. In Compounds mode, the student will be introduced to 16 different chemical compounds.

Game Levels:

Each one of the main two modes of the game has some levels to play. In Atoms mode, there are 118 levels, each level represents an atom in the periodic table. In Compound mode there are 16 different levels, each level represents a different chemical compound.

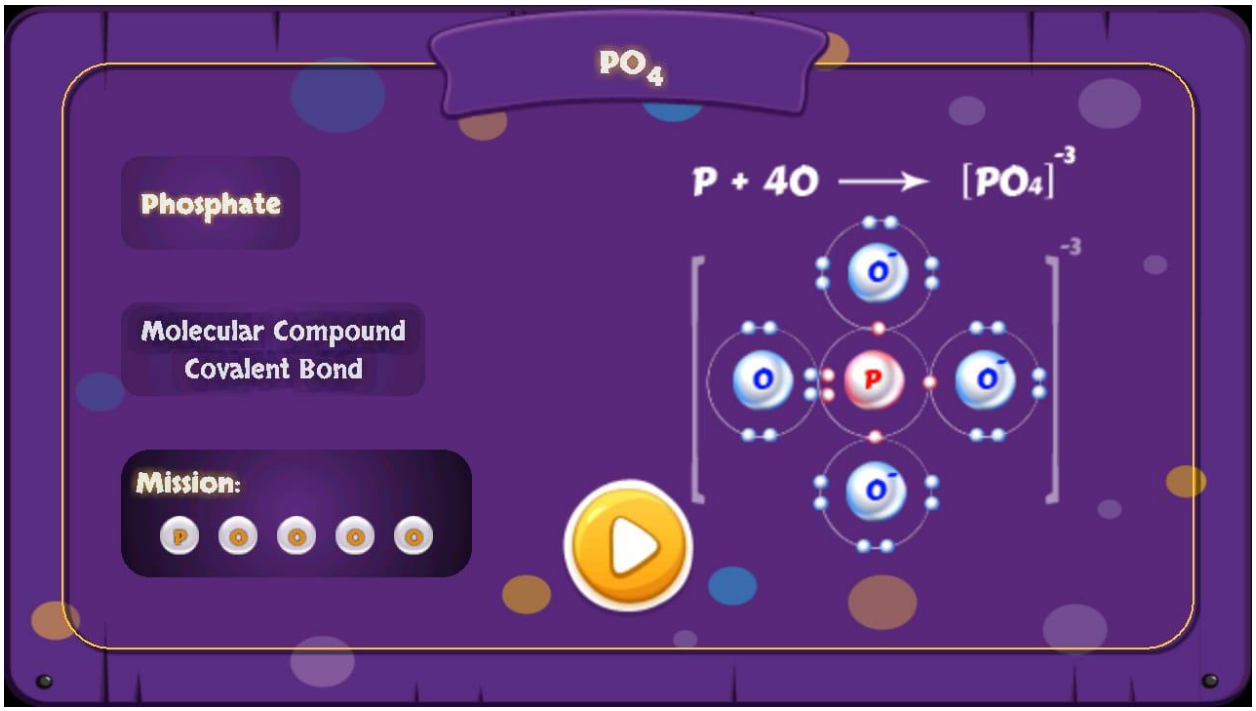
Each level of the game has a different task to be achieved. Generally, the task of the Atoms levels is to help the atom character reaches its energetically satisfied state or keeping it during the level time. The compounds levels tasks are to form the level compound by collecting his atoms.



Educational Added Value:

The game introduces the students to the periodic table shape and the atoms. For each atom, the game shows a profile view that contains many details such as the group, period, atomic number, phase, series, color and electron configuration of the atom.

Also, the game shows a profile view for the compounds, the view contains information about the selected compound such as the name, type, bond and the atoms configuration of the compound.

