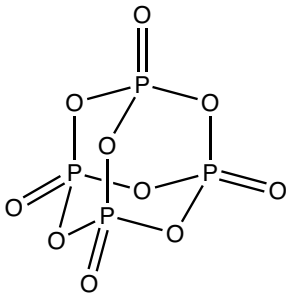
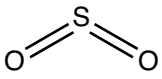
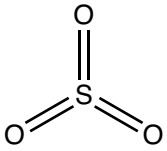
PERIOD 3 OXIDES

Ionic Oxides	
Which oxides are ionic?	
Comparing the strength of the ionic bonding (lattice enthalpies) and any covalent character	
Comparing solubility	
How ionic oxides react with water	
How ionic oxides react with acid	

How ionic oxides react with alkali	
Acid-base nature	
Example equations	a) magnesium oxide + hydrochloric acid b) aluminium oxide + nitric acid c) aluminium oxide + potassium hydroxide d) sodium oxide + sulfuric acid

Covalent Oxides (simple molecular)			
Which oxides are molecular?	P_4O_{10} phosphorus(V) oxide	SO_2 sulfur(IV) oxide	SO_3 sulfur(VI) oxide
			
How do molecular oxides react with water			
How do molecular oxides react with acids			
How do molecular oxides react with alkalis			

Structure of anions formed	PO_4^{3-} phosphate(V)	SO_3^{2-} sulfate(IV)	SO_4^{2-} sulfate(VI)
Acid-base nature			
Example equations	a) sulfur(VI) oxide + sodium hydroxide b) phosphorus oxide + potassium hydroxide c) sulfur(IV) oxide + barium hydroxide		

Covalent Oxides (giant covalent)	
Which oxides are giant covalent?	
How does it react with water	
How does it react with acids	
How does it react with alkalis	

Oxide	Structure	Reaction with water	Reaction with acid	Reaction with base	Nature of oxide
Na_2O					
MgO					
Al_2O_3					
SiO_2					
P_4O_{10}					
SO_2					