

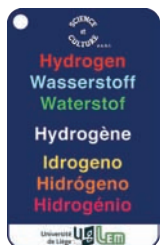


# Difficulty 1/3

## BEFORE THE GAME... REMOVE :



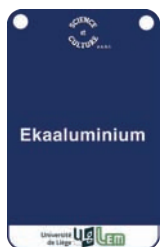
⇒ the 2 identification cards (white face) bearing on the back a white dot in the top left-hand corner and the mention " Periodical Puzzle " in various languages.



⇒ the 4 (yellow face) cards bearing on the back a white dot in the top left-hand corner :

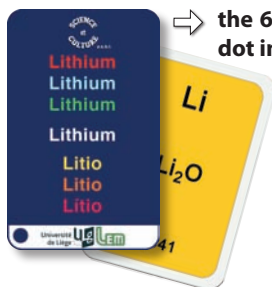
hydrogen  
helium

beryllium with the relative atomic masses : 9,4 or 14,1  
indium with the relative atomic masses : 38 or 76 or 114



⇒ the 2 (yellow face) cards bearing on the back a white dot in the two top corners :

ekaaluminium with the symbol "Ga" on the front face  
ekasilicium with the symbol "Ge" on the front face



⇒ the 6 (yellow face) cards bearing on the back a dark blue dot in the bottom left-hand corner :

lithium  
sodium  
potassium  
rubidium  
cesium  
francium

## AND NOW ... THE GAME !

The 42 remaining cards are shuffled and laid down, front face up. They must then be classified.

Once the classification is over, the students can put back the hydrogen and helium cards, which had been put aside at the beginning of the game.

## EDUCATIONAL ASPECT

In its simplest form, there is no particular problem. The game doesn't include the cards for hydrogen and helium. Classification thus begins with lithium.

In the process of classifying, the students reinvent Mendeleev's approach. Amongst other things they have to reverse the order of potassium and argon, tellurium and iodine i.e take into account the **priority of chemical behaviour** (the formulae for the oxides) over the relative atomic masses.

However, the students are guided by the fact that potassium (K) and iodine (I) belong to two families characterized by the colours of the cards (**red face** for the alkalines and **blue face** for the halogens).