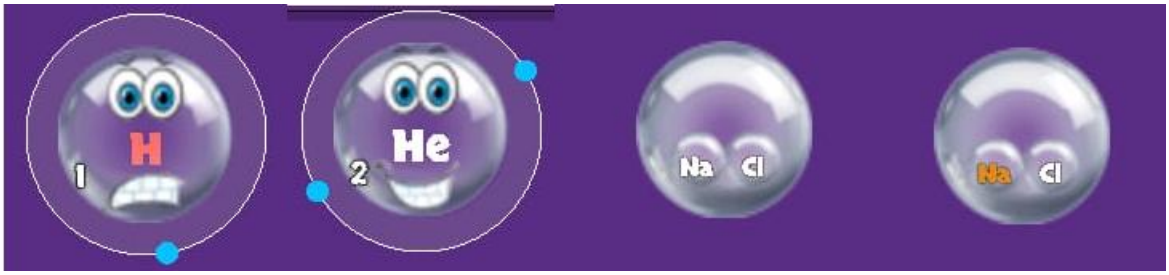


The student will learn in a un-direct, enjoyable way all of the information about the periodic system, atoms, and compounds.

Game Characters:

There are several different game characters:

1- Main character: represents an atom or compound. The character is controlled by the player using a virtual joystick that is located at the right or the left bottom of the screen.



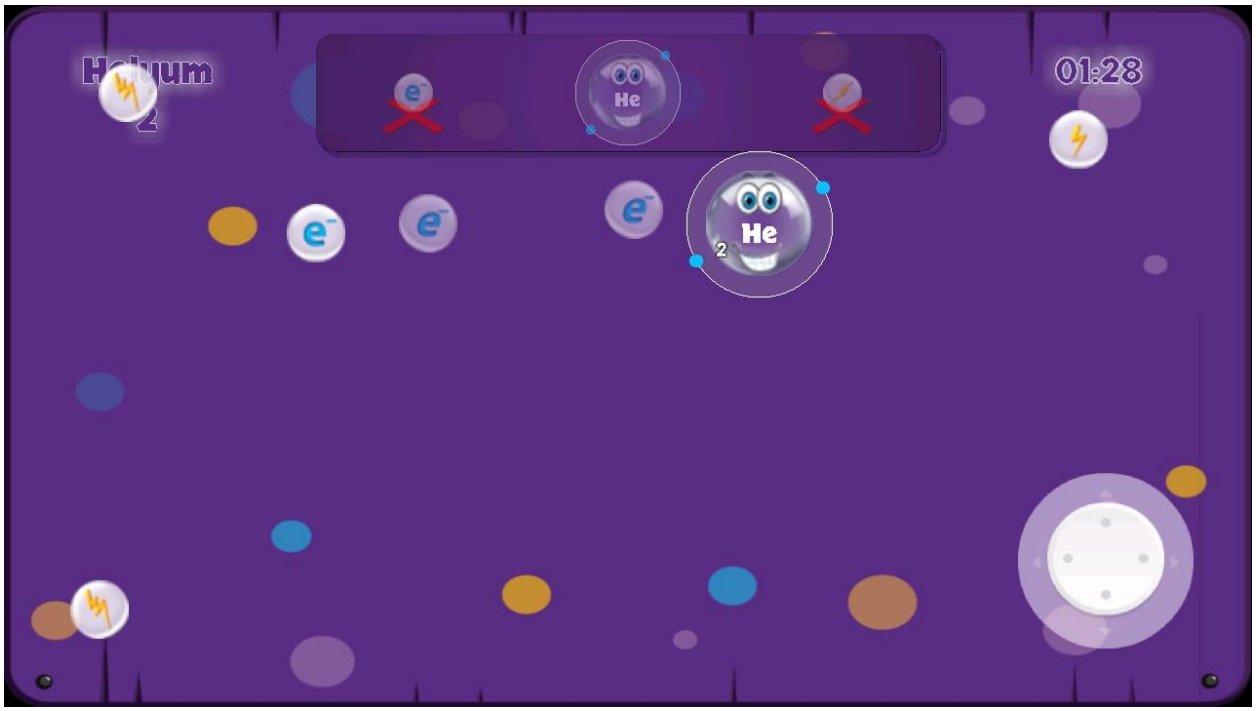
2- Electron character: a secondary character that represents an electron.

3- Ionic energy character: a secondary character that represents ionic energy that can remove an electron from an atom.

4- Atom characters, secondary characters, each one represents an atom. These characters can be used to form a compound.

