

8  
O  
Oxygen

16  
S  
Sulphur

34  
Se  
Selenium

52  
Te  
Tellurium

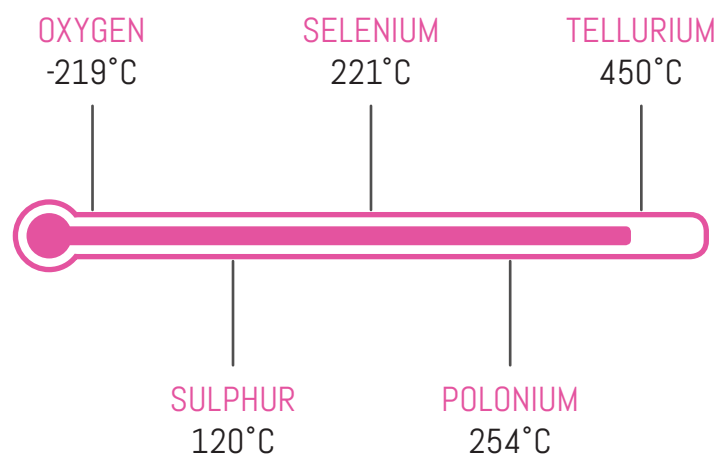
84  
Po  
Polonium

116  
Lv  
Livermorium

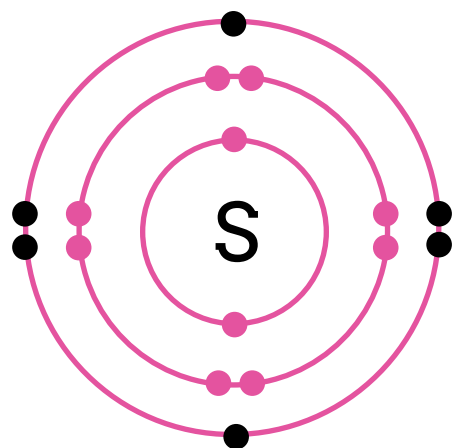
# Group 16 - The Chalcogens

THE GROUP 16 ELEMENTS ARE A MIX OF ELECTRONEGATIVE NON-METALS & METALLOIDS COMMONLY ASSOCIATED WITH METAL BEARING MINERALS

## MELTING POINTS



ALL OF THE  
SOLID  
CHALCOGENS  
ARE **SOFT**  
AND  
**DON'T CONDUCT  
HEAT WELL**



ALL OF THE  
GROUP 16 ELEMENTS  
HAVE  
**SIX VALENCE  
ELECTRONS**

ALL THE GROUP 16 ELEMENTS  
**F O R M - 2 I O N S**  
WHEN REACTING WITH  
ELECTROPOSITIVE METALS

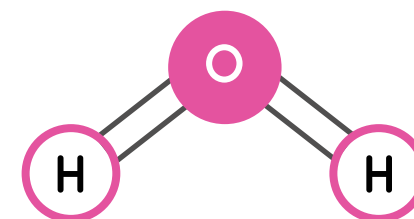
**SULPHUR DIOXIDE**  
REACTS WITH WATER VAPOUR  
TO FORM SULPHURIC ACID  
AND CAUSE **ACID RAIN**



**OXYGEN**  
MAKES UP  
**65%**  
OF THE  
HUMAN BODY



ALL OF THE  
COMPOUNDS OF  
**HYDROGEN WITH  
CHALCOGENS**  
ARE **TOXIC**



APART FROM WATER

## ALLOTROPES

**OXYGEN**  
NINE  
 $O_2$   $O_3$   $O_4$   $O_8$

**SULPHUR**  
TWENTY  
 $S_2$   $S_3$   $S_4$   $S_8$

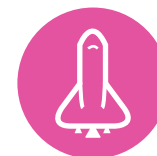
**SELENIUM**  
FIVE  
MAINLY  $Se_8$

**POLONIUM**  
TWO  
 $\alpha$ -Po &  $\beta$ -Po

 **OXYGEN**  
IS THE ONLY  
**GASEOUS  
CHALCOGEN**

**SELENIUM,  
TELLURIUM &  
POLONIUM**  
ARE ALL  
**METALLOIDS** 

## USES OF THE CHALCOGENS



**OXYGEN**  
MAKING STEEL  
ROCKET FUEL



**SULPHUR**  
GUNPOWDER  
SULPHURIC  
ACID



**SELENIUM**  
PHOTOCOPIERS  
GLASS-MAKING



**TELLURIUM**  
CD-RW DISCS  
SOLAR PANELS



**POLONIUM**  
ALPHA PARTICLE  
GENERATOR  
IN RESEARCH