



ROYAL SOCIETY
OF CHEMISTRY | Celebrating
IYPT 2019

Play your elements right

| | | | | | | | |
|---------|----|---------|-----|---------|-----|----------|-----|
| | | 14 | 15 | | | | |
| 69.723 | Ga | 72.630 | Ge | 74.922 | As | 78.9718 | S |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 114.818 | In | 118.710 | Sn | 121.760 | Sb | 127.603 | T |
| | 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| 204.38 | Tl | 207.2 | Pb | 208.980 | Bi | 208.9804 | P |
| | 81 | 82 | 83 | 84 | 85 | 86 | 87 |
| [286] | Nh | [289] | Fl | [289] | Mc | [289] | L |
| | | 114 | 115 | 116 | 117 | 118 | 119 |

These activities have been created by the Royal Society of Chemistry to help celebrate the International Year of the Periodic Table.

Find out more at: www.rsc.org/iypt

Game guidelines

The original inspiration for this activity was the TV game 'play your cards right' where audience members had to guess if the next number on a card from a pack of playing cards was going to be higher or lower. This is a chemistry version and outreach visitors need to guess if the atomic number of the next element card is going to be higher or lower than the previous one.

1. Ask your outreach visitor if they would like to play a chemistry card game about the elements from the periodic table.
2. Ask them to turn the first card over and have a chat to them about the element and point out to them the atomic element number written on the bottom left hand corner of the card.
3. Ask the visitor if they think that the element on the next card will have a higher or lower number than the current card.
4. The visitor turns the card over.
 - If they guess incorrectly the game is over but of course you can still have a chat to them about the element.
 - If they guess correctly chat to them about the element and ask them to guess again.
5. See if the visitor can guess correctly 6 cards and if they do, have a small prize to give them (eg sticker, pencil etc.). Please do adapt the number of cards to guess correctly according to your particular outreach setup.

Do personalise and if you have any anecdotes about particular elements please tell your audiences. Use your audience response and what they say to gauge how much you talk about an element and what you say about an element.

Each card has some interesting information on it (eg size of atom, melting point, useful facts). When you need more information about the elements why not download the RSC periodic table to your phone or device? Alternatively you can go to the RSC web version of the periodic table - <http://www.rsc.org/periodic-table>. The 'On this day in Chemistry' webpage is also a nice wider resource to refer to - <http://www.rsc.org/learn-chemistry/collections/chemistry-calendar/> As well you can direct your outreach visitors to the app and webpages. In most outreach settings there will probably be copies of the periodic table to refer to as well.

For outdoor venues you may wish to stick your cards down to the table with blutack or something similar to stop them blowing away!

For reference, these are the cards which are being used in the game

| Number | Symbol | Name |
|--------|--------|------------|
| 1 | H | Hydrogen |
| 2 | He | Helium |
| 3 | Li | Lithium |
| 5 | B | Boron |
| 6 | C | Carbon |
| 7 | N | Nitrogen |
| 8 | O | Oxygen |
| 9 | Fl | Fluorine |
| 10 | Ne | Neon |
| 11 | Na | Sodium |
| 12 | Mg | Magnesium |
| 13 | Al | Aluminium |
| 14 | Si | Silicon |
| 15 | P | Phosphorus |
| 16 | S | Sulfur |
| 17 | Cl | Chlorine |
| 19 | K | Potassium |
| 20 | Ca | Calcium |
| 26 | Fe | Iron |
| 29 | Cu | Copper |
| 33 | As | Arsenic |
| 35 | Br | Bromine |
| 47 | Ag | Silver |
| 48 | Cd | Cadmium |
| 55 | Cs | Caesium |
| 63 | Eu | Europium |
| 76 | Os | Osmium |
| 79 | Au | Gold |
| 80 | Hg | Mercury |
| 82 | Pb | Lead |