Game Playing:

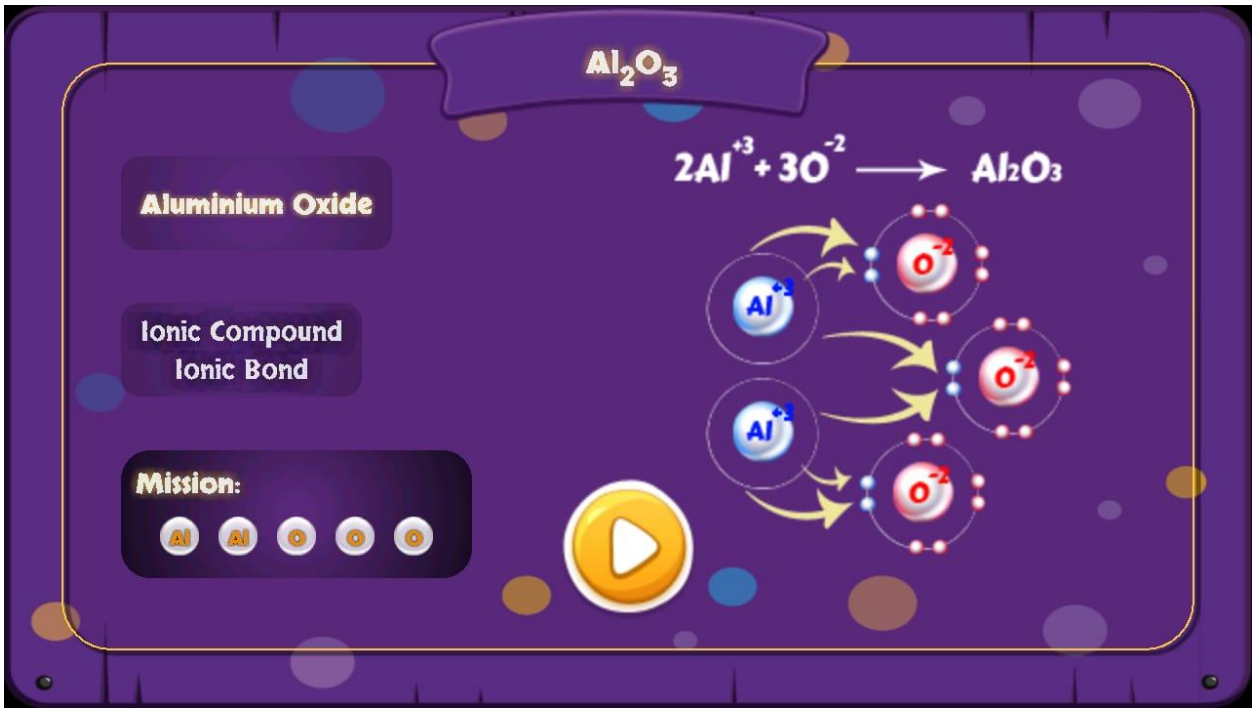
The game playing view is a simple 2D space where the main character moves in all directions using a virtual joystick that is controlled by the player. Secondary characters will be moving in random directions in the same space. The player needs to follow the level tasks to achieve victory. Based on the level task, the player needs to collect some electrons, lose some electrons by hitting an ionic energy character or avoid collisions with any one of the secondary characters. In Compounds levels, the player needs to collect the required atoms that the compound consists of.

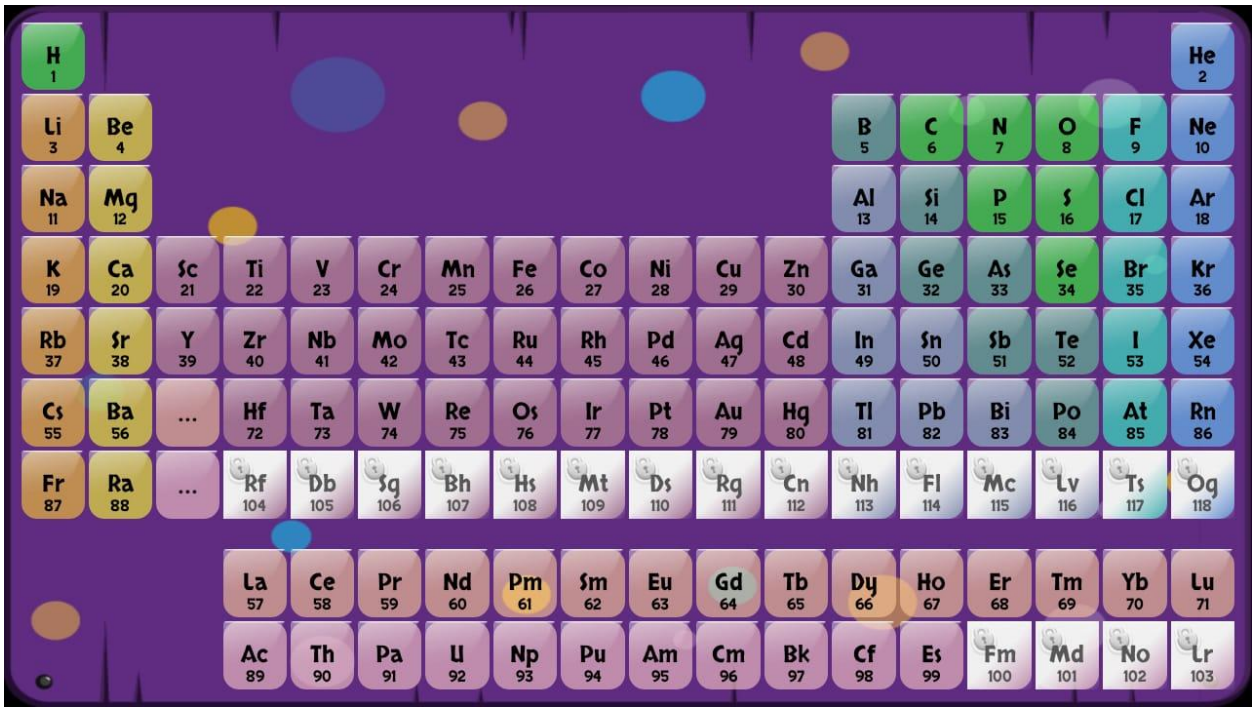


Settings:

The game has a settings menu that allows the player to change the game language (English/Turkish). Also, he can choose to play with right hand or left hand. Moreover, the setting menu allows the player to turn on or off the game sounds.

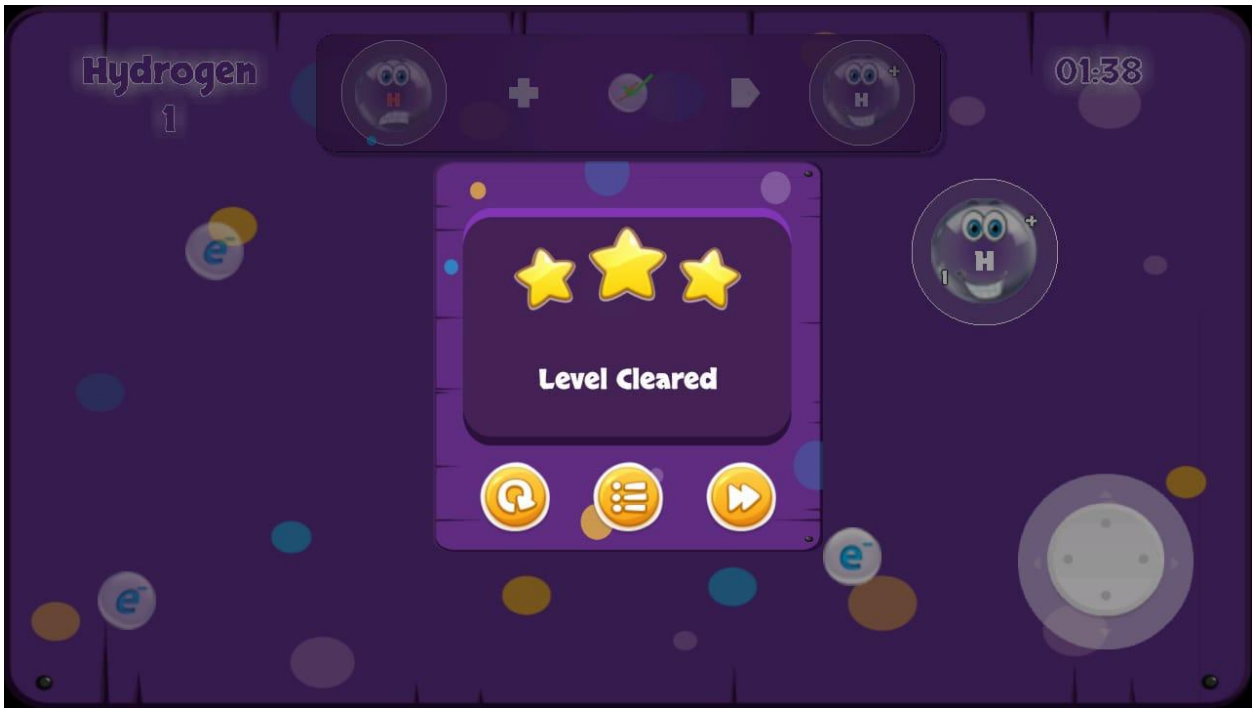
Other screen shots:

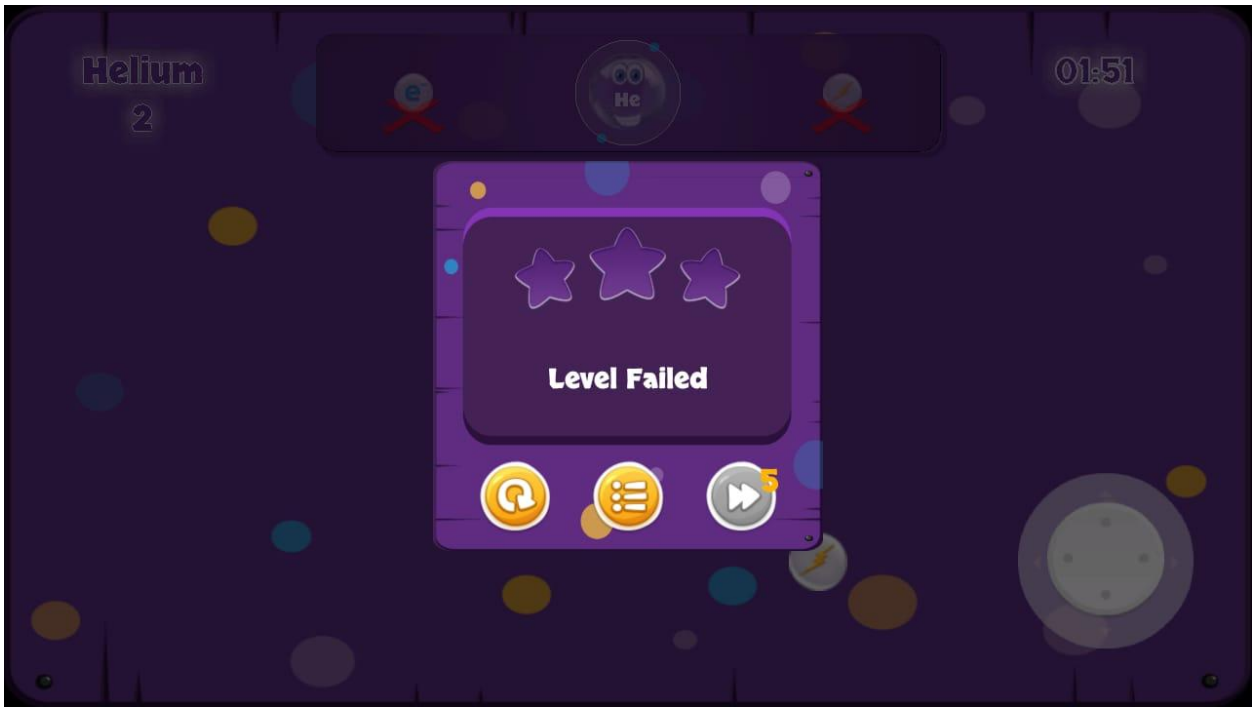



H 1
He 2
Li 3
Be 4
B 5
C 6
N 7
O 8
F 9
Ne 10
Na 11
Mg 12
Al 13
Si 14
P 15
S 16
Cl 17
Ar 18
K 19
Ca 20
Sc 21
Ti 22
V 23
Cr 24
Mn 25
Fe 26
Co 27
Ni 28
Cu 29
Zn 30
Ga 31
Ge 32
As 33
Se 34
Br 35
Kr 36
Rb 37
Sr 38
Y 39
Zr 40
Nb 41
Mo 42
Tc 43
Ru 44
Rh 45
Pd 46
Ag 47
Cd 48
In 49
Sn 50
Sb 51
Te 52
I 53
Xe 54
Cs 55
Ba 56
...
Hf 72
Ta 73
W 74
Re 75
Os 76
Ir 77
Pt 78
Au 79
Hg 80
Tl 81
Pb 82
Bi 83
Po 84
At 85
Rn 86
Fr 87
Ra 88
...
Rf 104
Db 105
Sg 106
Bh 107
Hs 108
Mt 109
Ds 110
Rg 111
Cn 112
Nh 113
Fl 114
Mc 115
Lv 116
Ts 117
Og 118
La 57
Ce 58
Pr 59
Nd 60
Pm 61
Sm 62
Eu 63
Gd 64
Tb 65
Dy 66
Ho 67
Er 68
Tm 69
Yb 70
Lu 71
Ac 89
Th 90
Pa 91
U 92
Np 93
Pu 94
Am 95
Cm 96
Bk 97
Cf 98
Es 99
Fm 100
Md 101
No 102
Lr 103

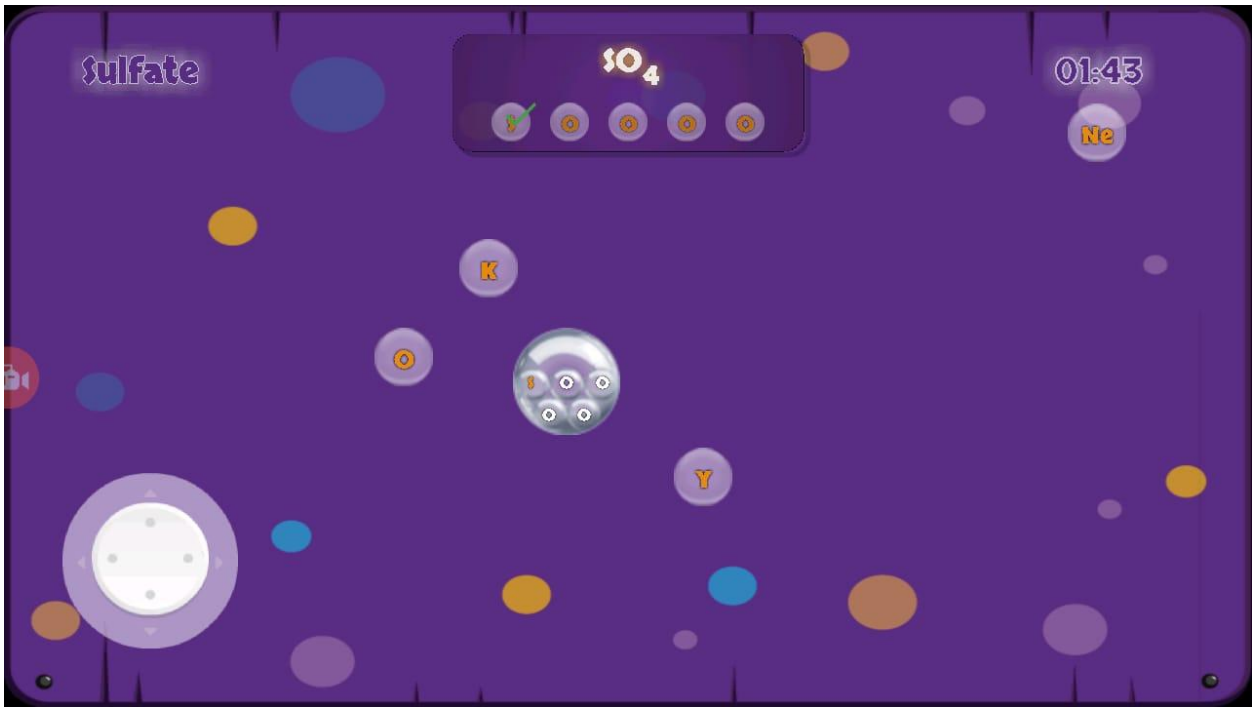

Oganesson (Og)
18
GROUP
7
PERIOD
ATOMIC NUMBER: 118
118
ELECTRON
118
PROTON
176
NEUTRON
PHASE: N/A
SERIES: Noble Gas
COLOR: N/A
DISCOVERY YEAR: 2006
Og
118
Mission: Stay Safe


Helyum
2
He
01:25


Hydrogen
1
01:38
Level Cleared


Helium
2
01:51
Level Failed


Mendeleev
Exit Game!!
Are you sure?


Sulfate
SO_4
01:43
Ne
K
Y